

P-1

### THE MICROCIRCULATORY EFFECTS OF LOW TO MEDIUM DOSE VASOACTIVE AGENTS DETECTED BY TISSUE OXYGENATION IN SEVERELY SEPTIC PATIENTS

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Although macrocirculation is the main regulatory mechanism of hemodynamics in septic shock, microcirculation is the one that delivers oxygen to the tissues. We aimed to detect the changes of microcirculation by the usage of vasoactive agents in severe sepsis-septic shock patients.

**Method and Material:** 51 patients (18-80 years) with severe sepsis (SAP<90mmHg) were included the study. The subcutaneous microcirculation (StO<sub>2</sub>) was assessed by using near-infrared spectroscopy (NIRS) at the thenar eminence (InSpectra, Model 300; Hutchinsonson Tec. Inc., USA).

Hemodynamic variables as well as the microcirculation values were recorded before and after the volume replacement (250ml/hour). Patients in whom the SAP was elevated > 90mmHg after a few hours volume replacement and the ones who died during the study period were excluded from the study (n:11). Vasoactive agents were given in the order below; each regimen for an hour, while recording the hemodynamic and microcirculatory measurements.

Dopamine 5µg/kg/min; Dopamine 7.5µg/kg/min; Dopamine 7.5µg/kg/min+ Nitroglycerine 20 µg/min; Dopamine 7.5 µg/kg/min+ Nitroglycerine 50 µg/min.

Kolmogorov-Smirnov, Chi-Square test and t-test were used for statistical analysis

**Findings:** Mean arterial pressure (MAP) and StO<sub>2</sub> (%) values were recorded as (mean±SS); in basal; 55.7±6.5 / 79.6±2.5; with Dopamine 5µg/kg/min; 65.2±7.5 / 82.5± 3; with Dopamine 7.5µg/kg/min; 72.2±8.1/ 85.7±2.8; with Dopamine 7.5µg/kg/min + Nitroglycerine 20 µg/min; 71.4±8.8 / 85.6±2.8; with Dopamine 7.5 µg/kg/min+ Nitroglycerine 50 µg/min; 69.5±9.4/ 84.5±3.1.

**Results:** It has been observed that in the severely septic hypotensive patients, dopamine in increasing dosages has positive impacts on microcirculation by increasing mean arterial pressure (MAP); adding Nitroglycerine 20 µg/min to dopamine has no advantage in terms of microcirculation and adding Nitroglycerine 50 µg/min actually decreases StO<sub>2</sub> values by reducing MAP.

#### References

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P-2

### THE EFFECT OF ULTRASOUND- GUIDANCE ON CENTRAL VENOUS CATHETER-ASSOCIATED BLOOD STREAM INFECTION IN CRITICAL CARE PATIENTS

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We performed a study to compare USG guided central venous cannulation (CVC) with conventional anatomical landmark approach to CVC in terms of access time, the average number of attempts, the rate of mechanical complications and the incidence of CVC- associated blood stream infection (CVC-BSI).

**Method and Material:** In this randomized study, after approval from our hospital ethical committee, 97 critical care patients who underwent real-time ultrasound-guided cannulation (Grup I) of the internal jugular vein were prospectively compared with 97 critical care patients in whom the landmark technique (GrupII) were used. The parameters studied included average access time, time for insertion, attempts required, and complications encountered.

**Findings:** There were no significant differences in gender, age, body mass index, APACHE II, side of cannulation (right or left) or in the presence of risk factors for difficult venous cannulation between the two groups of patients (p>0.005). Average access time (skin to vein), total insertion time, number of attempts, mechanical complication rate, CVC-BSI were significantly reduced in the Grup I of patients compared with the Grup II (p<0.005) (Table I).

**Results:** The present data suggest that USG guided catheterisation of the IJV offers the advantage of a reduced number of successful attempts and therefore has a lower mechanical complication rate and may result in a lower incidence of CVC-BSI compared with the landmark technique.

**Table I:** Outcome measures in the Grup I versus Grup II

	Grup I (n= 97)	Grup II (n=97)
Time		
Access time (skin to vein) (sn)	9.9±12.2	18.8±19.3
Total time (sn)	65.4±16.9	83.1±31.9
Average number of attempts	1.2±0.5	1.5±0.7
1. attempt	81 (%83.5)	60 (%61.9)
2. attempt	10 (%10.3)	21 (%21.6)
3. attempt	6 (%6.2)	16 (%16.5)
Mechanical Complications	5(%5.2)	28 (28.9)
Carotid Puncture	1(%1.0)	15 (%15.5)
Haematoma	2(%1.0)	9 (%9.3)
Pneumothorax	0(%0)	2 (%2.1)
Hemorrhage	2(%2.1)	2 (%2.1)
Duration of catheter (day)	10.1±5.8	10.5±5.2
CVC-BSI	2 (%2)	10 (%10.3)
Stap.aureus	0	3 (%1.4)
KNS	0	4 (%4.1)
Enterekok	1 (%1)	0 (%0)
Klebsiella	1 (%1)	2 (%2.7)
Acinetobacter	0	1 (%1)

## P-3

### THE EFFECTS OF THEOPHYLLINE AND METHYLPREDNISOLONE ON THE BIOMECHANICS AND HISTOPATHOLOGY OF DIAPHRAGMA MUSCLES

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In the current study, we aimed to investigate the effects of theophylline and methylprednisolone, which are frequently used in clinics and which have different effects on the respiratory system and on the biomechanics and histopathology of the diaphragm muscle.

**Method and Material:** The study included four groups of rats. Group T received 1 mg/kg of intraperitoneal theophylline, Group M received 2 mg/kg of intraperitoneal methylprednisolone, Group TM received 1 mg/kg of intraperitoneal theophylline plus 2 mg/kg of intraperitoneal methylprednisolone, and Group K received 1 ml of intraperitoneal isotonic solution. The medications were continued for 7 days in each group. The rats underwent cervical dislocation under anesthesia on the 8th day, and their diaphragm samples were extracted. The left hemidiaphragm was used for the investigation of biochemical parameters, and the right hemidiaphragm was used for the histopathological evaluation.

**Findings:** It was observed that the medication administered in Group T increased the contraction strength and duration compared with that in Group M. Additionally, the duration of semi-relaxation was prolonged in Group T compared with Group M. The highest contraction strength and the longest contraction period among all of the groups were observed in Group TM. No difference was observed between the groups regarding the histopathology.

**Results:** It was concluded that the combined use of theophylline and methylprednisolone had positive effects on the contraction strength and the durations of contraction and semi-relaxation of the diaphragm muscle. In addition, both drugs had synergistic effects on each other.

## P-4

### PREDICTORS OF MULTIDRUG RESISTANT ACINETOBACTER BAUMANNII INFECTIONS IN INTENSIVE CARE UNIT: RETROSPECTIVE ANALYSIS

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In the current study, we aimed to investigate the effects of the *Acinetobacter baumannii* which is one of the most frequent nosocomial pathogens, has drawn attention in the last years owing to multi-drug resistant strains. Multidrug resistant *Acinetobacter baumannii* (MDRAB) is an important cause of hospital acquired infection and leads to an increasing morbidity and mortality in intensive care units (ICU).

**Method and Material:** The charts of the patients who were admitted to the ICU between January 2009 and December 2010 were reviewed to identify patients with MDRAB and NON- MDRAB infection. Recorded data were as follows: age, sex, medical history, underlying surgical pathology, Acute Physiology and Chronic Health Evaluation II score (APACHE II), presence of invasive procedures (intubation, arterial, central venous lines, urinary catheters, and renal replacement therapy), days in ICU, infection site, complications, length of stay (LOS) in the ICU and hospital, and final outcome. Strains of *Acinetobacter Baumannii* which were non sensitive to multipl antibiotics except colistin has been accepted as multi drug resistant *Acinetobacter Baumannii*.

**Findings:** 76 patients were included in these study. MDRAB identified in the 35% of patients (27/76). In the patients who have been identified MDRAB; median LOS in ICU was 19 and the median LOS in hospital was 30 days. However, median LOS in ICU was 18 and the median LOS in hospital was 27 days in the NON-MDRAB. The median value of the Apache II score in the group MDRAB was 25, in NON-MDRAB group was 24 and it was 24 when all the patients has considered. Also in diabetes mellitus the rate of NON-MDRAB was much than MDRAB group and it was statistically significant. MDRAB group patients have 33.3% (9/27) TPN and 77.8% (21/27) enteral nutrition during the period in the ICU. There were no statistically significant difference in terms of having TPN and enteral nutrition between groups. The incidence of catheter-related infection in the group MDRAB were statistically significant. (p:0,037\*)

**Results:** The result of our study indicate that APACHE II score is predictors of MDRAB in ICU patients. Also in diabetic patients the rate of identifying MDRAB is less than in NON-MDRAB group. Patients with MDRAB infection tended to have a higher mortality and had a longer LOS in ICU than NON-MDRAB patients.

## P-5

### DOC'S CHALLENGE WITH FLUID: ARE WE BEYOND SO FAR? PROS AND CONS.

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Just whilst latest sepsis guidelines have convinced us about early resuscitative fluid management in sepsis treatment, on the other hand may whispered parameters and numbers have seemed how some foggy. Thus in this study, we objected to re-evaluate effectiveness of fluid resuscitation strategy in sepsis, compared parameters of patients' daily fluid balances (DFB) and central venous pressure (CVP) records and improvement on patients' survival.

**Method and Material:** The project was planned as a retrospective analysis of sepsis patient's records. The study was conducted in Trakya University Faculty of Medicine Medical Intensive Care Unit (MICU). Total of 100 (one-hundred) sepsis patients records were randomly assigned into study in a blinded fashion, through years 2010 to 2013. Patients' records were collected in a software database and statistically analyzed for survival function. Among assigned patients, 63 were men and 37 were women, mean age was 64.2±15.5 years (±SD, ranged 16-98), mean APACHE-II score was 23.6±7.7 (±SD, ranged 5-44), 42 were discharged and 58 were lost, mean length of stay (LOS) in MICU was 9.7±10.0 days (±SD, ranged 1-63), mean invasive mechanic ventilation and intubated period was 6.4±8.6 days (±SD, ranged 0-35), mean vasopressor period was 4.7±5.5 days (±SD, ranged 0-34), mean CVP was 10.5±5.5 mmHg (±SD, ranged 3-23), mean fluid balance was 1147.9±1157.6 ml (±SD, ranged -1684 to 5367), the first 24th hrs mean fluid balance was 1150.1±1555.3 ml (±SD, ranged -2864 to 7200).

**Findings:** Kaplan-Meier survival and COX regression analysis showed that calculated 19 and above APACHE-II scores proposed higher mortality rates in respect of first 5 days, on the other hand, 19 and lower levels were not indicative for better survival. APACHE-II scores of 10 and lower levels were predictive for survival. Shorter intubated days and lower vasopressor needs correlated with higher discharge rates as expected. Intubation period of longer than 24-48 hrs linearly correlated with worse outcome, vasopressor need more than 48 hrs also did. Longer LOS beyond 5 days dramatically increased mortality. CVP levels were significantly predictive for shorter LOS, intubated day, vasopressor needs, and earlier discharge possibility. Levels of 6-9 mmHg and +800 to +900 ml DFB were best predictive of within the first 3 day survival. Statistical analysis ensured that mean 7 mmHg CVP levels and mean about +900 ml DFB throughout LOS were the most predictive levels for survival function; however, the first 24th hr mean fluid balance alone was surprisingly not predictive. On the other hand, over-increased DFB and CVP levels strictly correlated with longer LOS and higher mortality rates.

**Results:** Of course, current guidelines have the most leading force on treatment approaches, but did nearly whole studies address increasing perfusion and also fluid replacement. Tissue perfusion, microcirculation and capillary filling are the landmarks of sepsis management that is why we inevitably try to full patients-up, for sure. But, here it seemed a little bit like a double-edge-sword. Because, this study results interestingly showed against current evidences that lower DFB and CVP levels had indeed more predictive effect on sepsis patient survival, at least, might be inspiring for not to increase DFB and CVP levels above some threshold values which should be determined in a better precision for future studies. On the other hand should we also think about to stay in-between a range of fluids and do we drown or fry patients too much?

## P-6

### THE USE OF NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN (NGAL) IN DETECTING ACUTE RENAL INJURY IN CRITICALLY BURNED PATIENTS: A PROSPECTIVE, OBSERVATIONAL STUDY OF 31 PATIENTS

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The detection of acute renal injury in the early stage of burns is of critical importance in decreasing the morbidity and mortality of severely burned patients. A new biomarker, Neutrophil gelatinase-associated lipocalin (NGAL) was shown to appear in the plasma and urine after acute renal injury. In this observational study, we studied NGAL has a place in the early detection of acute renal injury in critically burned patients.

**Method and Material:** The urine and plasma NGAL levels of patients in our burn intensive care were studied at the time of admission (hour 0) and 12, 24, 36, 48, and 72. hours following admission. SOFA and APACHE II scores of the patients were measured for predicting the morbidity and mortality rates. AKIN and RIFLE criterion were measured at 12, 24, 36, 48, and 72. hours after admission. The use of renal replacement therapies (RRT) and the length of treatments were recorded.

**Findings:** The study included 31 patients, aged between 1 to 86, 5 women (16,1 %). The degree of burn was 2 nd. and 3 rd., the mean percentage of burns was 51.3 %. The causes of burns; flame (n=17, 54.8%), electric (n=12, 38.7%), inhalation (n=4, 12.9%), scolding (n=2, 6.4%), hot oils (n=1, 3.2%). RRT was used in 48.4% of the patients. A significant correlation was found between plasma NGAL and creatinin levels on admission and 12 hours after admission (p<0.05). The admission NGAL levels were statistically higher in patients who received RRT than the patients who did not (p<0.05). In RRT patients the decrease in creatinin 24, 36, 48, and 72. hours compared to 0. hour were found significant (p<0.01). The patients who received RRT 36 and 48. hour creatinin levels were higher than the patients who were not received RRT (p<0.05) In the patients who did not receive RRT, creatinine levels significantly decreased in the first 72 hours of admission (p<0,05). The cut off level determination for serum NGAL revealed 251 ng/dl to be significant (p<0.05). Inotropes were used in 51,6 % of the patients and its use was associated with mortality (p<0.01). Nonsurvivors had a significantly higher burn area than survivors (p<0.01). Also nonsurvivors received significantly more fluids, had higher SOFA and APACHE scores than survivors (p<0.01, p<0.05 and p< 0.01 respectively)

**Results:** Renal failure is a frequent complication in burn patients associated with significant morbidity and mortality. Serum NGAL levels on admission and during the next 24 hours were associated with increased occurrence of renal failure requiring RRT. This early detection could result in earlier therapies to prevent or limit acute renal failure. Future studies could focus on early interventions in burn patients with increased NGAL levels.

## P-7

### TROMBOCYTOPENIA AND PLATELET TRANSFUSION IN THE CRITICALLY ILL

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In the intensive care unit (ICU) trombocytopenia is frequently detected at admission or during ICU stay. Though, there is no consensus on platelet transfusion, the decision to replace is based on platelet account, bleeding symptoms and preparation for surgery. In this study we wanted to investigate trombocytopenia and platelet transfusion frequency in our ICU.

**Method and Material:** We analyzed data of 237 patients who admitted to the ICU with 7 bed capacity at Sisli Etfal Training and Research Hospital in the year 2011. Age, gender, ICU stay, platelet account at admission, transfusion frequency, platelet account before transfusion, transfusion reasons and mortality were recorded. Severe trombocytopenia was defined as trombocyte account <50000/uL.

**Findings:** The Mean±SD patients' age was 44,76±18,55 years, male/female ratio was 130/108. Mean±SD ICU stay was 10,79± 9,87 days. Severe trombocytopenia was detected in 21 patients at admission and in 26 patients during ICU stay. Totally 19% of all ICU patients had severe trombocytopenia and 50 Units of random/ 21 Units of apheresis trombocytes were transfused. Average platelet account was 40815/uL at transfusion, lowest 7500/uL highest 65000/uL. Reasons for transfusion were as follows: Severe hemorrhage in 6 patients, surgery preparation in 7 patients, catheterization in 2 patients and low platelet accounts in 21 patients. Mortality was 40% in the transfused patients.

**Results:** Even though there are no certain limits for transfusion, it is recommended in patients without bleeding when platelet account is under 20000/uL, for major surgical procedures the limit is 50000/uL. We determined that our transfusion frequency was fewer in severe hemorrhage and surgical procedures than in low platelet account. Average of platelets in transfused patients was 40815/uL. These results indicate unnecessary transfusion in our ICU patients. However, more data is required.

## P-8

### SEARCHING THE RISK FACTORS OF VRE FOR INTESTINAL COLONIZATION

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Enterococcus are the gram positive cocs which take part in the Streptococcaceae family. They are found at soil, water, foods; bowel, biliary tract, mouth and sometimes even on the skin of people and animals' normal flora. This low-virulenced microorganism causes infections which usually results from the patient's own endogenic flora. All of the enterococcus, including vancomycin resistant enterococcus (VRE), can contaminate directly from patient to patient or indirectly through contaminated hands, surfaces, medical tools and can spread in or among hospitals.

**Method and Material:** Our research to identify the predisposing factors for VRE colonization is done at Katip Celebi University Atatürk Training and Research Hospital Anesthesia Intensive Care Unit between January 2011 and July 2012. In these days, the control group patients, who stayed at anesthesia intensive care unit more than two days and chosen randomly with sampling method, are researched retrospectively with VRE colonization found consecutive cases. During the research 1502 patients are evaluated. In 51 of them VRE and gastrointestinal colonization are found and 49 disease control group is created.

**Findings:** A statistical and meaningful connection is found between VRE gastrointestinal colonization and age, first Acute Pysiology And Chronic Health Evaluation (APACHE) 2 score and staying period at the hospital. Though, there hasn't seen a connection between Sequential Organ Failure Assessment (SOFA) score and RIFLE score. At the patients who stayed at the hospital in the last six months, it was statistically meaningful to see positive VRE frequency.

**Results:** We think that, the patients who stayed at the hospital for a long time, is at advanced age, diagnosed malnutrition with NRS -2002 score and has high APA CHE 2 score, is under risk. And finally we believe that there should be an active surveillance study at the hospitals which Vancomycin Resistant Enterococcus (VRE) infection/colonization found and to prevent the spread of this, contiguity and isolation technics should be applied.

P-9

### INTUBATION WITH STORZ DCI VIDEOLARYNGOSCOPE AND TRUVIEW EVO2 VIDEOLARYNGOSCOPE: IN PATIENTS WITH SUSPECTED DIFFICULT TRACHEAL INTUBATION

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Endotracheal intubation is defined as insertion of a tube into trachea in order to ensure airway patency, and control respiration. Sometimes during the intubation procedure difficulties can be encountered, and hemodynamic parameters of the patients can deteriorate. Herein, we intended to compare Storz DCI, and Truview EVO2 videolaryngoscopes with respect to the quality of glottis images, intubation times, intubation-related, and postoperative early stage complications, and hemodynamic responses developed following intubation in cases resistant to intubation as predicted by Mallampati tests.

**Method and Material:**The study included 60 patients aged between 18-65 years with ASA I-II class based on Mallampati III-IV scale scoring who would undergo elective surgery. The patients were randomly divided into 2 groups. Groups S, and T were intubated using Storz DCI, and Truview EVO2 video laryngoscopes, respectively. Cormack-Lehane (C-L) score, intubation time, intubation-related, and immediate postoperative complications during intubation were recorded. Perioperative heart rate, systolic, diastolic, and mean arterial pressures, peripheral oxygen saturation measured before, and after induction, immediately, 1., 2., 3., 4., and 5. minutes after intubation were recorded. Also, endtidal carbon dioxide was noted immediately, 1., 2., 3., 4., and 5. minutes after intubation.

**Findings:**In both groups, any significant difference was not found between C-L grade I, and II as for the quality of glottis images, however C-L grade III was significantly more frequently observed in Group T. In Group S, only 1, and in Group T, 6 patients had attained C-L score III. Intubation time was found to be significantly longer in Group T (36 s) than Group S (31 s), and all intubations were successfully performed in all groups. The only 1 laryngoscopy-related complication was lip laceration in Group T. Early stage intubation-related postoperative complications were coughing ( Group S: n=4; Group T: n=5), and throat ache( Group S: n=3; Group T: n=2). A significant difference could not be found between hemodynamic parameters, and antihypertensive drug requirement between 2 groups.

**Results:**Storz DCI video laryngoscope displayed a successful performance with shortened intubation times, improved, and clearer glottis views relative to Truview EVO2 video laryngoscope. Therefore, we have concluded that in cases with intubation problems Storz DCI video laryngoscope can be preferred over Truview EVO2 video laryngoscope.

P-10

### EFFICACY OF HAEMODIAFILTRATION THERAPY IN OUR CRITICALLY ILL PATIENTS

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Although continuous veno-venous haemodiafiltration (CVVHDF) is a common procedure in critically ill patients with acute kidney injury (AKI), its efficacy remains uncertain. Patients who receive CVVHDF usually have higher mortality rates than those who do not. Our aim was to assess CVVHDF efficacy, with special attention to mortality.

#### Method and Material:

We performed an analysis using data of Sisli Etfal Training and Research Hospital database between 2007-2012 including critically ill patients accepted to our intensive care unit (ICU). AKI was defined according to RIFLE criteria. The association between CVVHDF and ICU mortality was examined. Data was presented as Mean±SD.

**Findings:** During this time period 1542 patients were accepted to our ICU, 99 patients received CVVHDF. 36 were female and 63 were male, age was 59.40±20.26 years, ICU stay was 27.33±24.00 days and CVVHDF was applied on the 15.23±18.10th day of ICU admission. 7.8% of the patients were treated with CVVHDF therapy in the renal-injury-stage, 35.7% in the renal-failure-stage, 47.9% in the renal-loss-stage and 8.6% in the renal-end-stage disease. CVVHDF was continued for 4.89±3.69 days. 11.4% recovered and were discharged from the ICU.

**Results:** In our study population, CVVHDF failed to reduce ICU mortality, it was ironical high with 88.6%. This result emphasizes the need for randomized studies comparing CVVHDF to conservative management in selected ICU patients, with special focus on timing of treatment beginning.



## P-11

**COMPARISON OF HEPARIN AND CITRATE ANTICOAGULATION ON HAEMODIAFILTRATION THERAPY**

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Heparin is commonly used for anticoagulation in renal replacement therapies. However, citrate anticoagulation has become more frequent, too. In the intensive care unit (ICU) continuous veno-venous haemodiafiltration (CVVHDF) is a common procedure in critically ill patients with acute kidney injury, because it is easily applicable to unstable patients. We aimed to compare heparin and citrate anticoagulation on haemodiafiltration therapy.

**Method and Material:** We retrospectively analyzed data of Sisli Etfal Training and Research Hospital ICU database between 2007-2012. During CVVHDF therapy 46 patients were anticoagulated with heparin (GroupH), 24 were anticoagulated with citrate (GroupC) and 30 with both (this group was not included to the comparison). Age, male/female ratio, RIFLE-score, CVVHDF time, platelet account, aPTT level, ICU stay and mortality were recorded. Data were expressed as Mean±SD.

**Findings:** In GroupH age was 62.78±18.06 years, male/female ratio was 26/20, renal-loss-score was the leading cause of CVVHDF with 87.5%, CVVHDF was continued for 5.07±4.02 days, platelet account was 63533±32004/uL, aPTT level was 151.57±41.99, ICU stay was 22.64±24.01 days and mortality was 96.6%. In GroupC age was 54.17±22.32 years, male/female ratio was 18/6, renal-loss-score was the leading cause of CVVHDF with 85.6%, CVVHDF was continued for 5.54±3.91 days, platelet account was 372000±154000/uL, aPTT level was 63.57±14.3, ICU stay was 19.01±20.06 days and mortality was 84.6%.

**Results:** This study showed that platelet account was significantly decreased and aPTT level was significantly increased in heparin anticoagulation. Also mortality was significantly higher in the heparin group. We concluded that citrate anticoagulation might be a good alternative to heparin anticoagulation in patients treated with CVVHDF. But still further studies should evaluate the effects of hypocalcemia in citrate anticoagulation.

## P-12

**MORTALITY PREDICTION AFTER CARDIAC SURGERY: COMPARISON OF CASUS AND EUROSCORE**

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Outcome prediction scoring systems are increasingly used in intensive care medicine, but most were not developed for use in cardiac surgery patients. We compared the performance of two intensive care outcome prediction scoring systems; Cardiac Surgery Score [CASUS]) and well studied EuroSCORE in patients undergoing open heart surgery.

**Method and Material:** Between June 1, 2010 and June 1, 2011 we prospectively included all consecutive adult patients (patients age>18 yrs) admitted to our intensive care unit (ICU) after open cardiac surgery. Both scoring systems were calculated daily from the 1st day in the ICU (day of operation) until the patients discharge or until 7th day of ICU stay. NCSS (Number Cruncher Statistical System) 2007 & PASS (Power Analysis and Sample Size) 2008 Statistical Software (Utah, USA) program was used for statistical analysis. ROC curve analysis was used for evaluating efficacy of EuroSCORE and CASUS scoring systems on mortality prediction.

**Findings:** 50 patients (21 female, 29 male) were included. Mean age was 60.38 ± 10.7 years. Intensive care unit mortality was 10%. Area under ROC curve for EuroSCORE was 45.3%. For CASUS area under ROC curve were 66.9%, 64.7%, 79.8% on postoperative day 0, day 1 and day 2 respectively. There was statistically significant relationship between mortality rate and length of ICU stay (p<0,01).

**Results:** In predicting mortality, CASUS was not adequate on postoperative day 0 and day 1, but adequate on postoperative day 2 for long ICU stays. EuroSCORE was not adequate in predicting mortality. As the length of ICU stay increases the mortality rate increases.

P-13

### PRETREATMENT WITH CARNOSOL IN LUNG ISCHEMIA/ REPERFUSION-INDUCED RENAL INJURY

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Lung ischemia/reperfusion injury may result in mortality and morbidity because of kidney injury in the post-operative period. Carnosol, a major component of rosemary, is reported to exhibit antioxidant and anti-inflammatory effects. The primary aim of this experimental study was to investigate the protective effects of carnosol on kidney injury induced by lung ischemia/reperfusion.

**Method and Material:** Twenty-four New Zealand white rabbits were randomised into the following three groups: (1) lung ischemia/reperfusion (IR group) (60 min ischemia-60 min reperfusion), (2) bolus injection of carnosol before lung ischemia/reperfusion (CIR group), and (3) sham (S group) (pulmonary hilum was not clamped). Myeloperoxidase activity was used as an indicator of renal neutrophil influx. Intercellular adhesion molecule-1 can attract and/or activate leukocytes, potentiate small vessel occlusion, and promote further production of inflammatory mediators. Therefore, renal Myeloperoxidase and intercellular adhesion molecule-1 levels were evaluated to show the kidney responses and protective effects of carnosol on lung ischemia/reperfusion injury.

**Findings:** Renal tissue myeloperoxidase and intercellular adhesion molecule-1 levels were significantly higher in the IR group when compared with the CIR and S groups ( $p=0.021$  and  $p=0.0001$ , respectively). No statistically significant difference was detected between the CIR group and the S group.

**Results:** The data of the present study suggests that lung ischemia/reperfusion-induced kidney injury causes increased myeloperoxidase and intercellular adhesion molecule-1 levels, which are related to activated neutrophil sequestration. The protective effect of carnosol may be dependent, in part, on its inhibitory effect on tissue neutrophil infiltration.

P-14

### DIALYSIS CATHETER PLACEMENT AFTER PROTHROMBIN COMPLEX CONCENTRATE APPLICATION IN A WARFARIN USING PATIENT

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Serious bleeding and urgent interventions require more than administration of vitamin K in congenital or warfarin associated coagulation deficiency. In such situations, replacement of protombin complex concentrate (PCC)(FII, FVII, FIX, FX, protein C and S ) can be used. PCC dose is adjusted according to the target INR or the highest INR level at the beginning. This is a case report about the treatment of high INR level in a patient who needs immediately a catheter placement.

**Case:** A 87 years old woman was accepted to our ICU with respiratory distress. She had diagnosis of decompensated cardiac failure. 6 years ago she had a tricuspid and mitral valve replacement, and that's why she was using warfarin. On auscultation she had crepitan crackles at the basal lungs and she was using her accessory respiratory muscles. Chest x-ray showed cardio-thoracic index  $>1/2$  and cardiomegaly. Urine discharge indicated oliguria. After non-invasive mechanical ventilation no relieve in respiratory distress could be achieved and she had to be intubated. Haemodynamic instability and mean arterial pressure decrease were treated with dopamine, dobutamine and noradrenaline. Because urine output was still oliguric furosemide was applied with no success. The patient's pulmonary edema did not regress and cardiac failure still persisted. The need for central venous pressure monitorization and haemodiafiltration occurred. Because of the INR level  $>8,02$ , no catheterization could be proceeded. 10 mg vitamin K and 2 Units of fresh-frozen-plasma were administrated but her INR level did not decrease. Finally, 30 ml (250ü/10 ml) of PCC (COFACT®) were infused intravenously to the patient in 15 minutes, 2 ml/min, which was half of the recommended dose, because the patient had prosthetic valves. After 30 minutes INR was 1,6. At last we were able to place a central venous pressure and a haemodialysis catheter into the patient. Haemodiafiltration continued for 72 hours, diuresis begun ( $>0,5$  ml/kg/h), respiratory parameters recovered and the patient was extubate on the 4th day.

**Conclusion:** PCC is a very useful medication for treatment of acute interventions and to stop serious hemorrhage in warfarin using patients like presented in this case. Some studies indicate, that PCC is more potent than fresh-frozen-plasma in the treatment of coagulation abnormalities due to warfarin usage.

## P-15

### RELATIONSHIP BETWEEN THE RIGHT INTERNAL JUGULAR VEIN AND CAROTID ARTERY AT IPSILATERAL HEAD ROTATION

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Ultrasound-guided right internal jugular vein catheterization (RIJV) should be the first choice to decrease the catheter-related complications in high-risk hemodialysis patients. For this procedure, clinicians should identify the optimum positions of the RIJV, including its lower overlap with the CA and high cross-sectional area of the vein. The aim of this prospective randomized study to evaluate the effects of mild ipsilateral head rotation combined with Trendelenburg position on RIJV cross-sectional area and its relation to the CA in adult patients.

**Method and Material:**Forty ASA I-II patients who were undergoing elective surgery were enrolled for this study. Subjects were asked to remain supine in the 15–20° Trendelenburg position. Two dimensional ultrasound was then used to measure the degree of overlap between the RIJV and CA, the cross-sectional area of the RIJV. These measurements were compared between head rotation to the >30° right, <30° right, neutral, and <30° left positions. A p<0.05 value was considered statistically significantly.

**Findings:**When the head was in the >30° left position overlap were seen in 38 of 40 patients (95%). As the head was rotated from >30° left to <30° right, the CA-RIJV overlap (from 95% to 57.5%), and the crosssectional area (from 14.2 mm to 8.7 mm) significantly decreased.

**Results:** In conclusion, when the head was turned to <30° right, the CA-RIJV overlap significantly decrease, but the crosssectional area also decreased. When clinicians determine the optimal head position before RIJV cannulation, it is important to consider the advantages and disadvantages of the different head positions from >30° left to <30° right.

## P-16

### MEAN PLATELET VOLUME AND PLATELET DISTRIBUTION WIDTH AS A PREDICTOR OF MORTALITY IN ICU PATIENTS; A SINGLE CENTRED RETROSPECTIVE ANALYSIS

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Mean platelet volume (MPV) and platelet distribution width (PDW), are routinely available parameters in many laboratories. MPV is the most commonly used measure of platelet size. Increased MPV reflects larger platelet and is commonly associated with increased metabolic activity. Previous studies demonstrated the relation between MPV and adverse cardiovascular effects. Also MPV has a close relationship with diabetes mellitus, hypertension, hypercholesterolemia and metabolic syndrome. We aimed to investigate the MPV and PDW parameters in mixed intensive care unit (ICU) population and their relation with mortality in ICU.

**Method and Material:** Two hundred and eighty four patients, ages varying from 5-101 years were enrolled into this study. All patients were identified retrospectively via the central database of our hospital. MPV and PDW values were recorded daily in patients who spent 10 or more days in ICU and weekly in patients who spent more than 10 days in ICU. Initial and final MPV and PDW values were recorded. The relationship between mortality and initial/final MPV and PDW values were evaluated. Changes in MPV and PDW values with respect to the age and length of stay in ICU were also investigated. The changes in MPV and PDW values, depending on the age and length of stay in ICU were analyzed with Pearson Correlation. Logistic Regression test was used for analysing the significant mortality predictor.

**Findings:** Mortality increased significantly in parallel with age. Prolongation of stay in ICU was also with higher mortality levels. There was no correlation between age and length of stay in ICU. MPV values towards the end of stay in ICU were significantly higher in patients who died. The relation between mortality and initial MPV and PDW values were not significant. There was a significant correlation between PDW values and length of stay in ICU, however there was no correlation between PDW and mortality.

**Results:** The initial values of MPV and PDW were not valuable as a predictor of mortality in mixed ICU population. Considering the high platelet volume of the new circulating platelets, our data suggest that more platelets participate in circulation at the end of the mortal process. Further studies are required, in order to detect the value of MPV and PDW as a predictor of mortality.



P-17

## A CASE OF HASHIMOTO'S ENCEPHALOPATHY

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**Introduction:** Hashimoto's Encephalopathy (HE) is a very rare condition associated with Hashimoto's thyroiditis. Here, we presented a case of 53-year-old woman with pre-diagnosis of encephalitis which is diagnosed as HE. She responded dramatically to high dose intravenous corticosteroid.

**Case description:** A 53-year-old Turkish woman with a medical history of hypothyroidism was admitted to the hospital with complaint of fever and confusion. Neurological examinations showed neck stiffness. Cognitive functions and intellectual performance were decreased. Glasgow coma score was 8/15. Ocular movement was full without nistagmus. Deep tendon reflexes were normal and without any pathological reflex. No apparent paresis, extrapyramidal signs or autonomic dysfunctions were found. Within an hour her Glasgow coma score became 6/15. We intubated the patient and started mechanical ventilation. Laboratory results showed normal electrolyte values, renal and liver functions. Lumbar puncture revealed no red or white blood cells, with normal protein and glucose levels. Normal serum thyroid-stimulating hormone of 2.43 mIU/mL (normal range 0.350-5.500 mIU/mL) and normal free thyroxine FT4 (1.21; normal range 0.9-1.8 ng/dL) was noted. A diagnosis of encephalitis was entertained and serum, CSF, urine studies were sent to investigate for a possible infectious process. Antibiotic and an antiviral agent was started. Viral, bacterial studies were normal. PCR detection of CSF herpesvirus DNA was negative. Anti-thyroid peroxidase antibody (anti-TPO-Ab) was obtained exhibiting elevated titers (235 IU/mL; normal range 1-9.0 IU/mL). Thyroid sonography showed signs of chronic thyroiditis. The diagnosis of HE was suspected and the patient was given 5 days of 1 g IV/day methylprednisolone. The day after, the patient was able to open her eyes and make our comments.

**Conclusion:** HE is a syndrome of encephalopathy, elevated serum antithyroid antibody concentrations, and response to corticosteroid therapy. Hashimoto's encephalopathy should always be in the differential diagnosis while evaluating central nervous system pathologies.

P-18

## A RARE PRESENTATION OF ACUTE MYOCARDIAL ISCHAEMIA FOLLOWING A HONEYBEE STING :KOUNIS SYNDROME

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In rural areas honeybee stings are not rare occasions and the treatment usually consists of routine use of antihistaminergic drugs and systemic corticosteroids when patients experience allergic reactions due to these stings. But the situation may not be that simple especially when acute onset chest pain accompany honeybee stings. In treating these patients ACS (Acute Coronary Syndromes) should be considered along with acute allergic reactions which is known as Kounis Syndrome. We describe herein a case of Kounis Syndrome in a patient who suffered an anaphylactic reaction after a honeybee sting.

**Introduction:** Kounis Syndrome, which was firstly described as allergic angina syndrome in 1991 is the concurrence of acute coronary syndromes with conditions associated with mast cell activation including allergy or hypersensitivity and anaphylactic or anaphylactoid insults.

**Case Report:** A 59-year-old farmer was admitted to the Dursunbey State Hospital Emergency Department following a honeybee sting by his right eye while he was working in his garden. His right eyelid and lips were swollen. The pain, itching and bulging was not relieved after ice pad application and after having difficulty in breathing and coarseness in his voice he had brought to the emergency department immediately. He did not have previous history of allergy, bronchial asthma, dermatitis or eczema. His therapy began with intravenous (IV) 50 mg of diphenhydramine and 40 mg of dexamethasone. The patient was taken to our intensive care unit for close monitoring. During his treatment, he complained of chest discomfort and sweating. The electrocardiogram (ECG) showed 2 mm of ST segment depression in II-III-aVF, and V3 through V6. Troponin I assay revealed elevated levels (0,035 ng/mL). Although his past medical history was unremarkable with no cardiovascular risk factors a possible ACS was suspected and standard treatment was initiated with oral administration of 300 mg acetyl salicylic acid and 2 mg of IV morphine. A repeated ECG showed the same findings and repeated Troponin I assay showed further increase (0,043 ng/mL). Despite the treatment the patient's discomfort was not relieved then it was decided to transfer him to the coronary care unit of the Balikesir State Hospital. The heart catheterization was revealed critical occlusion of proximal right coronary artery with collaterals and the patient offered a by-pass surgery.

**Conclusions:** The acute onset of chest pain accompanied by allergic symptoms should raise suspicion for the possibility of Kounis Syndrome. Two variants of Kounis syndrome has been described. The Type 1 variant includes patients with normal coronary arteries and represents a manifestation of endothelial dysfunction. Type 2 variant of Kounis Syndrome includes patients with preexisting atherosclerotic coronary arteries disease. Acute coronary syndromes following allergic reactions are associated with significant morbidity and mortality in hypersensitive individuals. Because of potentially atypical ACS clinical presentations, the ECG is an obligatory diagnostic tool in any allergic reaction. Along with ECG the initial cardiac studies should include the routine cardiac tests. These patients should follow-up in cardiology and allergy clinics following the hospital discharge Kounis syndrome should be considered in young healthy patients with no atherosclerotic risk factors when they develop acute coronary syndrome after administration of potentially allergic agents. Several drugs (antibiotics, analgesics, anesthetic agents), foods, environmental exposures (bee stings, ants, poison ivy, latex contact) have been reported as capable of inducing Kounis syndrome. Mast cells degranulation and the subsequent release of vasoactive mediators leads to coronary artery spasm. The manifestations of ACS in sting-induced hypersensitivity reactions could be completely atypical. Insect venoms contain several well-characterized allergens like peptides, proteins, and vasoactive amines including histamine, acetylcholine, norepinephrine and dopamine that can trigger anaphylactic reactions. These substances are responsible for direct venom cardiotoxicity. In our case, our patient was stung by a honey bee. The major allergen of honey bee venom is phospholipase A2. Other allergens in the bee venom are melitin, hyaluronidase and apanin. In our country there have been an increased interest in Kounis Syndrome. Although there are many valuable contributions to the current literature by Biteker et al. with this case report we would like to take attention to possible catastrophic results of seemingly harmless insect bites including honey bees.

## P-19

### MYXEDEMA COMA TRIGGERED BY UROSEPSIS IN A PATIENT WITH HYPOTYROIDISM

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**Objective:** Our aim in this case report is to emphasize that myxedema coma can be triggered by a process started with urinary tract infection progressed to urosepsis in a patient with hypothyroidism.

**Method and Material:** Morbidly obese female patient under age of 30 brought to our emergency clinic in a comatose state. Within 10 minutes of admission cardiopulmonary resuscitation was performed because of respiratory failure and cardiac arrest. After resuscitation patient was admitted to our intensive care unit.

**Results:** In her medical history it was found that the patient, who has hearing-impairment, was diagnosed with hypothyroidism 3 months ago but did not use steroid and hormone replacement therapy regularly. She has used analgesics and antibiotics intermittently in last two months due to left lumbar pain. During the last week lumbar pain was increased together with swelling in all of her body, especially in her face, eyelids and abdominal region. As learned from her family she was sleepy in last 24 hours. Vital signs were as follow upon admission: Pulse rate: 54/min, TA: 101/47 mmHg, respiratory rate: 7/min, body temperature: 34,5 °C. Physical examination; patient unconscious, GCS 3, pupil size equal, reactive to light bilaterally and cornea reflex positive bilaterally. Patient was intubated endotracheal and invasive mechanic ventilation initiated. Extensive facial swelling, short neck, per orbital edema, ptosis, coarse and sparse hair and macroglossia was determined as typical myxedematous face characteristics. Thyroid was non-palpable, skin was dry, pale and cold; unsplitting edema was positive in entire body. Abdomen was severely distended and bowel sounds were hypokinetic. Cardiac sounds were rhythmic and bradycardic, there were no extra sounds or murmurs. There were extensive rales bilaterally in pulmonary examination, sero-hemorrhagic foamy secretion was aspirated through endotracheal tube. Laboratory workup was as follows: WBC: 20900/ $\mu$ L, Hb: 9,6 g/dL, PLT: 274000/ $\mu$ L, c-reactive protein (CRP): 28,5 mg/L, freeT3: 0,82 pg/mL, freeT4: 0,31 ng/dL, TSH>150mIU/mL, BUN: 87 mg/dL, creatinin: 2,3 mg/dL, Na: 145 mmol/L, Ca: 8,5 mg/dL, glucose: 178 mg/dL, AST: 111 U/L, ALT: 77 U/L, CK: 1386 U/L, LDH: 1019 U/L. Arterial blood gas analysis during ventilation with %100 oxygen was pH: 7,065; PaCO<sub>2</sub> 82 mmHg, PaO<sub>2</sub> 44 mmHg, SO<sub>2</sub> %58 HCO<sub>3</sub> 24 mmol/L; acute respiratory acidosis determined. Urinalysis depicted pyuria and bacteriuria. There was no significant pathology in computed brain tomography. ECG revealed no pathology although troponin I was 0,07 ng/mL. Cardiomegaly was determined in chest radiography, in echocardiography minimal pericardial fluid detected. Also bilateral extensive infiltration consistent with ARDS was determined in chest radiography. Multiple stones detected localized to left kidney seen in abdominal USG. Oral levothyroxin and stress dose steroids (hydrocortisone) treatment started immediately. Empiric antibiotic treatment administered because of urosepsis. During follow-up TSH levels decreased but clinical state of ARDS persisted, DIC developed. Together with ARDS and DIC treatment hemodialysis executed due to acute renal failure. Because of hypotension and bradycardia vasopressor and inotropic support administered. After 10 days of follow-up the patient deceased.

**Conclusion:** Myxedema coma is a rare condition which has mortality rate of 30% in intensive care units. Infections, especially urosepsis, are among the most common triggering factors. Important factors in treatment are awareness of clinician, immediate administration of thyroid hormone replacement and hydrocortisone therapy, appropriate support treatment. Despite of high mortality rate early diagnosis can be life saving.

## P-20

### THE RETROSPECTIVE EVALUATION OF THE PEDIATRIC PATIENTS ADMITTED IN BURN INTENSIVE CARE UNIT

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This study aimed to compare the expected mortality rate of the 105 pediatric patients hospitalized in the burn intensive care unit between the years 2008 to 2012 with mortality rate of intensive care unit with respect to ABSI (Abbreviated Burn Severity Index) and PRISM (Pediatric Risk of Mortality) scores.

**Method and Material:** We reviewed the files of the 105 patients in age group 0-14 hospitalized in the burn intensive care unit between December 2008 to December 2012 in our study. We examined age, gender, hospitalization duration, type of burn, burn grade, living status, connection status to mechanical ventilation, ABSI and PRISM scores and expected mortality data of the patients.

**Findings:** According to the study data obtained from 105 patients; 39% (41) patients were female while 61% (64) patients were male. Mean age was 3,62 $\pm$ 3,3. With respect to type of burns; hot liquid burns, flame burns and electrical burns were found in 65,7% (69), 23,8% (25) and 7,6% (8) of the patients, respectively. Of the patients; 25,7% (27), 26,7% (28) and 17,1% (18) had 11-20%, 21-30% and 31-40% TBSA, respectively. Burn grades were second degree and second-third degree in 24,8% (26) and 53,3% (56) of the patients, respectively. Mortality was found 16,2% (17). Of the patients, 36,2% (38) needed mechanical ventilation. Mean hospitalization duration was 7,67 $\pm$ 11,44 (1-68) were days. Of the patients burned by hot liquids, 81,4% (61) were alive while 11,6% (8) died. Of the flame burned patients; 72% (18) were alive while 28% (7) died. When hospitalization duration was considered upon living status, 83,7% (72), 92,3% (12) and 66,7% (4) alive patients had hospitalization duration of 0-10 days, 11-30 days and 31 and more days, respectively. According to ABSI, mean ABSI score of the dead patients was 7,47 $\pm$ 2,69 whereas mean ABSI score of the alive patients was found 5,08 $\pm$ 1,71. Mortality rate was greater in the cases with higher ABSI score (p<0,001). Mortality was found higher in the cases with greater expected mortality rate according to PRISM (p<0,001). Mortality risk was 1,48-fold (1,06 – 2,07) higher in the cases with higher ABSI score (p<0,05). Mortality risk was 1,28-fold (1,04 – 1,59) higher in the cases with higher PRISM score (p<0,05).

**Results:** We conclude that ABSI and PRISM scores are not sufficient in determining mortality in burn intensive care units and that novel and further detailed scorings are required in determining intensive care unit.

P-21

### MORTALITY RATES OF PATIENTS SCHEDULED FOR POSTOPERATIVE INTENSIVE CARE UNIT

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Sisli Etfal Training and Research Hospital is a multi-disciplinary surgical institution. Though it is a central hospital, also patients with increased ASA status are undergoing different kinds of surgical procedures. We herein aimed to study our mortality rates of patients scheduled for postoperative intensive care unit (ICU) admission.

**Method and Material:** Retrospectively data of patients who admitted to our postoperative-ICU with 5 bed capacity were recorded including age, gender, discharge status and ICU stay for the time interval 01.01.2007-01.01.2013.

**Findings:** Totally 328 patients of 528 patients scheduled for postoperative ICU observation, admitted to the postoperative ICU. 173 (52.74%) were male and 155 (47.24%) were female. The youngest patient was a newborn and the eldest patient was 107 years old, age was  $58.66 \pm 23.67$  (Mean $\pm$ SD) years, ICU stay was  $4.58 \pm 6.12$  days. The main reason for postoperative ICU stay was emergency surgery (43%), followed by malignancy (31%) and cardiovascular diseases (18%). Totally 272 (82.9%) patients died.

**Results:** This study showed that patients scheduled for postoperative ICU observation have a high mortality rate and that these group of patients need attention in every step of hospitalization. But on the other hand only 62% of patients scheduled for postoperative ICU actually did admit. Also the surgeons should question their operation indications on pro and contra when they are dealing with unstable patients.

P-22

### INDICATIONS OF PERCUTANEOUS ENDOSCOPIC GASTROSTOMY IN OUR INTENSIVE CARE UNIT

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Percutaneous endoscopic gastrostomy (PEG) has become the modality of choice for providing enteral access to patients who require long-term enteral nutrition. This study aimed to evaluate indications and complications associated with PEG feeding.

**Method and Material:** We conducted a retrospective analysis over a period of 5 years of all patients who referred to our intensive care unit (ICU) with 7 bed capacity and were placed a PEG tube. Medical records of 49 patients dealing with PEG tube placement were reviewed to assess demographics, indications and complications. Data were expressed as Mean $\pm$ SD.

**Findings:** Patients' age was  $62.23 \pm 18.87$  years, 25 were female and 24 were male. ICU stay was  $84.97 \pm 53.72$  days. PEG was placed in  $32.68 \pm 21.96$  days during ICU stay. 57.9% died in the ICU and 42.1% were discharged alive. The indications for enteral feeding tube placement were central nervous diseases in 85.7% (n=42), of which 32.65% (n=16) patients were suffering of subarachnoid hemorrhage, 30.61% (n=15) of malignancy, 6.12% (n=3) of ischemia and 6.12% (n=3) of Alzheimer disease. Trauma was the mean reason of subarachnoid hemorrhage in 68.75% (n=11). In 6.12% (n=3) minor complications occurred which included wound infection (4.08%) and tube blockage (2.04%). 8.16% (n=4) patients experienced major complications including hemorrhage (4.08%), buried bumper (2.04%) and perforation (2.04%). There were no deaths related to PEG procedure placement and the overall 30-day mortality rate due to primary disease was 40.9%. All tubes were placed permanent.

**Results:** Percutaneous endoscopic gastrostomy is a save and minimally invasive endoscopic procedure associated with an acceptable morbidity (14.28%) rate and easy to follow-up.

P-23

### GUIDANCE FOR INTENSIVE CARE PHYSICIANS BY POST-MORTEM FINDINGS PRESENT AFTER A SUCCESSFUL CARDIOPULMONARY RESUSCITATION (CADAVER STUDY)

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Successful applications of Cardiopulmonary Resuscitation (CPR) after a Cardiac Arrest (CA) have been increasing in recent years. As anesthesiologists and reanimation doctors, one of the patient groups we frequently follow in intensive care units is patients receiving a successful CPR. In this study, post-mortem reports of patients who had a cardiac arrest due to non-traumatic reasons, received CPR but died afterwards have been retrospectively examined and the findings and their relation to CPR have been ascertained. It is considered that some opinions can be obtained regarding the localization and severity of iatrogenic traumas of thorax, mediastinum and other body parts in the course of patients' follow-up and treatments in intensive care units.

**Method and Material:** After obtaining the scientific committee's, this study was conducted with examinations on 9534 post-mortem reports in total performed in the Republic of Turkey Ministry of Justice İstanbul Forensic Medicine Institution between January 2010–August 2012. Post-mortem findings of the total 702 cases which had CA due to non-traumatic reasons, received CPRs and died afterwards were evaluated. The findings including the inscription "reanimation is possible" in the post-mortem reports were recorded. Such data as age, sex, body height and weight and pregnancy of the cadavers whose post-mortem findings had been obtained and the causes of their death were recorded. The team applying the CPR was classified as the ambulance transport and emergency service team (Group ATEST), the clinical team (Group CT) and the intensive care unit team (Group ICUT). CPR-induced traumatic findings of the cases were statistically evaluated after classified according to their ages as aged over 65, aged between 19-65 and aged 18 and below.

**Findings:** 542 of 702 cases which received CPR and underwent autopsy were male (77.2%) and 160 of them were female (22.8%). The most frequent macroscopic finding of CPR-induced trauma was rib fractures with 444 cases (63.2%); the mean number of rib fractures of the 444 cases which had at least one rib fracture was 6.9, while the mean number of rib fractures of all 702 cases receiving CPR was 4.4.

**Results:** Our purpose in conducting this study is to gain an insight to how we can manage intensive care follow-ups of the cases resuscitated to life after CPR, in the light of the knowledge and findings we acquire from the cases that died after CPR. Our aim is to correctly guide the examination and treatment of patients admitted to intensive care units after successful CPRs and to provide care in better conditions for the patients resuscitated to life after a serious effort. The fact that CPR-induced life-threatening major complications are observed rarely, their vital findings in the patient group are generally unstable, and these complications do not cause a significant difference in terms of prognosis demonstrates that routinization of advanced examinations to be conducted will not be much practical and beneficial. The benefit of chest radiography is questionable; however, we can suggest that a bedside monitoring method such as ultrasonography may be more appropriate for intra-abdominal, pleural cavity and pericardial evaluations. Use of prophylactic antibiotics after CPR in ICUs is not suggested; however, 4% possibility of pulmonary aspiration within our findings should not be ignored. Finally, application of analgesic for bone fracture pains should not be ignored for patients with high coma scores who receive chest compression and are admitted to intensive care units.

## P-24

### RETROSPECTIVE ANALYSIS OF VENTILATOR ASSOCIATED PNEUMONIA IN AN INTENSIVE CARE UNIT

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Ventilator-associated pneumonia (VAP), is the most frequent nosocomial infection in the ICU, and it complicates the course of the illness by increasing mortality rate, hospital length of stay, and costs for patients who acquire it. Every ICU should know their own epidemiological features for there are various factors which play a role in isolation of resistant pathogens. The aim of this study was to examine microbial causes of VAP and describe any variability by the timing of VAP onset and antibiotic usage before VAP retrospectively.

**Method and Material:** This retrospective study was performed in one of the ICUs in Ankara Numune Training and Research Hospital. It was performed between January 2010 and December 2012 with patients undergoing mechanical ventilation. We analyzed demographic data, APACHE II scores, length of stay in ICU, length of mechanical ventilator, time to start of VAP causative factors and mortality rate.

**Findings:** Total 52 cases of VAP were encountered among 1101 inpatient cases in our unit in 3 years. Mean age, APACHE II score, length of stay in ICU, length of mechanical ventilator and time to start of VAP were  $61.4 \pm 22.9$  years,  $15.0 \pm 6.9$  points  $35.1 \pm 23.8$  days,  $32 \pm 21.7$  days,  $18.2 \pm 14.2$  days respectively. The rate of VAP (12.88, 7.77 and 18.59 for the years of 2010, 2011 and 2012 respectively) and, the rate of the use of mechanical ventilation (0.61, 0.46 and 0.49 for the years of 2010, 2011 and 2012 respectively) were found to be similar to the mean relevant rates of Turkey. It was seen that the rate of late VAP high having the leading causative factor to be *Acinetobacter Baumannii*. There have been a history of use of antibiotics in most of the patients having VAP.

**Results:** We are in opinion that the preventable risk factors should be reviewed for decreasing the frequency of VAP in our unit which are encountered mostly in the late phases and arisen from resistant bacteria.

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## P-25

### EVALUATION OF PATIENTS' RELATIVES SATISFACTION IN THE INTENSIVE CARE UNIT

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For the purpose of defining and improving the quality of the health services given in the ICUs, we assessed family satisfaction by applying questionnaires to family members of patients.

**Method and Material:** Between July 2012 and March 2013 in order to evaluate satisfaction of family members of patients who had been presenting 3 days or more in the level 3 ICUs of our department and factors influencing family satisfaction, we prepared a 30 item questionnaire. In this questionnaire treatment and care of the patient, quality of information given about the patient, attitude of ICU staffs towards family members and their feelings, being able to perceive the conditions of the patient and the ICU, conditions of waiting room and decision making process had been investigated. Questionnaires had been applied while the patients had still been treated in the ICU.

**Findings:** Between the dates in which our study had been performed, 401 patients had been presented 3 days or more in our ICUs. Among these, families of 211 of them accepted to be involved in our study (Respond rate %52.6). Satisfaction rate results are transformed into points between 0 and 100. According to the results of our questionnaire, family members are found to be well satisfied with the treatment and care of their patients (87.29 pts.), information given about their patient (77.43 pts.), concern shown to them (75.09 pts.) and the decision making process (70.14 pts.). They are also able to perceive the condition of their patient and the conditions of the ICU in high grade (85.94 pts.). Family members are found to be moderately satisfied with the interest shown to their feelings (59.27 pts.) and weakly satisfied with the waiting room conditions (33.38 pts.). Among the properties of family members; age, proximity of the relationship, whether living with the patient or not, education level, and previous ICU experience have no meaningful impact on satisfaction ( $p > 0.05$ ). However, satisfactions of male respondents and family members living in the same city of hospital were found higher in some of the subtitles.

**Results:** Staffs of the intensive care unit are seemed to be successful in knowledge, skill and behaviour according to the family members. However, waiting room conditions and providing services for the patients' needs are required to be improved.



P-26

## DEXMETOMIDINE IN THE MANAGEMENT OF SEVERE TETANUS

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A 53-yr-old man complained of dyspnea, upper lip twitching, difficulty in swallowing and a local abscess around his right foot. He had a medical history of a penetrating wound in his right foot 11 days ago. Antibiotics and human tetanus immunoglobulin were administered, and surgical debridement of the wound was performed. Because of respiratory failure due to generalized muscle spasm, he was intubated and mechanically ventilated. Midazolam was administered as an antispastic therapy and magnesium sulphate was used to control spasms and autonomic disturbance. Dexmedetomidine infusion was started and midazolam infusion was discontinued on day 5 after intubation, since muscle spasm did not improve under midazolam and magnesium sulphate therapy. Thereafter, the patients muscle spasms and sympathetic over activity were well controlled. But on day 10, the patient developed severe bronchopneumonia, and died on day 12. This case suggests that the use of dexmedetomidine is an optional therapy in the management of sympathetic over activity (SOA) in patients with severe tetanus.

P-27

## ISCHEMIC PRECONDITIONING ATTENUATES LIPID PEROXIDATION AND APOPTOSIS IN CECAL LIGATION AND PUNCTURE MODEL OF SEPSIS

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**Objectives of study:** Sepsis and septic shock is one of the major cause of death in the intensive care unit. Lung and kidney are most affected organs in sepsis. There were evidences that lipid peroxidation and apoptosis may be responsible high mortality in sepsis. Ischemic preconditioning (IP) is a method of protection tissue/organs against to ischemia reperfusion injury via reducing reactive oxygen species, lipid peroxidation and apoptosis. We investigated the effects of IP in CLP induced sepsis in the rats.

**Method and Material:** After the approval of ethics committee for Research Animals, three groups of animals were used in this controlled study: the sham-operated group (Sham, n:7) which only underwent a laparotomy; the sepsis group (Sepsis, n:7) which underwent cecal ligation and perforation; and the ischemic preconditioning+sepsis group (IP+sepsis, n:7) which underwent CLP and immediately after three cycles of IP applied to the hind limb. Study was terminated at 6 hours after induction of CLP. Blood and kidney-lung tissue samples collected for determination of serum creatinine, blood urea nitrogen (BUN), neutrophil gelatinase associated lipocalin (NGAL), lung tissue malondialdehyde (MDA) levels and for histological examinations and apoptosis.

**Findings:** Serum creatinine, plasma NGAL and lung tissue MDA levels in the sepsis group were significantly increased compared with the sham and the IP+sepsis groups ( $p<0.05$ ). Alveolar macrophage count, histologic kidney and lung injury scores, kidney (caspase 3) and lung tissue immunoreactivity (M30) scores in the sepsis group were significantly increased compared with the sham and IP+sepsis groups ( $p<0.05$ ). Alveolar macrophage count in the IP+sepsis group were increased compared with the sham group ( $p<0.05$ ).

**Results:** In conclusion, IP inhibits lipid peroxidation and attenuates histologic injuries and apoptosis in lung and kidney in sepsis.

P-28

## EVALUATION OF NOSOCOMIAL INFECTIONS AND DETERMINATION OF RISK FACTORS IN INTENSIVE CARE UNIT PATIENTS

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Nosocomial infections are a prominent problem resulting in high mortality. Intensive care units (ICU) are the areas where nosocomial infections are mostly common. The present study aimed to to determine the frequency of hospital infections, hospital infection and mortality rate, infectious agents, risk factors for development of infection in a General ICU at Ankara Numune Education and Research Hospital.

**Method and Material:** This retrospective study was conducted between November, 2009 and August, 2011 at the General ICU of our hospital. APACHE II score, average age, sex, intensive care unit stay, the primary diagnosis, presence of any sub-diseases, any history of operations, number and days of invasive procedures, ventilation support were recorded. Total parenteral nutrition (TPN), enteral feeding days, renal replacement therapy, usage of multiple drug therapies such as sedatives, steroids were also concerned. The diagnosis of hospital infection was made according to the criteria of the Centers for Disease Control and Prevention (CDC) and 159 of 705 patients were determined in whom infectious agents were isolated in this study.

**Findings:** Rate of nosocomial infection in ICU in this period was determined as 22.5%. Age ( $p=0.000$ ), hospital stay ( $p=0.000$ ) and APACHE II score ( $p=0.000$ ) were determined as significant and independent risk factors for development of infection. The mortality rate in patients who developed nosocomial infection was 72.3% whereas in patients who dose not developed hospital infections the mortality rate was 39.7%. The other risk factors for development of hospital infection were the presence of mechanic ventilation, tracheostomy, arterial cannulation, pleural catheter, central venous catheter and paracentesis. There was no statistically significant difference between patients for the usage of chest tube ( $p=0.067$ ). Also TPN, enteral feeding days, renal replacement therapy, usage of multiple drug therapies such as sedatives, steroids were determined as a risk factor for development of hospital infection. Nosocomial pneumonia (38.5%), nosocomial urinary system infection (33.6%) and blood stream infection (20.6%) were most frequently seen infections in ICU patients. Most frequently isolated microorganisms were *Acinetobacter baumannii* (28.7%), *Pseudomonas aeruginosa* (15.9%) and *Klebsiella pneumoniae* (14.6%).

**Results:** In order to reduce the infection rate in ICU, the studies on the risk factors for development of infection must be developed in every hospital. All invasive procedures, as the risk factors of infections, should carefully be indicated. Investigating the infectious agents and antibiotic susceptibility patterns, will provide more appropriately specific infection control measures.



P-29

### INVASIVE DEVICE ASSOCIATED HOSPITAL INFECTIONS IN THE INTENSIVE CARE UNIT

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As our hospital is an oncology teaching hospital, generally old patients with malignancy and comorbidities are followed in the intensive care unit (ICU). This increases the use of invasive devices and risk of related infections. The objective of this study is to investigate prevalence of invasive device usage and rate of related infections in 4 years period between January 2009 and December 2012 in our ICU.

**Method and Material:** Laboratory dependent active surveillance data of Infection Control Committee for 4 years were evaluated retrospectively. Hospital acquired infections (HAI) were described according to CDC criteria. Definitions: CA-UTI: Catheter Associated Urinary Tract Infection CVCR-BSI: Central Venous Catheter Related Bloodstream Infection VAP: Ventilator Associated Pneumonia UC: Urinary Catheter CVC: Central Venous Catheter Formulas below are used in calculations Invasive device usage rate= invasive attempt Day/ hospitalisation day Device associated HAI rate= invasive device associated infection rate / invasive device attempt day x 1000

**Findings:** A total of 491 invasive device associated HAIs were detected in 1673 patients that were followed in ICU between 2009-2012. CVCR-BSIs were most frequent HAIs during the first 2 years period (rates:23,01 and 19,74); but VAP became prominent in last 2 years (rates:24,10 and 20,39). When evaluated by means of years, while ventilator usage rates increased by time (0,61 - 0,63 - 0,71 - 0,73), VAP rates increased in first 3 years then it decreased in the last year (17,46 -18,23 - 24,10 - 20,39). While urinary catheter usage rate didn't change by time (0,95), CA-UTI rate increased in the first 3 years period then it decreased in the last year (9,86 - 11,86 - 14,57 - 12,81). Central venous catheter usage ratio didn't change by years (0,74) whereas CVCR-BSI rates decreased gradually (23,01 - 19,74 - 12,15 - 11,50).

**Results:** The majority of the patients hospitalised in our ICU were operated oncology inpatients or bone marrow transplanted hematology patients. For this reason hospitalisation duration was long and invasive device usage rates were high. Therefore invasive device related infection rates seem high as expected. The reasons of decrease in rates of CVCR-BSI during this 4 year period and VAP in last year period are application of infection control precautions as a care bundle, hand hygiene and short duration of invasive device usage. This study shows that infection control programs if carried out effectively, invasive device related infection rates could decrease.

P-30

### ACINETOBACTER INFECTIONS IN ICU

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Hospital acquired infections (HAI) with Acinetobacter species have been a major problem in hospitals since the microorganism is resistant to most of the available antibacterial drugs. The aim of this study is to assess the number of hospital acquired infections in our intensive care unit (ICU) caused by Acinetobacter species and the resistance patterns of the microorganism during a period of four years (Jan 2009-Dec 2012).

**Method and Material:** HAIs were assessed by using active surveillance method. The HAIs were defined according to Centers for Disease Control and Prevention (CDC) criteria. The isolates were identified by using conventional methods and VITEK 2 system (VITEK 2 Compact, bioMérieux). Antimicrobial resistance patterns were described according to Clinical and Laboratory Standards Institute (CLSI) guidelines. CA-UTI: Catheter Associated Urinary Tract Infection CVCR-BSI: Central Venous Catheter related bloodstream infection VAP: Ventilator associated pneumonia

**Findings:** 540 HAIs were observed in ICU during this time period. Acinetobacter spp were isolated from 161 (29,8%) of them. Most of the Acinetobacter strains were isolated from VAP. Evaluation of antimicrobial resistance in this microorganism shows that all of them were resistant to Ampicillin-sulbactam, carbapenems, quinolones and piperacillin-tazobactam during these four years period. Ceftazidime resistance increased from 59% (in 2009) to 96% (in 2012). While there was no resistance to colistin and tigecycline in 2009, in 2012 resistance rates increased slightly (8% for colistin and 13% for tigecycline). Resistance rates were increased for amikacin and gentamicin in the first three years (33%, 58%, 80% and 3%, 72%, 82% respectively), but as they were not preferred as the first choice in the treatment of Acinetobacter infections in ICU, aminoglycoside resistance rates decreased in the last year (63% and 49%).

**Results:** Infections with nonfermentative gram negative bacteria have become a major problem in ICUs. Acinetobacter is one of the most common pathogens isolated from HAIs. The microorganism can spread by hands of health care workers, contamination of environmental surfaces and medical equipments. Colonised or infected patients are the primary reservoirs. As most of the strains are multidrug resistant, it is difficult to treat infections caused by this agent. Active surveillance of infection and colonisation by this microorganism, infection control measures and antibiotic prescribing policies can reduce infections with this pathogen in ICUs.

P-31

### READMISSION TO INTENSIVE CARE UNIT AFTER CORONARY BYPASS OPERATIONS

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The purpose of this study is to analyze the outcome results of coronary bypass operations from a single institution. The readmissions to intensive care unit (ICU) have been analyzed in detail in order to find out the risk factors.

**Method and Material:** In this retrospective study, we analyzed the prospectively collected data of 679 coronary bypass patients. The outcome data of patients was evaluated with logistic regression analysis and the outcome data of patients readmitted to ICU (Group R) were compared with patients not readmitted to ICU (Group N).

**Findings:** Of these 679 patients, 36 (5.3%) were readmitted to ICU. Postoperative in-hospital mortality, pulmonary and neurologic morbidity occurred in 43 (6.3%), 135 (19.9%) and 46 (6.8%) patients, respectively. The comparison of Group R and Group N showed that the differences were significant (mortality 16.7% vs 5.9,  $p=0.029$ ; pulmonary morbidity 66.7% vs 17.3%,  $p=0.0001$ ; neurologic morbidity 38.9% vs 5.0%,  $p=0.0001$ ). Presence of left ventricular dysfunction preoperatively (Odds ratio (OR)=4.1; 95% Confidence interval (CI)=1.4-12.5;  $p=0.013$ ), advanced NYHA Class (OR=5.3; 95% CI=1.3-21.7;  $p=0.022$ ), pulmonary complications (OR=7.3; 95% CI=2.1-25.5;  $p=0.002$ ) and neurologic complications (OR=4.6; 95% CI=1.3-16.7;  $p=0.021$ ).

**Results:** Patients readmitted to ICU postoperatively have higher rates of mortality, pulmonary and neurologic morbidity after coronary bypass operations. Left ventricular dysfunction, advanced NYHA class, and postoperative pulmonary and neurologic complications are significant risk factors for readmission to ICU.

P-32

### BLOOD TRANSFUSION IN CRITICALLY ILL PATIENTS

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Some studies showed that increased blood transfusion is associated with prolonged Intensive Care Unit (ICU) stay and higher mortality rates. However, it is well known that anemia increases tissue hypoxia in the critical ill patient. In this study we aimed to discuss transfusion frequency and threshold values of transfusion in our ICU.

**Method and Material:** Data of 237 patients hospitalized in the ICU of Sisli Etfal Training and Research Hospital with 7 bed capacity during the year 2011 were analyzed retrospectively. Age, gender, ICU stay, blood transfusion amount, hemoglobin (Hb) level before transfusion and mortality was recorded. Data was presented as Mean±SD

**Findings:** Age was 44,76±18,55 years, male/female ratio was 130/108. ICU stay was 10,79± 9,87 days. Totally 183 patients were transfused 252 Units of red blood cells (RBC). 114 patients received one Unit, 69 patients received more than two Units of RBC. The Hb level was 8,62±2,2g/dl in the transfused patients. 68 patients were transfused with Hb <7g/dl, ICU stay was 10,83±8,42 days and mortality was 33,8% (n=23). 43 patients received transfusion with a Hb <8 g/dl, ICU stay was 10,76±8,96 days and 41,8% (n=18) died. 52 patients received transfusion with Hb < 9g/dl, ICU stay was 13,63±10,2 days and mortality was 73% (n=38). 20 patients were transfused with Hb <10 g/dl, ICU stay was 19,03±12,67 days and 65% (n=13) died. The ICU stay in not transfused 54 patients was 10,81±7,63 days and 42,5% (n=23) died.

**Results:** While ICU stay was not prolonged and mortality was not increased in the patients transfused with a Hb level of 7-8 g/dl which was similar to the not transfused patients, it was just the opposite in patients receiving transfusion with Hb level 9-10g/dl. We think, that a restrictive blood transfusion protocol in the ICU might be a better strategy to prolong life. But we also think that further studies on tissue oxygenation should be conducted.

P-33

### OCCULT METABOLIC ALKALOSIS: INCIDENCE AND REASONS

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Incidence of metabolic alkalosis is high in ICU. However, detection of it may be problematic by using Henderson-Hasselbalch approach especially when metabolic acidosis accompanies to metabolic alkalosis. We aimed to investigate the incidence and etiology of metabolic alkalosis according to Stewart approach on admission to intensive care unit.

**Method and Material:** We retrospectively analyzed clinical and biochemical variables of 183 patients on admission to intensive care unit. Data included simultaneous measurement of arterial blood gas, serum electrolytes, albumin, lactate, creatinin and phosphate values. Physicochemical analysis was used to calculate the strong ion difference (SID), total weak acids (Atot) and the corrected base excess (BE). Age, sex, mortality, diagnosis and APACHE II scores were also recorded. Occult metabolic alkalosis was defined as SID>38 mEq/L or Atot<11 mmol/L while BE≤2.

**Findings:** Incidence of metabolic alkalosis was 20% with Henderson-Hasselbalch and 50% with Stewart approach ( $p<0.05$ ). Occult metabolic alkalosis was detected in 54 patients (30%). Both BE and corrected BE was not a good indicator to determine metabolic alkalosis. The reasons of alkalosis were low Atot (96%) and high SID (4%) ( $p<0.05$ ).

**Results:** Incidence of occult metabolic alkalosis is high in the ICU. To detect metabolic alkalosis cases, Stewart method is superior than Henderson-Hasselbalch approach and BE. Hypoalbuminemia was the most common cause of the metabolic alkalosis.

P-34

### INCIDENCE OF BRAIN DEATH RELATED CLINICAL FINDINGS IN OUR ICU

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The aim of this clinical study was to define the incidence of brain death related clinical findings during declaration period in our ICU.

**Method and Material:** 44 brain dead patients who admitted in Akdeniz University Hospital Anesthesia ICU between January 2011 and December 2012 were included in the study.

**Findings:** Incidence of spinal reflexes was %20. Sympatic storm was defined in 16 patients (%36). 33 patients (%75) revealed Diabetes Insipidus. Hemodynamical compromise requiring vasoactive agent support was obtained in 36 patients (%81). Apnea testing could not be performed in 3 patients because of hypoxia and hemodynamical deterioration during the procedure. Transcranial Doppler Ultrasonography (TDU) (29 patients) or single photon emission computed tomography (SPECT) (15 patients) was performed for declaration of brain death. The duration of declaration period after diagnosing brain death by clinical examination was 25 hours and 12,3 hours, respectively.

**Results:** Hemodynamical compromise, diabetes insipidus and sympatic storm were the most frequent clinical findings in brain dead patients. The declaration duration was shorter for the patients in whom brain death was confirmed by SPECT in our ICU.

## P-35

### THE MANAGEMENT OF TWO CASES WITH SEVERE OVARIAN HYPERSTIMULATION SYNDROME IN THE ICU

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**Objectives of the study:** Ovarin hiperstimulation syndrome (OHSS) is a severe complication result from in vitro fertilization (IVF) therapies. The patients may develop multi-organ failure requiring multidisciplinary care in the ICU setting. We report the management of two cases of severe OHSS which required ICU admission in our university hospital.

**Materials and methods:** A 28 year old patient was admitted in the ICU at day 15 of IVF therapy with periferical oedema, pleural effusion, chest pain, tachypnea, dispnea and oliguria. The second patient was a 29 year old female who was administered follitrophine alpha and chorion gonodotrophine alpha for IVF 10 days ago. She was admitted to ICU with massive pulmonary oedema, central cyanosis and hypoxemia.

**Results:** The first case was mechanically ventilated for 4 days. Intravenous albumin, diuretics and low molecular weight heparin (LMWH) were administered. Chest tube was inserted in right hemithorax. The patient was discharged from the ICU at day 5. The second patient was emergently intubated and invasive monitorization was performed. At second day of admission, secondary ARDS was defined and she was mechanically ventilated in the following 24 days with pulmonary protective strategies. Diuretics, sedatives and muscle relaxants, broad spectrum antibiotics and LMWH were administered during the ICU stay. The patient were transported to ward at day 29.

**Conclusions:** OHSS may lead to ICU admission because of extravascular fluid shift, pleural and pericardial effusion, hypovolemic shock, electrolyte imbalance, thromboembolus or multiorgan insufficiencies. Management of Organ Supportive care may be required in severe cases.

## P-36

### RETROSPECTIVE ANALYSIS OF PULMONARY EMBOLISM CASE ADMITTED TO ICU IN LAST YEAR

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Pulmonary embolism(PE) is a life threatening vascular emergency. Blockade of pulmonary artery may cause life threatening acute right ventricle failure. We aimed to share our experience of PE cases admitted to our intensive care unit within last year in this retrospective analysis.

**Method and Material:**Patients admitted to ICU with PE are scanned for demographic and hemodynamic parameters, concomittant diseases, symptoms, findings in physical examination, GCS, APACHE II Score, laboratory findings; ECG, chest X-ray, Echocardiography, thorax CT-angiography scores; clinical findings and treatment modalities.

**Findings:**Seventeen male twelve female patients were admitted to our intensive care unit with PE during last year. Most common predisposing factor was immobilization (62%), most common symptom was dyspnea (65%) and most common sign was tachypnea (69%). Seven patients presented with cardiogenic shock. Most common accompanying medical conditions were coronary artery disease, heart valve disease, Alzheimer's disease, history of cerebro-vascular incident. Five of the patients were diagnosed with PE during hospitalization because of lower extremity fractures. Mean APACHE II score was 19.1, mean GCS was 10.8. In laboratory evaluation acute renal failure was detected in 7 patients, ALT and AST levels were increased in 10 patients. In 19 patients (65%) cardiogenic shock or hypotension due to sepsis developed and inotropic agents were used. Abnormal ECG findings were atrial fibrillation (44%), sinus tachycardia (17%), VES (7%). Chest X-ray revealed mostly bilateral hilar mild hyper density, 5 patients (17%) had accompanying pleural effusion. Echocardiography revealed increased pulmonary artery pressure (PAP) in all patients (mean PAP= 55 mmHg). Two patients had ejection fraction (EF) below 40% (mean EF=54%) PE diagnosis was confirmed by thorax CT-angiography in 22 patients. Seven patients had massive, 16 patients had segmentary or sub-segmentary embolism. CT-angiography could not be performed in 7 patients because of severe renal failure or cardiogenic shock upon admission, two of these patients were admitted to intensive care unit per-operative period with PE suspicion and transferred to orthopedics ward in 2 days after clinical improvement. Nine patients (31%) needed invasive mechanical ventilation upon admission, 7 other patients were intubated after admission. Non-invasive pressure controlled mechanical ventilation used for 6 patients, for other patients oxygen support with facial mask was sufficient. Mean mechanical ventilation time was 4.7 days; mean hospitalization time in ICU was 10.3 days. In three patients hospitalization in ICU was prolonged due to accompanying diseases and sepsis. All patients were treated with LMWH. Thrombolytic agents used for 8 patients after assessment of risk factors and written informed consent, their mortality rate was 25%. One patient who received LMWH and one in thrombolytic group experienced hemorrhagic complications. Twelve patients (41%) were discharged with full recovery, one of them had massive PE.

**Results:**Estimated mortality rate after PE is 10-15%, however it is reported to be higher in hemodynamically unstable patients reaching up to 60%. In Turkey immobilization and geriatric population is increasing, thus preventive measures should be implemented.

P-37

### BRUCELLAR SPONDYLODISCITIS IN A CRITICALLY ILL PATIENT WITH PARAPARESIS

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**Introduction:** Brucellosis is a sporadic disease that is seen in animals and also in humans when contaminated milk or milk products are used by them. The symptoms and clinical findings include fever, headache, myalgias, cough, sweats, back pain, hepato-splenomegalia, lymphadenopathy, osteoarticular manifestation such as arthritis, osteomyelitis, bursitis, and sacroileitis. Herein, we presented a critically ill patient with paraparesis due to spondylodiscitis because of brucella.

**Case Report:** Eighty-one years old male patient admitted to Emergency Department with symptoms of dyspnea, difficulty of walking and tiredness. Paraparesis was detected at neurological examination. Cranial computerized tomography and magnetic resonance imaging (MRI) were normal. Lumbar puncture was performed to confirm pre-diagnosis of Guillain-Barre syndrome but protein level was found normal in cerebrospinal fluid. Patient was intubated due to hypercarbic respiratory failure. Then he was transferred to intensive care unit (ICU) to perform mechanical ventilation and to research a neurological problem. APACHE II score and Glasgow Coma Scale were 18 and 7, respectively. Antibiotherapy was started because of pneumonia. Blood test and radiological examination were performed. MRI of lumbosacral spine revealed evident findings consistent with spondylodiscitis in level T8-9 and L4-5 vertebrae. Brucella spp. was produced in his blood culture, and doxycyclin and rifampicin were added to his medication. Additionally, Rose Bengal and Brucella agglutination tests were resulted as positive. At 7th day in ICU, he was extubated. Conscious patient with stable hemodynamics was transferred to Infection Disease Clinic at the day of 16th of ICU.

**Discussion and Result:** Brucellosis is hyperendemic in some countries such as Turkey, Portugal, Greece, India, Mexico. Musculoskeletal system is affected with female dominance and estimated to account for about 2 to 53% of cases. Lumbar vertebrae are the most frequently involved region in brucellar spondylitis. Waist and back pain is seen in this patients, and they may have complaints about difficulty in walking, myalgia and night pain. Difficulties in the diagnosis of brucella spondylitis may cause a delay in appropriate treatment, and the disease may lead to devastating consequences when associated with neurological complications. Our patient had Brucella diagnosis one week after the ICU admission and his progression got better after his medication changed according to the diagnosis. In conclusion, brucellar spondylodiscitis should always be in the differential diagnosis of vertebral pain or neurological symptoms, especially if the patient lives in an endemic area.

P-38

### CAN DECUBITUS ULCERS BE PREVENTED?

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Decubitus ulcer is a remarkable reason for morbidity or even mortality. Eventhough the main purpose is protecting the patients from decubitus ulcer during the follow-up and treatment; grade1 decubitus may be overlooked and/or passes through the grade 2-3. Our purpose is determining decubitus at grade1 and prevent from upgrading.

**Method and Material:**“Wound Prevention and Maintenance Committee” (WPMC) was founded in 2012. The aim of the committee is to improve the awareness of the staff, to identify the decubitus at grade1 phase and make treatment. We use barrier creams, transparent films, position cards for prevention and nonadherented coverings, hydrogel, hydrocolloid mousse, alginate for treatment. The patients who hospitalized with already existing decubits are not included to the study.

**Findings:**RATES OF DECUBITUS ULCERS IN 2012 BY BODY AREAS (%) ; Sacrum: 31, heel: 15, feet toes: 8, scapula:12, external ear: 8, left gluteal: 31, right gluteal: 4, arm: 4, right ankle: 4, right femoral: 4 RATES OF DECUBITUS ULCERS IN OUR INTENSIVE CARE UNIT BY YEARS(%); 2009: 8, 2010: 5.2, 2011: 3.3, 2012: 4.7

**Results:**The decubitus is seen much more in sacrum and left gluteal area according to our findings. Early treatment in grade 1 ulcers prevent the requirement of greft and/or flep. Five patients passed through grade 2 and those were at the sacral region. After the beginning of the study,no decubits are detected outside the sacral area. There are no patients detected as grade 3. Eventough the grade 1-2 rates seem to be more than 2011, the awareness of the staff and decubits detected in grade 1 is increased; so the progression to grade 2-3 is decreased. As aresult the occurrence and upgrading of decubitus ulcers were decreased by the working of WPMC and the follow-up of position cards.



## P-39

### KORONER ARTER BYPASS CERRAHİSİNDE REMİFENTANİL VE FENTANİL İNFÜZYONLARININ HEMODİNAMI, YOĞUN BAKIMDA KALIŞ SÜRESİ VE PROPOFOL TÜKETİMİNE ETKİSİ

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Koronar arter bypass cerrahisi uzun süreli yoğun bakımda yatış süresi ve çoklu ilaç kullanımını gerektiren, yüksek maliyetli bir cerrahidir. Kısa etkili opioidler erken uyanmanın yanı sıra, kullanılan ilaç miktarında, yan etki profilinde, yoğun bakım kalış süresinde azalma sağlayabilir (1). Bu çalışmada koroner arter bypass cerrahisi geçiren hastalarda intraoperatif remifentanil ve fentanil kullanımının hemodinami, BIS değerleri, ekstübasyon zamanı, propofol tüketimi, postoperatif yoğun bakımda kalış süresi, toplam ilaç tüketimi ve maliyeti üzerine etkisini araştırmaktır.

**Method and Material:**Çalışmaya 40-65 yaş arasında ASA III-IV 60 hasta dahil edildi. Hastalar operasyondan 30 dakika önce 0.3 mg/kg i.m. midazolam yapıldı. Hastalara EKG, pulse oksimetre, invaziv arter kateterizasyonu, BIS monitörizasyonu yapıldı. İndüksiyonda Grup F'ye 2-3 mg/kg propofol + 0.6mg/kg rokuronyum +5- 10mcg/kg fentanil, Grup R' ye 2-3 mg/kg propofol + 0.6mg/kg rokuronyum + 1-2mcg/kg remifentanil yapıldı. İntraoperatif dönem ve yoğun bakımda, BIS değerleri, PAB, ısı, KH, OAB takipleri yapıldı. İdamede Grup F'ye %2-3 sevofluran + %50 oksijen- hava, 0.1-0.5 mcg/kg/dak fentanil infüzyonu; cilt insizyonu ve sternotomi öncesinde 5mcg/kg fentanil bolus, Grup R'ye ise % 2-3 sevofluran + %50 oksijen-hava, 0.5-1mcg/kg/dak remifentanil infüzyonu, cilt insizyonu ve sternotomi öncesinde 0.25-1 mcg/kg remifentanil bolus uygulandı. Her iki gruba da ekstübasyona kadar 50-100 mcg/kg/dk dozunda propofol infüzyonu başlandı. Ekstübasyondan 24.saate kadar VAS değerleri kaydedildi. Perioperatif opioid ve propofol tüketim ve maliyetleri, yoğun bakımda kalış süreleri, ekstübasyon zamanı ve hasta memnuniyeti kaydedildi.

**Findings:**İki grup arasında demografik veriler bakımından fark yoktu. Grup R'de KH tüm zamanlarda ( $p<0.001$ ), OAB değerleri ise indüksiyondan yoğun bakım 1. saatine kadar daha düşüktü ( $p<0.001$ ). BIS değerleri sternum kapatılması sırasında Grup F'de daha düşüktü ( $p=0.015$ ). Grup R'de toplam opioid tüketim maliyeti Grup F ile karşılaştırıldığında anlamlı olarak daha yüksek bulundu ( $p<0.001$ ). Gruplar arasında yan etkiler, VAS, BIS, ısı, PAB değerleri, yoğun bakımda kalış süreleri, propofol tüketimi ve hasta memnuniyeti açısından anlamlı bir fark bulunmadı.

**Results:**Bu çalışmada koroner arter bypass cerrahisi geçiren hastalarda intraoperatif remifentanil ve fentanil kullanımının hemodinami, BIS değerleri, ekstübasyon zamanı, propofol tüketimi, postoperatif yoğun bakımda kalış süresi, toplam ilaç tüketimi ve maliyeti üzerine etkileri araştırılmıştır. Sonuç olarak remifentanil, fentanille karşılaştırıldığında koroner arter bypass cerrahisi geçiren hastalarda hemodinamik dezavantajlarına ek olarak maliyeti arttırması nedeniyle fentanille göre daha az tercih edilebilecek bir ajan olarak görünmektedir.

## P-40

### RISK FACTORS FOR CATHETER ASSOCIATED URINARY TRACT INFECTIONS IN A SURGICAL INTENSIVE CARE UNIT

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Catheter associated urinary tract infection (CAUTI) has been associated with increased morbidity, mortality, hospital cost, and length of stay. Aim of this study was to determine the predictors of the development of CAUTI in surgical ICU patients admitted to Baskent University Hospital.

**Method and Material:**Following Institutional Review Board approval we performed this retrospective study, including 876 patients admitted to surgical ICU between January 2009 and July 2012. After completing review of patients' data, 20 patients diagnosed with CAUTI, were compared to 75 appropriate matches who were not. Patients' demographical features (age, sex, body weight), underlying diseases, etiology for ICU admission, APACHE II (Acute Physiology and Chronic Health Evaluation) and SOFA (Sequential organ failure assessment) scores, duration of hospitalization, organ dysfunctions, fluid balances, laboratory values, use of vasopressors, mechanical ventilation, nutrition, antibiotics, transfusions, features related to central venous catheterization, urinary catheterization, and intubation were the recorded parameters. Patients who did not have an urinary tract catheter and were discharged or died within the 2 days of ICU admission were excluded.

**Findings:**Out of 95 patients who were included in the final analysis, 20 patients (19%) had CAUTI. When compared to patients who did not have CAUTI, those who did were older ( $p=0.034$ ) and required more blood product transfusions during the first 3 days of ICU ( $p=0.016$ ). These patients also had higher APACHE II and SOFA scores ( $p<0.05$ ), and had a longer duration of hospital stay prior to ICU admission ( $p=0.001$ ). Following regression analysis, longer duration of hospital stay prior to ICU (OR: 1.037; 95% CI: 1.004-1.072;  $p=0.027$ ) was determined as a risk factor for CAUTI. Fourteen-day and 28-day mortality rates for CAUTI were 20% ( $p=0.250$ ) and 25% ( $p=0.343$ ), respectively.

**Results:**In conclusion, although age, blood product transfusion, APACHE II and SOFA scores, and duration of hospitalization prior to ICU were different between patients who did and did not have CAUTI, prolonged duration of hospital stay prior to ICU was the only independent risk factor for CAUTI.



P-41

## ANESTHESIOLOGICAL APPROACH IN A CASE WITH TAR (THROMBOCYTOPENIA – ABSENT RADIUS) SYNDROME

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TAR syndrome is a rare autosomal recessive disease characterized by hypomegakaryocytic thrombocytopenia and bilateral radial aplasia with thumbs present which was firstly described in 1951 by Bernhard and defined as a syndrome in 1969 by Hall . Skeletal, gastrointestinal, and cardiac anomalies may accompany thrombocytopenia and bilateral radius absence . The management of children with TAR syndrome can present challenge to anesthesiologists. Children with TAR are at risk for bleeding because of chronic thrombocytopenia and require extensive surgery for orthopedic procedures for correcting the limb deformities associated with this syndrome. In this case report , we intended to present our successful anesthesiological management in a patient who underwent lower extremity genu varum deformity correction surgery under general anesthesia

**Case:** The 5-year old girl of 17 kg body weight had the diagnosis of TAR syndrome in her 3rd month of age when she was taken to the hospital due to diffuse rash in her skin with shortness of both arms. In this first admission to the hospitals pediatry clinic , her platelet counts were 11.000 K/uL and she was given platelet transfusion. Her ultrasonography ,echography ,chest –X ray and ECG had revealed no cardiac, lung or gastrointestinal anomalies .In 5th year of her follow up elective lower extremity genu varum correction surgery was planned but surgery was delayed because of low platelet count of 66.000 K/ uL. At 6 months follow-up, platelets rose to 112.000 K/uL upon spontaneous remission and surgery was reconsidered. In physical examination performed in preoperative period, it was observed that mental development was normal, and that there was no anatomical pathology leading to any intubation difficulty. Cardiac and respiratory system examinations including ECG and Pulmonary function tests were normal .Her haemodynamics were in normal limits. In musculoskeletal examination, bilateral radius absence (Figure 1), camptodactyly in both 5th fingers, and radial deviation in both wrists were the predominant features. There was no supination in both elbows. Both hip joint motions were natural and both knees revealed genu varum deformity. Laboratory tests were as following: Hgb: 12.4 g/dl Hct: 37.6 % Plt: 112.000 K/uL Glu: 73mg/dl BUN: 32mg/dl Creat: 0.29mg/dl AST: 48U/L ALT: 22U/L Ca: 8.3mg/dl Na: 138mEq/L K: 4.1mEq/L Cl: 104mEq/L ECG, non-invasive arterial pressure, and peripheral oxygen saturation (SpO2) monitoring were performed to the case which was operated without application of premedication. Upon preoxygenation with 100% O2 at a rate of 3 l/ min with mask, anesthesia was induced with sevoflurane. IV line was established and 1 mcg/kg fentanyl and 0.6 mg/kg rocuronium were injected. The patients trachea was intubated at first attempt without any difficulty (Figure 2). Anesthesiological maintenance was provided with 50 % O2 – 50 % N2O - 0.8 % Sevoflurane and 0.25 mcg/kg/ min remifentanyl continuous intravenous infusion. During the surgery, systolic blood pressure was 80-90 mmHg in average, and diastolic blood pressure was 40-50 mmHg in average. The operation continued 180 minutes .The patients trachea was extubated once she was thoroughly awakened after surgery and airway reflexes became stronger. She was given 500 mg acetaminophen intravenously for postoperative pain

relief.Recovery period after surgery passed comfortably, without any problems. During the 24 hour-period postoperatively, the patient was monitored in orthopedic ward, which revealed neither abnormal vital signs nor complications.

**Discussion:** TAR is a clinically defined syndrome characterized by hypomegakaryocytic thrombocytopenia and bilateral radial aplasia with thumbs present. Firstly ,loss of chromosomal region localized to 1q21.1 has been found associated to TAR syndrome and congenital heart disease but later it has been reported that the inheritance pattern of TAR is complex and that deletion (1q) is necessary but not sufficient to cause the phenotype. Bleeding episodes are most frequent during the first 1 to 2 years of life, with increased mortality due to intracranial hemorrhage (1) when the platelet count is 20,000/mm<sup>3</sup>. With increasing age, the recurrence of thrombocytopenic episodes decreases and platelet count can improve to a near-normal level. Survival is significantly longer in patients with TAR syndrome, with a projected curve showing a plateau of 75% by 4 years of age. The postponement of the operation to the 5th year of age in our patient thus seems reasonable. Frequency of hemorrhagic episodes decreases with age in agreement with a rise in the platelets, the function of which is probably normal in the majority of patients with TAR syndrome . Although bilateral radial aplasia which is observed in 100 % of the patients is the defining skeletal feature in TAR, additional skeletal abnormalities are frequently observed, including extensive upper limb malformations, phocomelia, and lower limb malformations which are observed in almost 50 % of the patients. Dysmorphic facial features such as micrognathia, broad forehead, and low, posteriorly rotated ears have been found in up to 53% of patients with TARS. In addition, mental retardation and lactose intolerance (47%) may also be present . Non-skeletal abnormalities are also common, including gastroenteritis and cow's milk intolerance in 47 % , renal malformations in 23 % , cardiac defects in 15 % , facial dysmorphism in 53%, short stature in 95%, macrocephaly in 76% and capillary hemangiomas in 24 % In a case report by Lynch et al , successful general anesthesia of an urgent caesarean section for a woman with TAR syndrome. The major anaesthetic difficulties they encountered were severe thrombocytopenia with a platelet count 30x10<sup>9</sup>/L, which precluded regional anaesthesia, and extensive limb abnormalities resulting in difficulty with vascular access and cardiovascular monitoring. Platelet transfusion was required but airway difficulties were not encountered. In our case ,although it can be expected in this syndrome due to the dysmorphic facial features we did not encounter airway difficulties and no platelet transfusion required . The treatment of TAR in the first year of life is largely supportive with platelet transfusions as needed to control bleeding symptoms and facilitate orthopedic or other procedures. Much of the clinical management following the first year of life will be directed towards the non-hematologic manifestations of this disorder . Nonetheless platelet count is important in preoperative assessment. If platelets are below 50000 / ml, mucosal hemorrhages may develop during intubation by means of laryngoscopy. Blood losses require close attention during surgical follow-up. Patients may require perioperative platelet transfusions. The postponement of all elective operations until platelet counts are normal is recommended . Nasotracheal and nasogastric tubes are relatively contraindicated secondary to risk of epistaxis.Limb anomalies may make vascular access more challenging and might require careful positioning.Patients with congenital heart disease require perioperative antibiotic prophylaxis . This case report, to the best of our knowledge, is one of a limited number of cases emphasized on management of anesthesia of TAR syndrome in the world. In conclusion, we believe that careful preoperative assessment, selection of appropriate anesthetic agent, and monitoring deserve important consideration in cases with TAR syndrome where possible associated anomalies should not be overlooked. The written informed consent was obtained from the family for publishing this case as a report.

## P-42

### EFFECT OF BODY MASS INDEX ON EARLY OUTCOME AFTER CORONARY ARTERY BYPASS GRAFTING

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The aim of this study obesity is a risk factor for morbidity and mortality and to investigate whether in patients undergoing coronary artery bypass surgery (CABG).

**Method and Material:** After approval from the hospital ethical committee, 250 patients aged 33 to 82 were studied undergoing CABG. Patients were divided into four groups according to body mass index (BMI) as weak (n = 15; BMI < 15), normal (n = 52; BMI = 19 to 24.9), overweight (n = 72; BMI = 25 to 29.9) and obese (n = 111; BMI > 30). Surgical risk factors examined included age, sex, previous myocardial infarction, ejection fraction, hypertension, diabetes mellitus, chronic obstructive pulmonary disease, peripheral vascular disease, cerebrovascular disease and urgency for surgical procedure. Surgical outcomes examined included using of inotropics, amount of bleeding, need for transfusion, sternal wound infection, renal failure, mechanical ventilation time, intensive care unit stay and length of hospital stay. The data obtained from chi-square test, Kruskal-Wallis test and Mann-Whitney U test.

**Findings:** The incidence of hypertension was significantly higher than baseline in the obese group (p < 0.05). Findings of other preoperative and perioperative parameters did not differ significantly. The level of bleeding was significantly lower in obese patients (p < 0.01). Transfusion needs was significantly lower in the group of obese compared to other groups (p < 0.01).

**Results:** Our results indicate that the patients with obese BMI do not effect early outcome after CABG. Despite the comorbidities that are often present with obesity, obese BMI was not found to be an independent predictor of morbidity and mortality after CABG.

## P-43

### INTENSIVE CARE COURSE OF A PATIENT WITH BULBAR PRESENTATION OF AMYOTROPHIC LATERAL SCLEROSIS

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**Aim:** Amyotrophic lateral sclerosis (ALS) is a progressive neurodegenerative disease with a mean age at the onset of 60 years. It is characterized with progressive degeneration of upper and lower motor neurons. Although the usual clinical presentation is asymmetric muscle weakness of the extremities, it is rarely presented with bulbar symptoms such as dysarthria, hoarseness or dysphagia. The progression of the disease is generally rapid and most the patients die within 2 to 4 years due to respiratory failure. Long term intensive care unit admission is inevitable for ALS patients. The aim of this case report is to present the intensive care unit (ICU) course of a patient with ALS presented with bulbar involvement.

**Case Report:** A 73 year old man with the history of dysarthria and dysphagia was diagnosed as ALS 6 months ago. He has had a coronary artery bypass surgery and was under medication for hypertension and coronary artery disease. He admitted to ICU after a successful resuscitation for acute respiratory failure in the emergency department with an APACHE II score of 24. Chest X-ray revealed opacification of the right hemithorax and CT scan revealed bilateral pleural effusion and compression atelectasis especially significant on the right side. PaO<sub>2</sub>/FiO<sub>2</sub> ratio, which was improved with recruitment maneuvers and higher levels of PEEP was 69 on admission to ICU. Fiberoptic bronchoscopy was performed and purulent secretions occluding the right main bronchus were suctioned. Tracheotomy and gastrostomy were performed. The mechanical ventilation was uneventful except a ventilator associated pneumonia related to *Acinetobacter baumannii* that was treated with appropriate antibiotherapy. Weaning was unsuccessful for the patient due to poor spontaneous breathing; therefore we planned to discharge the patient with home ventilation. He was also evaluated in another medical center and scheduled for diaphragm pacing.

**Discussion:** Mechanical ventilation is inevitable in the course of ALS especially when either respiratory muscles or the bulbus is involved. Intensive care course may be prolonged and complicated for patients with ALS. Early application of tracheotomy and gastrostomy may decrease the frequency of respiratory complications. Quality of life after intensive care unit should especially be considered while planning the treatment and follow-up strategies for ALS patients.

P-44

### OPTIMAL WRIST POSITION FOR LONG AND SHORT AXIS ULTRASOUND GUIDED RADIAL ARTERY CANNULATION

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The radial artery is the most common site for arterial cannulation. Procedures for improving radial artery cannulation have involved direct visualization of the vessel with ultrasonography (US). The aim of this study evaluate the short axis and long axis radial artery measurements at 0°, 45°, 60° wrist joint angle and find out the optimal wrist joint angle for long and short axis US guided radial artery cannulation.

**Method and Material:** One hundred fifty-two (90 men and 62 women, 18-48 years of age; mean age: 32.9±6.1) healthy volunteers were recruited. The radial artery distance between skin and height, width, area in short axis and radial artery distance between skin and height was measured in long axis at 0°, 45°, 60° wrist joint angle were measured.

**Findings:** Short axis width was statistically significantly increased at 45° compared to at 0° ( $p<0.001$ ). Short axis radial artery distance between skin and height at 45° were statistically significantly decreased than at 0° ( $p<0.001$  for all comparisons) and long axis skin distance and height at 45° were also statistically significantly decreased than at 0° ( $p<0.001$  for both comparisons). Short axis radial artery skin distance and area at 60° is statistically significantly decreased than at 45° ( $p<0.001$  for both comparisons) and also long axis height of radial artery at 60° is statistically significantly decreased than at 45° ( $p<0.001$ ).

**Results:** Angle increment up to 45° might help clinicians for radial artery cannulation in short axis plane whereas this angle increment maneuver decreased the arterial height in long axis which might be a potential disadvantage for cannulation.

P-45

### COUPLED PLASMA FILTRATION ADSORPTION (CPFA) IN INTENSIVE CARE UNIT: FIRST EXPERIENCE

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**Objectives:** Sepsis is still one of the main causes of death in critically ill patients and circulating pro-inflammatory and anti-inflammatory mediators appear to participate in this cascade. Several blood purification techniques have been used to remove circulating septic mediators (continuous hemofiltration, high volume hemofiltration, plasma exchange) but in order to achieve higher mediator clearance new strategy that combines plasmafiltration with plasma adsorption has been proposed (1). Coupled plasma filtration adsorption (CPFA) is a modality of blood purification in which the plasma is separated from whole blood and directed into a sorbent cartridge. The sorbent agent removes cytokines with no interaction with the blood cells (2).

**Case:** A 76-year-old male patient with a history of Diabetes Mellitus, chronic obstructive pulmonary disease and atherosclerotic heart disease was admitted to the intensive care unit with respiratory insufficiency. He had a history of falling down at home 2 days ago. On physical examination there were ecchymotic lesions on the left side of thorax and chest x-ray revealed displaced fractures on the left 6 - 7th ribs with hemothorax requiring a chest tube insertion. The patient's clinical course deteriorated and the mechanical ventilation was started following the endotracheal intubation. His vital signs were unstable and vasopressor agents were infused to stabilize the hemodynamic condition. He had tachypnea and his spontaneous breathing was not sufficient to wean so continuous sedation was required to adapt the mechanical ventilation. On the 5th day, chest radiograph showed increased pulmonary infiltration on the left side together with the positive sputum culture for methicillin-resistant *Staph aureus*. Antibiotics were administered according to the susceptibility of the isolated pathogen. Ventilator-associated pneumonia was considered as a result of prolonged mechanical ventilation. He had also fever up to 39°C and leucocytosis (25.000/mm<sup>3</sup>). This septic condition made the physical status of the patient worse and the increment doses of vasopressors were required together with the infusion of noradrenalin. The patient had anuria refractory to fluid therapy. An additional therapy for the purification of the blood from septic mediators was scheduled to reduce the severity of the clinical picture. The right femoral vein was accessed via 12 F double-lumen catheter inserted through the Seldinger technique and CPFA (INFOMED HF-440, Geneva, Switzerland) was carried out. Plasma filtration and blood flow rates were maintained at 25 ml/min and 150 ml/min respectively and according to the patient's condition, the flow rate was adjusted. A single course of CPFA lasted for 6 hours and at the end of the procedure the noradrenaline infusion was ceased, the doses of vasopressors were decreased and the urinary output was 0.5mL/kg/h. The radiological improvement on chest x-ray was also promising but on the 12th day of his admission, the patient was tracheotomised because of the failed extubation. Atrial fibrillation resistant to multidrug treatment accompanied to the clinical condition. Although the management of the septic condition and the improvement of the renal function, the patient died on the 34th day of his admission due to the aggravation of his serious co-existing diseases.

**Discussion:** In our case, the application of CPFA facilitated the cessation of vasopressors and improved the systemic and renal hemodynamic status. Considering the high mortality and morbidity rates in septic shock patients, this technique seems to have benefits. The clinical studies are limited so further experiences are required to define the effectiveness of this technique in septic patients.

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## MAN- IN- THE –BARREL SYNDROME DUE TO BILATERAL SUBDURAL HEMATOMA

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**Introduction:** "Man-in-the-barrel" syndrome refers to a clinical syndrome of brachial diplegia. Classically, it has been associated with cerebral hypoperfusion resulting from watershed ischemia between the vascular territories of the middle and anterior cerebral arteries (1). It has also been reported secondary to peripheral nervous system involvement (brachial plexus lesions and polyneuropathies), spinal cord disease (infarction of the spinal cord, upper spine injuries, motor neuron disease, cervical epidural infection) and brain involvement other than watershed infarctions (metastatic disease and closed head injury) (2). With this paper we report a patient who developed "man-in-the-barrel" syndrome due to a closed head injury.

**Case:** A 41-year-old man, with a closed head injury and a Glasgow Coma Scale of 7, was intubated in the emergency department and admitted in to the ICU. A cranial CT showed bilateral fronto-parietal subdural hematomas and frontal parenchymal edema. The patient received optimal supportive care and after 15 days he regained consciousness with 'man-in-the-barrel syndrome'. Although his motor function remained intact in the lower extremities, his arms did not react to painful stimuli applied to the nailbeds. During the treatment period, the patient neither had any hypotensive episodes nor any electrolyte disturbances. MRI showed bilateral watershed infarctions involving distal fields of the middle and the anterior cerebral artery. A doppler analysis of the supra aortic trunks showed that the carotid and vertebral trunks were normal.

**Conclusions:** The duration and severity of hypotension needed to trigger 'man-in-the-barrel syndrome' is unknown. Our patient did not develop any period of sustained hypotension, which is the most common cause of border-zone infarction. Therefore in our case, bilateral fronto- parietal subdural hematoma is most likely the cause of this border-zone infarction. In addition to mostly seen hypotension, other causes should be considered in diagnosis even these diagnosis are seen rarely.

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P-47

## SUCCESSFULL MANAGEMENT OF A CASE WITH H1N1(INFLUENZA) INDUCED SEVERE ACUTE RESPIRATORY DISTRESS SYNDROME WITH ECMO.

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**Objective:**H1N1 influenza can cause severe acute lung injury. Extracorporeal membrane oxygenation can be used as a rescue therapy in patients failing conventional mechanical ventilation. Here, we describe our experience in H1N1 induced ARDS using both lung protective ventilation strategy in conjunction with extracorporeal membrane oxygenation(ECMO).

**Case:**A 53 year old male patient was admitted to emergency service with respiratory failure and transferred to ICU. He was intubated on admission. It was learned that he took colchicine pills for abdominal pain from his past medical history. His CBC was WBC:2.3K/uL, neutrophil:1.7K/uL, lym:0.5K/uL, Hb:13.4 g/dL, Hct:41.1, PLT:84K/uL. His biochemical analysis was normal with the exception of ALT:88U/L, AST:274 U/L. Procalcitonin level was 3.65 ng/ml and CRP :15.6 mg/dL. Coagulation parameters and urine analysis were normal. Specific antimicrobial treatment was varied on the basis of microbiologic results to treat coinfections with H1N1; Acinetobacter and Klebsiella pneumonia.

Conventional ventilation, venovenous haemofiltration, antiviral and antimicrobial therapy and prone position did not improve severe hypoxia and intractable hypercapnia of the patient with isolated ARDS. ECMO (Novalung, Germany) was started at 15th day of mechanical ventilation. ABG analysis at that time point was pH:7.24, pCO<sub>2</sub>:103.7 mmHg, pO<sub>2</sub>:55.2 mmHg, K:3.61 mmol/L, Na:143.2 mmol/L, Ca:1.13 mmol/L, cHCO<sub>3</sub>:44.3, BE:14.5 while FiO<sub>2</sub> was 100%. Venovenous ECMO and biocoated circuit was used. A 20F venous withdrawal cannula was inserted via left femoral vein and a 18 F infusion cannula was inserted in the right jugular vein percutaneously with Seldinger technique. During extracorporeal lung assistance heparin infusion was monitored with ACT measurement which was maintained between 180-250 sec for 15 days. ECMO flow and respiratory parameters were adjusted to achieve normocarbida and oxygen saturation above 90. IVIG treatment at a dose of 2 mg/kg over a 5 day course was given to the patient since Immunoglobulin levels were lower than normal limits (421 mg/dL). Prednol was administered at a low dose (20 mgx2). The duration of ECMO support and the duration of mechanical ventilation was 16 and 31 days respectively. The patient was eventually recovered and successfully discharged from the hospital. His total length of ICU stay was 47 days.

**Conclusion:** ECMO therapy is a life saving invasive strategy in severe respiratory failure for patients with otherwise fatal prognosis.

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### A RELIABLE TEST FOR THE DIAGNOSIS OF BRAIN DEATH: BISPECTRAL INDEX SCALE (BIS)

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Brain death (BD) is defined as the total irreversible loss of brain functions including brain stem. According to the Turkish regulations, BD diagnosis must be based on the clinical criteria and an additional imaging test showing the cerebral circulatory arrest. Bispectral Index Scale (BIS) is derived from a mathematical analysis of the electroencephalogram. BIS value "zero" means total electrical silence of the brain. The aim of our study is to determine the reliability of BIS in brain death diagnosis.

**Method and Material:** Twenty-one patients with brain death diagnosis according to the clinical criteria were included. Patients were hemodynamically stable, normothermic, normocapnic and in normal range of oxygenation and metabolic status. Then patients were monitored by BIS (BIS XP, A-2000, Aspect Medical Systems, Newton, Mass, USA) continuously and an additional imaging technique was applied. Transcranial doppler ultrasound was performed in all but two cases, in whom diagnosis was confirmed by cerebral angiography in one patient and computed tomography angiography in the other.

**Findings:** Mean age was 42.5 ± 18.7 (4-71) years. Only BIS values with a signal quality index between 97-100 was recorded. Recorded BIS values were "zero" for the majority of the study period and all additional imaging techniques supported brain death diagnosis in all patients.

**Results:** BIS is a noninvasive, easily interpreted method for monitoring of cerebral activity. According to our results, BIS is easy to perform and helpful in BD confirmation.

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### A RARE AND FATAL CAUSE OF SEPSIS: EMPHYSEMATOUS PYELONEPHRITIS

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**Introduction:** Emphysematous Pyelonephritis (EP) is a rare and mortal suppurative renal infection but early diagnosis can be lifesaving. It can be diagnosed with radiology. It can be healed by wide spectrum antibiotics, surgical drainage or nephrectomy (1). In this case report, we aim to present a mortal case which contemplates aggressively despite the wide spectrum antibiotics.

**Case:** The female patient, who is 66 year old, came to our emergency department with the complaints of acute right side pain, fever, nausea and vomiting commencing two days ago. It can be learned that the patient was diagnosed with renal colic and discharged from another hospital a week ago. In her profile, she has type 2 regulated diabetes and kidney stone operation. In the emergency department, HR:138/minute SPO2:%80 T:36,8°C RR:30/min and her urine has three positive leucocyte esterase, abundant erythrocytes and leukocytes; Urea:50 mg/dL, Cr:1,24mg/dL, bilirubin:2,4mg/dL, hyponatremia hypokalemia, leukopenia, thrombocytopenia have been detected in the laboratory. In order to exclude pulmonary embolism or aortic dissection thoracoabdominal CT scan was done which rather revealed medium pelvicalyxial ectasia, air in the pelvis and calculi in the ureteropelvic junction in the right kidney and also air in the right ureter, and interstitial pulmonary edema. She was diagnosed with multi organ failure and intubated, and supported with mechanical ventilation in PRVC mode. Fluid resuscitation was done under PICCO monitoring. In her second day, interventional radiology placed drain to the right calyxial area and took culture from abscess. In her third day, because of the deep acidosis, CVVHDF was started. Meropenem treatment was started for the E.coli positive cultures. Despite all the treatments, the patient died in the seventh day of septic shock treatment.

**Conclusion:** EP is a serious infection, which has to be diagnosed quickly and treated swiftly. The patients who admit to the hospital having side-pain with diabetes and stone history and have findings of sepsis may be thought as potential sick. The diagnosis should be supported with monitoring methods. Treatment should be planned according to disease severity, patient's clinic situation and the response to the treatment.

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## P-50

**RED BLOOD CELL DISTRIBUTION WIDTH AND MORTALITY IN ICU PATIENTS; A SINGLE CENTERED COHORT STUDY****BÜYÜKKOÇAK Ü, GENÇAY I, ATEŞ G, ÇAĞLAYAN O***Kirikkale University Faculty Of Medicine, Kirikkale, Turkey*

The red cell distribution width (RDW) is a part of complete blood count and is a quantitative measure of the variability in the size of circulating erythrocytes. Recently RDW becomes a predictor of mortality in many conditions. We conducted this study to investigate the prognostic value of RDW in ICU (Intensive Care Unit) population without making age and diagnostic discrimination.

**Method and Material:** Two hundred and eighty four ICU patients were enrolled into this study. All patients including surgical ones, identified retrospectively via the central medical database of our hospital. Patients with a history of recent blood transfusion and patients who died or discharged from ICU within 48 hours were excluded. Patients were classified according to their age, process of their disease, duration of stay in ICU, types of diseases and clinical outcomes. Mortality rate in ICU was evaluated with respect to the surgical or medical nature, acute or chronic process of the disease, age and length of stay in ICU. The changes in RDW values depending on the age and duration of stay in ICU were evaluated. In patients who died or discharged, the assessment of the RDW values was made according to the acute or chronic process of the disease. The Chi Square test was applied to compare the mortality rate of the groups. The changes in RDW values depending on the length of stay in ICU were analyzed by repeated measures ANOVA and paired t test. The Student t test was used for normally distributed variables and Mann-Whitney U test for non-normally distributed variables.

**Findings:** There was no difference in the RDW values between the patients who survived or died. RDW values increased slightly parallel with the length of stay in ICU. Also there was a weak correlation between the initial RDW values and age. Mortality rate in ICU was found to be higher in medical patients than surgical ones, but no significant difference was found between acute or chronic case groups.

**Results:** Unlike the other previous studies in ICU, we did not found any significant relationship between mortality and RDW levels. Determination of the factors that influence RDW values is important in order to use RDW as prognostic predictor in ICU. In general intensive care units that have wide variety of diagnosis spectrum, RDW has been far from being a mortality predictor. Identification of the factors that had an impact on RDW values is important, in order to use RDW as a well mortality predictor.

## P-51

**URGENT LİVER TRANSPLANTATION AFTER ACUTE LİVER FAILURE CAUSED BY AMANITA PHALLOIDES POİSONİNG****GOK F, TOPAL A, HACİBEYOGLU G, EROL A, BİYİK M, KUCUKKARTALLAR T, YOSUNKAYA A***Necmettin Erbakan University, Meram Faculty of Medicine, Department of Anesthesiology And Reanimation, Konya, Turkey**Necmettin Erbakan University, Meram Faculty of Medicine, Department of Gastroenterology, Konya, Turkey**Necmettin Erbakan University, Meram Faculty of Medicine, Department of General Surgery, Konya, Turkey**Necmettin Erbakan University, Meram Faculty of Medicine, Department of Intensive Care Unit, Konya, Turkey*

**Introduction:** Amatoxin poisoning may progress into acute liver failure and death if liver transplantation is not performed. The mortality rate after Amanita phalloides poisoning ranges from % 2-22. In this case report, we aimed to present a patient poisoned by mushroom complicated with fulminant hepatic failure, acute pancreatitis and renal failure who we treated with plasmapheresis followed by liver transplantation and discharged healthy.

**Case Report:** 48-year-old man, with no relevant previous medical history, who presented to the emergency department 14 h after eating wild mushrooms collected near his home. He complained of vomiting, diarrhea, and severe, colicky, abdominal pain, with a clinical onset 8 h after eating the mushrooms. He was treated for presumed acute gastroenteritis with intravenous fluid and antiemetic agent. The patient was admitted to intensive care unit after two days. At this stage, the patient was conscious, alert and oriented. His Glasgow Coma Scale was 15. He had significant metabolic acidosis with pH: 7.19, pO<sub>2</sub>: 88.3mmHg, pCO<sub>2</sub>: 23.8 mmHg, HCO<sub>3</sub>: 9 mmol/L, BE, -17; laktat:13.4. Laboratory analyses showed a International Normalized Ratio (INR) of 6.8 and raised liver transaminases (aspartate aminotransferase 5274 U/l, alanine aminotransferase 6827 U/l. Large doses of intravenous penicillin G, and silibin, N-acetylcysteine was given. According to King's College criteria, he qualified for liver transplantation. The patient was treated with plasma diafiltration (Evaclio EC-2C®) and continuous renal replacement therapy before transplantation. Cadaveric liver transplantation was performed on the fifth day after mushroom ingestion. Abdominal pain, abdominal defense, elevated level of amylase and lipase (541, 1524 U/L, the highest respectively) had continued to increase since the first day of admission and during the postoperative period. Abdominal computed tomography revealed the presence of pancreatitis. Amylase and lipase levels and liver function tests tended to normal values on following days. The patient who administered continuous renal replacement therapy first week followed by based on conventional hemodialysis was discharged to the service. He was discharged from the hospital in a healthy way when urine output and renal function tests were normal on 30th day of admission.

**Conclusion:** Intoxications due to Amanita phalloides led to liver failure particularly may also affect other organs such as the kidney and pancreas. Acute pancreatitis is a rare occurrence. It is one of controversial situations to make decision to transplantation when acute liver failure develops. Even with a final decision to liver transplantation, patients may be lost due to multiple organ failure so long as a suitable organ to be found. In this case, as in our patient support systems applied in order to implemented a bridge process stand out as far as the transplantation was performed.

## P-52

### PLASMAPHERESIS AS A RESCUE THERAPY IN MUSHROOM POISONING: A CASE REPORT

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**Introduction:** Amanita phalloides is an important cause of death due to mycetism.(1) Poisonings generally have the symptoms as nausea and vomiting. Toxin is absorbed enterohepatically and renal reabsorption increases the toxicity. Toxins cause hepatorenal failure with gastrointestinal and neurologic symptoms.(2)

**Case:** A 28-years old woman admitted to the emergency department with the complaints of nausea and vomiting 24 hours after ingestion of mushroom. On admission, AST:317 ALT:419 LDH:522 INR:1,39, aPTT:31,8 Hb:7,4 g/dl Hct:%22 PLT:21000/mm<sup>3</sup>, ammonia:61µmol/l were detected. She was followed by the gastroenterology department with the diagnosis of A.phalloides poisoning and hemoperfusion with the carbon filter was started as the biochemical findings deteriorated (AST:1276 IU/L ALT:1637 IU/L LDH:1959 IU/L INR: 2,98). Despite the hemoperfusion, she got worse and unconscious, and was taken to the intensive care unit with acute fulminant liver failure. Penicillin G, oral-rectal lactulose and acetyl cysteine infusion were added to the treatment. Anemia and thrombocytopenia were treated by blood products. She was listed for emergency liver transplantation (MELD score:55 and Child Score:B). While awaiting for transplantation she was taken under plasmapheresis (as was AST: 4951IU/L ALT: 6357 IU/L LDH: 6750 IU/L INR: 3,32a PTT: 67, 1 ammonia: 224, total bilirubin:1,48). Due to the risk of bleeding, right femoral vein was catheterized under ultrasonographic guidance. Three sessions of plasmapheresis with fresh frozen plasma were undertaken with Prismaflex using TPE 2000 (Gambro Lundia AB, Sweden), and she was given noninvasive mechanical support. After plasmapheresis, as the clinical picture improved (with AST: 87 IU/L, ALT:499 IU/L, LDH: 192 IU/L, INR: 1,34, aPTT:26,3, ammonia:118, bilirubin:1mg/dl and MELD score:10, Child Score: A), she was discarded from the transplant list.

**Discussion:** In the acute fulminant liver failure due to mushroom poisoning, liver transplantation can be required. However, we think that due to both the difficulties in donor organ finding and the quick progress of the disease, plasmapheresis can be lifesaving and time saving during the preparatory period for liver transplantation.

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## P-53

### ADRENAL INSUFFICIENCY DEVELOPED IN PATIENT WITH CHRONIC KIDNEY FAILURE

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**Introduction:** Adrenal insufficiency (AI) is a hard to identify disease in early period that develops as a result of bilateral adrenocortical destruction. In our case in the patient followed due to chronic kidney failure (CKF), AI was presented which was diagnosed with resistant hypoglycemia and hypotension attack. Case Presentation:: 58 years old male patient in the dialysis program who was followed due to diagnosis of CKF was taken into intensive care unit because of disorder in his overall condition, hyperglycemia and hypotension. The cranial Computed Tomography (CT) of the patient was normal who had Diabetes Mellitus (DM) in his history and cachexia and hyperpigmentation. Consolidation in both hemithoraxes, pleural thickening and effusion was determined in thorax CT and atrophy was detected in both surrenal glands via abdominal CT. Response could not be obtained to adrenocorticotrophic hormone (ACTH) stimulation test in the patient whose plasma cortisol level was low and ACTH level was high. Steroid treatment was started in the patient who was considered to have AI and recovery was observed. The patient whose clinical findings improved, was transferred from intensive care unit to the service with steroid replacement therapy.

**Discussion:** Clinics for AI starts after 90% of adrenal glands are destructed; manifestation may be unclear for a long time and diagnosis may be delayed till adrenal crisis. Acute adrenal insufficiency might require intensive care due to resistant hypotension, dehydration, nausea, vomiting, hypoglycemia and disorder in overall condition. AI must be taken into account in patients with CKF if hypoglycemia and hypotension is observed and in diabetic patients with recurrent hypoglycemia attacks. In our case, findings like hypoglycemia and hypotension that were frequently seen in patients with CKF and DM, were presented. Upon requirement for intensive care unit due to disorder in general conditions and resistant hypotension, investigations along with laboratory and imaging methods were performed and response was obtained to the treatment applied for AI. As a conclusion, to our knowledge AI must be considered in patients with CKF who apply with only hypoglycemia and hypotension symptoms and it must be investigated with advanced examinations because delay in diagnosis in AI causes high morbidity and mortality.

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## P-54

**DERMATOLOGIC DISORDERS IN INTENSIVE CARE UNIT**

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Although intensive care patients are vulnerable to variety of skin disease due to underlying clinical conditions studies focusing this topic is limited. In this study we aimed to identify the dermatological disorders responsible for the most common skin lesions in the ICU.

**Method and Material:** Materials & Methods: We performed a 1-year prospective study in three general medical and surgical ICU. All patients examined dermatologically and patients who presented skin lesions upon admission or developed them during their ICU stay included to the study.

**Findings:** 136 patients with the mean age  $47.2 \pm 17.9$  years examined and 43 (31.6%) patients with skin disease included to the study. The major reasons were skin and soft tissue infections, contact dermatitis, xerosis cutis, adverse drug reactions, and chronic wounds including pressure sores and skin irritation or dermatitis and also toxic epidermal necrolysis was observed in one patient.

**Results:** Dermatological disorders are common problem in the ICU where is a special setting leading to various skin conditions due to immobility, sweating and decreased perfusion. Intensivists should be kept in mind that skin is a crucial organ as the other organs and deserve intensive care in ICU and also a collaboration between ICU staff and dermatology department will guarantee a rapid diagnosis and treatment of various skin disorders in the ICU.

## P-55

**NURSES' BURNOUT IN AN ONCOLOGICAL CRITICAL CARE UNIT**

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Burnout is common in intensive care unit (ICU) because of high demands and difficult working conditions and refers the sustained imbalance between work stress and recreation. The aim of this study was to analyse nurses' burnout in ICU and to determine which factors are associated with.

**Method and Material:** The study was carried out in Ankara Oncology Hospital ICU. A self-reporting questionnaire in an envelope was used for the evaluation of burnout (Turkish- language version of Maslach Burnout Inventory ) and depression (Beck Depression Scale). From a total of 37 ICU nurses, 35 participated in the study ( % 94,5 response rate).

**Findings:** No difference in prevalence of burnout was detected according to age, level of training, years of employment and family status. Anxiety, depression, depersonalisation scores were lower in the nurses that find the profession in its proper ( $p \leq 0.05$ ). Personnel accomplishment scores were higher in the nurses that choose the profession of his own accord ( $p \leq 0.05$ ). Emotional exhaustion was statistically significant in the nurses that find the social activity inadequate ( $p \leq 0.05$ ).

**Results:** Work demands and burdens, high expectations on performance and despite maximal effort and use of high technology apparatus and pharmaceuticals, not every patient could be recovered, creates enormous pressure on ICU nurses. A high proportion of critical ill oncological patients in our ICU is also associated with high levels of emotional stress. In our study, high levels of emotional exhaustion and depersonalisation were related to poor social activity. Finding the profession in proper and choosing the intensive care nursing profession by his own accord are also related to the burnout. The burnout risk is higher in our ICU nurses who do not want to work at his own request. As a result, maintaining a balance between personal needs and preferences and job demands and burdens may reduce burnout.

## P-56

**BRAIN DEATH AND DONOR MANAGEMENT IN THE INTENSIVE CARE UNIT: EXPERIENCES OVER THE LAST 5 YEARS**

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Every passing day, the shortage of organs for donation continues to be a national crisis. The majority of organ donors patients who die in Intensive Care Units (ICUs) after the irreversible cessation of all brain function (brain death). Brain death is associated with complex hemodynamic, endocrine, and metabolic dysfunction that can lead to major complications with the potential donor. Untreated, this can progress to cardiovascular collapse with loss of valuable organs for transplantation. The purpose of this study is to evaluate patients with brain death in our ICU.

**Method and Material:** We identified that patients diagnosed with brain death between 2007 and 2013 in our intensive care unit, all data was recorded retrospectively for reason of brain death, the time between admission to ICU and evaluated them for brain death-associated complications (hypotension requiring inotropic agents, diabetes insipidus, hypothermia, disrhythmia, thrombocytopenia) and donated organs per donor.

**Findings:** Forty-four patients (Female/Male:14/30) met the brain death diagnosis based on clinically ( $n=31$ ) and some patient's diagnosis supported transcranial doppler ultrasonograph ( $n=9$ ), SPECT ( $n=3$ ), cerebral angiography ( $n=1$ ). Their mean age was  $39.8 \pm 15.4$  years. The time between admission the ICU and diagnosis of brain death  $6.93 \pm 5.74$ . day and half of patients, diagnosis of brain death was made first four day in ICU. Cerebrovascular event was the most common reason for brain death ( $n=21$ , 47.7 %) with traumatic injury second ( $n=10$ , 22.7 %). In the remaining 13 patients, brain death resulted from an intracerebral tumor, cerebral hypoxia after cardiopulmonary resuscitation. Complications identified were as follow; hypotension requiring inotropic agents (90.9%), diabetes insipidus (45.5%), hypothermia (22.7%) and disrhythmia (45.5%), thrombocytopenia (13.6%) during donor management. Twelve patients became organ donors. Twenty two kidney, eleven liver, four heart, three pancreas were performed in the hospital or transfers to other centers for transplantation.

**Results:** Brain death results in a loss of hemodynamic situation, successful organ transplantation is possible after careful management of the organ donor. If family are adequately informed by intensivists about brain death and careful management of the organ donors, we suggest that organ donation may increase.

P-57

## PROLONGED MECHANICAL VENTILATION IN A PATIENT WITH MYASTHENIC CRISIS

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**Aim:** Myasthenia Gravis (MG) is an autoimmune disease characterized by skeletal muscle weakness due to antibodies against acetylcholine receptors at the neuromuscular junction. The clinical course is characterized with exacerbations and remissions of ophthalmoplegia, ptosis and muscle weakness due to repetitive movements. The myasthenic crisis can be seen in these patients because of respiratory failure related to the weakness of the respiratory muscles or involvement of the diaphragm. Besides, infection, pregnancy, stress and surgery may exacerbate myasthenic crisis in patients with MG. Treatment of myasthenic crisis includes corticosteroids, immunosuppressives, intravenous immunoglobulins and plasmapheresis. The response time to therapy in crisis is usually shorter than a month.

**Case Report:** A 45 years old woman with the history of hypertension and obstructive sleep apnea syndrome admitted to the emergency department with the complaints of muscle weakness, shortness of breath during sleeping, and ptosis ongoing for a year and a sudden onset of dyspnea 6 months ago. As her physical examination revealed hypoxia and hypercapnia, she was followed with CPAP for a couple of days. Due to the worsening at her condition she was transferred to neurology intensive care unit, intubated and mechanically ventilated with the diagnosis of myasthenic crisis. Steroid and immunosuppressant therapies were initiated and she also had plasmapheresis. She was followed 98 days in neurology ICU and as her weaning trial was unsuccessful, she was transferred to anesthesia and reanimation ICU. She had prednisolone, cyclosporin as well as plasmapheresis in the ICU. A tracheostomy was performed and she was followed with mechanical ventilation for 70 days in the ICU. Due to her ongoing need for mechanical ventilation, we plan to discharge the patient with home ventilation.

**Discussion:** There is no standard therapy in patients with myasthenic crisis and the choice of therapeutic regimen depends on the patient which aims to improve survival and quality of life. As in our patient the myasthenic crisis may last more than 6 months. Therefore the intensive care course should include precautions to prevent possible complications in addition to standard therapy in order to improve the patient's quality of life.

P-58

## CHARACTERISTICS AND OUTCOMES OF ADULT PATIENTS RECEIVING MECHANICAL VENTILATION DUE TO ACUTE POISONING

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Poisoning is an important cause of admission to intensive care units (ICUs) and prolongs the length of stay (LOS) in the ICU. Patients who come with self-poison or overdose may require mechanical ventilation (MV). The need for prolonged MV causes a significantly longer LOS and higher mortality in the ICU. The analysis of the characteristics and outcomes of patients receiving MV after poisoning may be useful in the clinical management of these patients, allowing for better counseling of the patients and their families. Objectives: to evaluate the relationships between demographic and etiological characteristics and the need for MV.

**Method and Material:** 211 patients diagnosed with poisoning were analyzed from January 2010 to December 2011. Data regarding type of poisoning, age, gender, the time between exposure and ICU admission, type of poisoning, toxic agents, the route of exposure, consciousness status on arrival, the length of the ICU stay, need of MV, complications of MV, the Glasgow coma score and outcome were obtained.

**Findings:** The use of MV was significantly associated with both gender ( $P=0.04$ ) and the route of exposure ( $p<0.001$ ). The use of MV was also significantly associated with type of poisoning ( $p=0.01$ ) and the poisoning agent ( $p<0.001$ ). There were very strong relationships between the drug poisoning and gender ( $p=0.002$ ) and between type of poisoning and gender ( $p=0.006$ ).

**Results:** The present study demonstrated that there were significant relationships between the use of MV and gender, type of poisoning, the toxic agents, the route of exposure and increased the ICU LOS. The need of MV may lead to poor outcome as it is associated with higher incidence of ventilator related complications and longer ICU stay.

P-59

## PROCEDURAL SEDATION AND ANALGESIA FOR BURN WOUND CARE IN ADULT

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Burn treatment includes daily cleaning, debridement, dressing changes and assessment regarding the need for skin grafting. These procedures are painful and usually require procedural sedation and analgesia. Our aim was to quantify efficacy and patient safety of procedural sedation and analgesia in a burn unit.

**Method and Material:** 201 procedural sedations and analgesia (PSA) in 101 burned patients have been reviewed over a 10-month period. Demographic and clinical data including patient age, gender, body weight, dates of burn injury and wound care procedures, length of procedure, PSA medications and doses, adverse drug events, difficulties encountered and related interventions have been assessed.

**Findings:** The mean length of the procedure was 32,4 minutes with a range of 10 to 90 minutes. The mean subject age was 38,9 years (range: 18 to 90 years), 82% were male, and the mean TBSA was 18,3% (1-67%). This burn center used a procedural sedation regimen of fentanyl, propofol, ketamine and midazolam for their rapid onset and short duration of action. Documented 126 adverse events were hypertension (60), respiratory depression (30), hypothermia and shivering (20), hyper salivation (8), allergic reactions (2), hyperthermia (2), agitation (2) and hallucination (2). No patient required intubation. Difficulties encountered were the physical condition of the patient monitoring and sedation (76), due to the patients' mental status (12) (Delirium, agitation, extreme fear, etc.), patients' comorbidities (20) and difficulties to intravenous access (14).

**Results:** Patient safety and comfort constitute the prime priorities in burned patient management. The provision of PSA in patients with severe burn carries the risk of potentially life-threatening complications. Good PSA practice involves pre-sedation assessment and optimal selection of patients, careful monitoring and support from dedicated staff, and adherence to recovery and discharge criteria.

P-60

## AN UNUSUAL CASE OF CARBON MONOXIDE POISONING

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**Introduction:** Affinity of CO to hemoglobin is 250 times greater than oxygen. It binds to same spot as oxygen to prevent further oxygen binding. CO concentration in blood stream increases rapidly thus causes tissue hypoxia (1-3). We aimed to share a different CO intoxication case in this report.

**Case:** Twenty-two years old male patient and his father, who could not be reached for two days, were found unconscious in their truck and truck's heating system was running. Patient's father was deceased when found. Patient was referred to our intensive care unit after intubation and connected to mechanical ventilator immediately after arrival. Primary findings upon admission were as follows: GCS 5, blood pressure 146/75 mmHg, pulse rate 102 bpm, respiratory rate 24/min, peripheral oxygen saturation 99% (with a FiO<sub>2</sub> of 100%), body temperature 38 °C, CVP 2 mmHg. Patient was shivering and sweating. Nasogastric content and urinary output were within normal ranges. Laboratory tests: CRP 15.6, WBC 10300, fibrinogen 600, D-dimer 2.20, troponin 3.97, myoglobin 156, BUN 53. First chest X-ray and cranial CT were evaluated as normal. Blood levels of ethanol and carboxyhemoglobin (COHb) were normal, urine analysis for drugs was positive for phencyclidine. On the second day of admission patient's fever, shivering and sweating decreased; his consciousness was improved, GCS was 15 so patient was extubated. Repeated MRI images were reported as consistent with CO intoxication. Diminished respiratory sounds in lower parts of lungs considered to be as a result of atelectasis and respiratory exercise, oxygen support through facial mask and non-invasive pressure controlled mechanical ventilation (NIMV) implemented. Decrease in oxygen saturation after NIMV observed and thorax CT-Angiography revealed bilateral linear atelectasis in lower parts of lungs and pneumomediastinum. NIMV was stopped. Patient's vital signs and laboratory findings were within normal range on 8th day and he was transferred to internal medicine ward. He was discharged from hospital on 10th day with full recovery.

**Conclusion:** Clinical findings of CO intoxication are usually correlated to COHb levels, but it must be considered that they are not always directly proportionate (1-3). Carbon monoxide causes structural damage in brain tissue which can be demonstrated acute and sub-acute stages (4-6). In our case unconsciousness and structural brain lesions seen in MRI despite of normal COHb levels support this. It should be kept in mind that half-life of CO is 320 minutes and effects of tissue hypoxia can be seen for prolonged time.



P-61

### VALPROIC ACID OVERDOSE INDUCED SEVERE BONE MARROW DEPRESSION IN ICU; USING OF CALCIUM FOLINATE AND L-CARNITINE

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**Objectives of study:** Valproic acid (VPA) has been used as an antiepileptic drug for different types of seizures. In addition, it has been used to treat a wide spectrum of diseases ranging from bipolar and schizoaffective disorders, social phobia and neuropathic pain to migraine treatment and prophylaxis. However, in toxic doses severe complications such as brain edema, coma, hepatic failure, pancreatitis, bone marrow suppression, hyperammonemic encephalopathy may occur. We report the case of a patient with a serious intoxication secondary to VPA overdose who was treated with a combination of calcium folinat and L-carnitine.

**Case Report:** A 33-year-old woman was admitted to our emergency department after ingesting 150 number of sustained-release formulation of VPA 500 mg. Then the patient was transferred to the intensive care unit (ICU). L carnitine therapy started first day of ICU and L-carnitine therapy was continued until the drug level fell to an undetectable range. 4th day of ICU; hematology were consulted increasing leukopenia. Calcium folinat therapy was started. After Calcium folinat therapy white blood cell were increased. 7th day of ICU; respiratory distress was observed then she was intubated and put on mechanical ventilation. It's thought that the patient has developed leukopenia associated pneumonia and appropriate antibiotics are administered. She died in 8th ICU day.

**Discussion:** We present a case of VPA intoxication with neurological involvement, hemodynamic instability, severe leukopenia, thrombocytopenia and respiratory acidosis after VPA overdose. Valproic acid is an organic acid similar to fatty acids that is metabolized by the liver mainly via glucuronic acid conjugation, mitochondrial beta-oxidation and cytosolic omega-oxidation. Overdose patients with acute VPA intoxication have been given levocarnitine (L-carnitine) in an attempt to increase VPA metabolism via beta oxidation and to reverse mitochondrial metabolic abnormalities.

**Conclusion:** The presented case of VPA intoxication was treated with calcium folinat and L-carnitine; hepatotoxicity did not develop and the patient recovered from a toxic dose of VPA. We supposed that performing early calcium folinat treatment in the beginning of leukopenia may prevent the bone marrow suppression and as a result morbidity and mortality can be decreased.

P-62

### SCREENING OF THE NUTRITIONAL RISK OF BURNED PATIENTS BY NRS 2002

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To evaluate the nutritional risk in hospitalized patients using the methodologies of European Nutritional Risk Screening 2002 (NRS 2002).

**Method and Material:** We prospectively evaluated the nutritional risk of 195 cases of burn patients in burn center and intensive care unit over a 10-month period with NRS 2002. The patients having NRS score > 3 were included in nutrition support (NS) program. According to patient status, oral nutrition support (ONS), enteral nutrition (EN), parenteral nutrition (PN), or EN plus PN was applied.

**Findings:** The study sample comprised 195 patients (55 women, 140 men), mean age 22.3 (SD=21.1) years. The mean percent total body area burned was 13,46% (SD=11,9). The prevalence of patients at nutritional risk with the NRS-2002 first and second week were found as 6.22% and 1,91% respectively. In burn unit, the rate of the patients having NS in first and second week were found as 90,4% and 72% respectively. No iatrogenic malnutrition was observed in our burned patients.

**Results:** The hypermetabolic response associated with severe burn injury results in high calorie requirements to allow optimal healing and outcome. Aggressive NS is recommended following severe burn injury. Our burned patients had been given aggressive nutritional support. Therefore, NRS 2002 screening system had no additive effects on deciding the nutritional support in burned patients.

## P-63

### THE COMPRASION OF EFFECTS OF PREOPERATIVE AND PERIOPERATIVE DEXMETETOMIDINE INFUSION ON POSTTHORACOTOMY PAIN

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We aimed to compare the effects of preoperative and perioperative dexmedetomidine infusions on postoperative analgesia, tramadol consumption and sedation on patients who undergoing thoracotomy in surgical intensive care unit (SICU).

**Method and Material:** Forty patients divided randomly into two groups. A loading dose of 1µg/kg dexmedetomidine (10minute) was applied in both groups before anesthesia induction. Additionally, in group-I infusion of dexmedetomidine (0.4 µg/kg/h) was given throught the operation and following 6 hours after the operation. Same protocol was used for induction and maintenance of anesthesia in all groups. Tramadol (1mg/kg) was also given as a loading dose in both groups after the extubation. Tramadol administered to the patients by PCA device with a 0.4 mg/kg/hour infusion, 0.2 mg/kg bolus dose, and 20 minutes lockout intervals. Hemodynamic parameters, SpO<sub>2</sub>, respiratory rate, visual analog scale (VAS) resting and ramsey sedation scale (RSS) values, tramadol demand and delivery doses, side effects and requirements for additional analgesia were recorded within the postoperative 24 hours in SICU.

**Findings:** No statistically significant differences were observed between the groups, when the amount of percentage changes in postoperative hemodynamic values were compared. There were no significant differences between the groups in VAS scores, total PCA-tramadol consumption, RSS values, requirements for additional analgesia, and side effects ( $p>0.05$ ). Postoperative basal VAS and RSS values were significantly lower than the other periods in both groups ( $p<0.05$ ).

**Results:** We conclude that preoperative iv dexmedetomidine infusion was as effective as perioperative dexmedetomidine infusion as an adjunct to PCA with tramadol on postthoracotomy pain.

## P-64

### RISK FACTORS ASSOCIATED WITH READMISSIONS TO ICU

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To evaluate risk factors for predicting readmissions to ICU and to help determining objective criteria for discharges from ICU.

**Method and Material:** A total of 476 patients discharged from our ICU over a 5-year period examined retrospectively. APACHE II and SOFA scores on both admission and discharge, clinical and laboratory findings of 50 readmitted and 56 non-readmitted patients were evaluated. Patients readmitted within 4 hours, aged under 16, had a diagnose of burn, transferred to another unit or home and died in first ICU stay were excluded.

**Findings:** 476 of 1186 patients discharged to ward and these patients made up the study group (mean patient age 61 years). Our readmission rate was %10,5 (readmissions over discharges). The most frequent diagnoses on admission was associated with gastro-intestinal surgery (%53,8) and secondarily neurosurgery (%19,8). Most common reason for readmissions was respiratory failure (%60) and second cardiovascular problems. %42 of readmissions occurred in 48 hours after discharge.

Patients with age over 60 had a nearly fourfold risk (OR=3,88) (%95 CI: 1.727-8.755) (AUC: 0,69), APACHE II score at discharge over 8 had a nearly fivefold risk (OR=4,74) (%95 CI: 1.733-12.996), SOFA score at discharge had over threefold risk (OR=3,529) (%95 CI: 1.550-8.035) and plasma albumin level under 2,5 g/L had more than a threefold risk (OR=3,348) (%95 CI: 1.496-7.494) for readmissions to ICU. Discrimination ability was moderate for the three models: AUC of 0.69, 0.64 and 0.66 for predicting readmissions, respectively. Regardless of the reason for readmission, these patients have an extremely high mortality rates (OR=159,0) (%95 CI: 35.997-702.310).

**Results:** Older age, APACHE II scores over 8 and SOFA scores over 1 at discharge, and plasma albumin levels under 2,5 g/L before discharge seems to be risk factors for readmissions to ICU. Efforts for developing an acceptable scoring system like Stability and Workload Index for Transfer (SWIFT) and; studies to determine risk factors are in progress. Future studies focused on reducing readmissions with high mortality rates are needed.

P-65

### FIRST VENO-VENOUS ECMO EXPERIENCE IN AN ARDS PATIENT DUE TO H1N1 INFLUENZA IN 2012

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**Introduction:** H1N1 influenza has been the focus of substantial research given its higher case fatality among younger subjects and the potential for fulminant acute lung injury (ALI) and acute respiratory distress syndrome (ARDS) [1]. In light of observational and randomized trials in support of extracorporeal membrane oxygenation (ECMO), this approach has been advocated for and employed in several cases of complicated H1N1 infection [2]. In this case report we aimed to report the first veno-venous ECMO experience in a patient with H1N1 influenza.

**Case:** A 34 year old female patient presented to hospital with severe respiratory failure. Mechanical ventilation was started according to arterial blood gases. Because of the refractory impairment of gas exchange despite maximal ventilatory support we decided to institute ECMO through venovenous femoro-jugular bypass on 3th day. ECMO therapy and mechanical ventilation support continued for 34 days but patient died due to multiorgan failure on 37th day of admission.

**Discussion:** Whereas H1N1 influenza virus is currently in the post-pandemic period, regional outbreaks are still ongoing. Despite the effectiveness of ECMO for oxygenation and ventilation of this patient overall hospital mortality is still elevated for this patient group.

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P-66

### ORGAN INVOLVEMENT DIFFERENCES BETWEEN PRIMARY ABDOMINAL AND PULMONARY SEVERE SEPSIS AND EFFECTS ON MORTALITY

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If outcomes vary according to the source of infection, this may impact on clinical trial design. The aim of this study was to investigate whether the presence of severe sepsis originating in two sites, abdomen and lung, had any impact on patterns of organ failure, number of organs failed, SOFA scores, lactate levels, platelet counts or mortality. We used SOFA scoring system to investigate organ failures.

**Method and Material:** With a diagnosis of sepsis between 2008 and 2010, 117 files of 130 patients were analysed retrospectively. 35 patients with severe sepsis were detected and divided into pulmonary and abdominal source groups including 13 and 22 patients respectively. Each group was further divided into two groups, exitus and discharge. The entry SOFA, 1 week maxSOFA and first 48 hours deltaSOFA scores were noted and compared. The mortality rates, length of stay were evaluated. The Number of involved organs were evaluated in pulmonary and abdominal sepsis groups. Also the initial lactate and thrombocyte levels relationship with mortality were examined.

**Findings:** The number of organs involved in the abdominal group is higher than the pulmonary group ( $p > 0,05$ ). Hospital stay in the pulmonary group is longer than the abdominal group ( $p > 0,01$ ). In the pulmonary group the rate of cases with thrombocyte levels higher than  $150 \times 10^9/L$  is higher, in the abdominal group the rate of cases with thrombocyte levels lower than  $150 \times 10^9/L$  is higher. In the pulmonary sepsis group the rate of cases with lactate levels lower than 4 mmol/dl is higher, in the abdominal sepsis group the rate of cases with lactate levels higher than 4 mmol/dl is higher. In the abdominal sepsis group; CVS ( $p < 0,01$ ) and renal involvement ( $p < 0,05$ ) was higher in exitus group. MaxSOFA and deltaSOFA rates are correlated with mortality.

**Results:** After exclusion, the number of cases became lower. So this study, we hope could be extended to make any addition to awareness of sepsis.

P-67

### THE EXAMINATION OF PROGNOSTIC FACTORS THAT HAVE AN EFFECT ON THE MORTALITY OF PATIENTS WITH MULTIPLE TRAUMAS

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Regardless of the level of socio-economic development in countries, multi-traumas are one of the most basic problems that cause deaths in our day. A high rate of morbidity and mortality are seen in patients with multiple traumas due to serious damage to a number of organs. In order to reduce the rate of deaths in connection with trauma, the factors that have an effect on mortality need to be determined and systems for approaching these patients need to be developed accordingly. The objective of our study is to research the factors that have an effect on mortality in patients with multiple traumas.

**Method and Material:** One hundred six patients of 18 years of age and older, who were being monitored in the Dicle University Anesthesiology and Reanimation clinic intensive care unit with a diagnosis of multi-trauma between the dates of November 2007 and December 2011 were included in our study. Information about the patient like age, gender, trauma etiology, the region affected by the trauma, the duration of mechanical ventilation, period spent in hospital, whether a blood transfusion was given, laboratory and radiology tests, GCS, APACHE-II and SOFA score; to provide information about the prognosis was obtained from the patient files and their connection with mortality was analyzed.

**Findings:** While 69% of the patients were male, 31% were female and the average age was  $34.2 \pm 17.1$ . 26 of the patients (24.5%) died. There was no connection between survival, age and gender. When the causes of trauma were examined it was observed that 44% were attributed to traffic accidents inside vehicles, 24% to traffic accidents outside vehicles and 27% were from falling from a height. No meaningful connection was observed between the presence of head trauma and thorax trauma, blood transfusion, ARSD development, undergoing operations and mortality. However, it was observed that there is a significant connection between the existence of abdomen trauma ( $p=0.034$ ) and the development of sepsis ( $p=0.011$ ) and mortality. It was observed that the rate of mortality rose as the duration of hospital stays and mechanical ventilation grew. Significant correlation was observed between mortality and GCS, APACHE II and SOFA scores. However, this correlation was even stronger with the APACHE II score ( $r=-0,624$ ;  $p \leq 0.001$ ).

**Results:** Multi-trauma is still an important health problem that increases mortality and morbidity rates. The transfer of patients to an intensive care unit as soon as possible and the delivery of their treatment with a multidisciplinary approach is extremely important in reducing mortality.

P-68

### ACUTE SEIZURES DUE TO DRUG INTERACTION BETWEEN VALPROIC ACID AND MEROPENEM

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Acute Seizures Due to Drug Interaction Between Valproic Acid and Meropenem

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**Objective:** Status epilepticus (SE) is a medical emergency associated with significant morbidity and mortality. The interaction between Valproic acid VPA and meropenem is characterised with a rapid decline in serum VPA levels. We describe a patient who displayed a probable pharmacokinetic interaction between meropenem and VPA that resulted in development of epileptic seizures.

**Case report:** A previously healthy 21 y.o. woman admitted to emergency department with fever and stiff neck. Blood cultures, CBC, CRP and blood chemistry and CSF samples were obtained. Meropenem and vancomycin were started an initial for meningitis. On day 3 of the antibiotic therapy generalized tonic clonic seizures were observed. Phenytoin and intravenous (IV) thiopental were started. The patient was intubated and mechanically ventilated. EEG revealed generalized epileptiform activity. In the following days, seizure activity continued. Levetiracetam, carbamazepine and VPA were added for treatment respectively, but seizures continued. The patient was consulted with neurology and infectious disease doctors daily. Serum VPA and carbamazepine levels were lower than therapeutic levels although the drug doses were on upper limits. On the 20th day of meropenem therapy, interaction of carbapenems and anti-epileptic agents was suspected. Antibiotherapy was discontinued. Serum concentrations of VPA increased over the next days to achieve therapeutic levels. On day 21 she was extubated, no seizures had occurred over the previous 48 hours. She was discharged from the ICU, with VPA concentrations within the therapeutic range.

**Discussion:** We have started treatment of IV meropenem with initial diagnosis of meningitis. On the 3th day of antibiotherapy epileptic seizures occurred. With the diagnosis of SE patient was non-responsive to the various antiepileptics. Serum concentrations of antiepileptics were low during treatment. A possible drug interaction was suspected and meropenem therapy was terminated. Serum concentrations of antiepileptics reached therapeutic levels within 48 hours and seizures stopped. Drug interactions are frequently encountered problems in ICUs. This situation may complicate the therapy. Carbapenems have a potential effect of inducing seizures and may also lower serum levels of antiepileptic drugs.

**Conclusion:** Patients receiving antiepileptics and carbapenem group antibiotics concomitantly should be closely monitored due to possible drug interaction between these agents.

P-69

## EVALUATION OF INVASIVE DEVICE-ASSOCIATED INFECTIONS RATES IN INTENSIVE CARE UNIT OF A TEACHING HOSPITAL IN TURKEY; FIVE YEARS' EXPERIENCE

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In this study, we aimed to evaluate invasive device-associated infections rates (IDAIR) in our nine-bed-adult-intensive care unit for five years.

**Method and Material:** Patients who were admitted to intensive care unit of our hospital in 2008-2012 were included in this study. Nosocomial infections were identified using the Centers for Disease Control and Prevention definition. IDAIR were calculated by using National Healthcare Safety Network (NHSN) data. Our results were compared with the country-wide surveillance data obtained from Refik Saydam National Public Health Agency.

**Findings:** 209 patients in 2167 patient days, 208 patients in 2005 patient days, 325 patients in 2083 patient days, 266 patients in 2220 patient days, and 486 patients in 2864 patient days were followed up in 2008, 2009, 2010, 2011, and 2012, respectively. Ventilator-associated pneumonia rate (VAPR) (2.31/1000 ventilator days in 2008, 4.32/1000 ventilator days in 2009, 2.77/1000 ventilator days in 2010) and Catheter-associated blood stream infection rate (CA-BSIR) (1.57/1000 central catheter days in 2008, 2.23/1000 central catheter days in 2009) were found to be less than the average of similar hospitals in the country. Catheter-associated urinary tract infection rate (CA-UTIR) of 2008, and 2009 (6.00/1000 urinary catheter days in 2008, 7.09/1000 urinary catheter days in 2009) of this period were above the CA-UTIR of 2010, 2011, and 2012 (4.35/1000 urinary catheter days in 2010, 4.57/1000 urinary catheter days in 2011, 3.17/1000 urinary catheter days in 2012). While VAPR in 2011 (11.49/1000 ventilator days), and 2012 (9.62/1000 ventilator days) were higher than the rates of 2008, 2009, and 2010, CA-BSIR remained in 2011 (0.56/1000 central catheter days), and 2012 (1.03/1000 central catheter days) were less than the rates of 2008, 2009, and 2010.

**Results:** The annual evaluation of surveillance has been guiding to prevent hospital infections. Unless the control measures are not applied equally effective in every area, the success could not be obtained simultaneously.

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P-70

## ERGONOMIC EVALUATION OF A GENERAL INTENSIVE CARE UNIT

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**Objectives of study:** The aim of this study was to evaluate the physical ergonomic factors in a general intensive care unit.

**Method and Material:** Materials and Methods: This descriptive study was conducted in a general intensive care unit in Keçiören, Ankara in April, 2011. Both some measurements such as room space, bedding, equipment, height of countertop, and the physical ergonomic factors such as temperature, humidity, ventilation, light, noise levels were evaluated. Measurements was held by using measuring cylinder, light meter, thermometer, moisture meter, and noise meter instruments.

**Findings:** The intensive care unit had 132 m<sup>2</sup> space and 31 healthcare workers (2 physicians, 22 nurses, and 7 caretakers). There was no restrooms in the unit. Sink/patient bed ratio was three, and the average distance between patient beds was 161.2 ± 24.6 cm. (min.= 125, max.= 200 cm.). There were nine beds, all electronically controlled. It was determined that the wall color intensive care unit was light green, and gray floor was made of non-slip plastic. According to the average of nine measurements, fluorescent type white light illumination level in the unit was found to be 582.2 ± 67.6 lux. Humidity level and temperature were found to be 15.0% and 25 °C respectively in the intensive care unit which had no window, and had a central type heating and air conditioning system. According to the 10 minute-measurement from the mid-point of the intensive care unit, average noise level was determined as 56.6 ± 4.8 dB. It was identified that there was no equipment such as elevator or lifting hoist for transferring or positioning the patient.

**Results:** In this study, measurements of physical space light, noise, and temperature levels were found to comply with the terms of the working environment for intensive care unit. Humidity levels should be adapted to the living conditions, and patient positioning / transferring equipment should be provided for efficient patient and employee health and safety.



## P-71

**FORTY-FIVE DEGREE WRIST ELAVATION IS OPTIMAL FOR  
ULTRASONOGRAPHY GUIDED LONG AXIS RADIAL ARTERY  
CANNULATION BOTH FOR YOUNG AND ELDERLY SUBJECTS.  
A RANDOMIZED STUDY**

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Procedures for improving radial artery cannulation have involved direct visualization of the vessel with ultrasonography at the time of cannulation. To establish an appropriate wrist joint position for arterial cannulation is crucial for US guided cannulation success. In this study we aimed to find out the optimal wrist joint angle for long axis ultrasonography guided radial artery cannulation with comparing the long axis radial artery measurements at 0°, 15°, 30°, 45°, 60°, 75° wrist joint angle in young and elderly healthy subjects.

**Method and Material:**One hundred forty (70 young healthy volunteers with mean age: 32,5±5,61 and 70 elderly healthy volunteers with mean age: 63,7±6,38) healthy volunteers were recruited to study and randomized to young and elderly subject group. The subjects' wrists were positioned at 0°, 15°, 30°, 45°, 60° and 75° again and images in long axis were obtained at each angle. The distance between skin and radial artery was measured in long axis.

**Findings:**Maximum arterial height was achieved at 45° in both young and elderly subjects ( $p < 0.05$  compared to 0° in both groups). Radial artery distance between skin at 0° ( $p: 0.02$ ) and radial artery height at 45° in long axis view were statistically decreased in elderly age subjects compared to young subjects ( $p: 0.01$ ).

**Results:**Angle increment up to 45° might help clinicians in long axis US guided radial artery cannulation whereas this angle maneuver decreased the arterial skin distance which might be also a potential advantage for cannulation.

## P-72

**THE EXAMINATION OF PROGNOSTIC FACTORS THAT HAVE  
AN EFFECT ON THE MORTALITY OF OBSTETRIC PATIENTS  
THAT ARE BEING MONITORED IN INTENSIVE CARE UNITS**

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Pregnancy, which is a physiological process usually passes without problems. However, complications in the pregnancy or the intensification of an existing medical condition can threaten the lives of the mother and/or the fetus and may require them to be transferred to an intensive care facility. Complications during pregnancy and birth are among the top reasons for mortality and morbidity among women at reproductive maturity, especially in developing countries. The objective of our study is to research the prognostic factors that have an effect on mortality in obstetric patients being monitored in a reanimation unit.

**Method and Material:**Seventy-eight cases that were admitted to the Dicle University Anesthesiology and Reanimation Clinic intensive care unit between April 2007 and April 2012 were included in our study. The demographic information about the patients such as the duration of their connection to mechanical ventilation and their stay in the intensive care unit, the procedures that were performed, the complications that developed, whether a blood or blood products transfusion was given, the use of vasoactive medications, a history of additional operations and hemodialysis, laboratory tests, GCS, APACHE-II and SOFA score; to provide information about the prognosis was obtained from the patient files and the connection of all the data with mortality was analyzed.

**Findings:**Mortality had occurred in 13 (16.7%) of the patients being monitored in the reanimation unit. No significant statistical factor was determined between mortality and maternal age, week of gestation, number of pregnancies and indications causing admittance to hospital (40% obstetric hemorrhaging, 37,2% Hellp Syndrome and 11,5% eclampsia). The most common complications to occur in the patients were; acute lunge injury (60.3%), acute kidney failure (15.4%), neurological complications (11.5%), sepsis (7.6%) and ARDS (3,8%) in that order. The GCS, APACHE II and SOFA scores in patients that developed mortality were significantly worse ( $p < 0.001$ ). It was discovered that the average duration of stays in the ICU for patients that died was 15 days whereas those that survived stayed there an average of 9 days ( $p = 0.012$ ). Mechanical ventilation treatment was administered to all of the patients who died (average 14 days) and 86% of the patients that survived (average 5 days) ( $p < 0.01$ ). Also a significant correlation was determined between the duration of mechanical ventilation and survival ( $r = -0.311$ ;  $p = 0.006$ ). The need for vasoactive medication infusion in patients that died was more than in the patients that survived ( $p < 0.001$ ). However no connection was observed between the provision of blood and blood product transfusions and a history of additional operations and hemodialysis.

**Results:**The rate of maternal mortality is still very high in our country and especially in our region. The importance of intensive care units in terms of preventing obstetric mortality and morbidity has increased in our day. Therefore it would be appropriate for critical patients to complete their 48 hour postpartum period in intensive care units.

P-73

### INFLUENZA A (H1N1) RELATED ACUTE RESPIRATORY DISTRESS IN PREGNANCY

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**Objective Of Study:** H1N1 influenza can lead to severe consequences including death of mother or fetus in pregnant woman. Mortality rates are high especially in the third trimester (1). The cause of maternal death is severe pneumonia and acute respiratory distress syndrome. We aimed to present a pregnant woman with 37th gestational week who had a H1N1 influenza virus infection .

**Case Report:** A 22-year-old pregnant expecting twins at 37 weeks was admitted to obstetric department for preterm delivery. She had a slight fever, sore throat and cough at admission. During her follow-up the cough has intensified, respiratory distress developed and rales were found bilaterally on chest auscultation. Echocardiography gave first degree of mitral and tricuspid insufficiency in the patient. There was pleural effusion bilaterally on the thorax ultrasonography. Blood sample results for troponine and d-dimer were within normal values. Due to fetal distress, the patient was undertaken to urgent cesarean section on the second day of her hospitalization and two living girls were delivered. The mother was admitted to the intensive care unit with noninvasive ventilatory support postoperatively. On the third day her body temperature raised to 39 °C. There was widespread pneumonic infiltration at chest radiography. She was intubated and mechanical ventilation was started. In order to rule out H1N1 virus infection, nasopharynx wipe sample was taken. Oseltamivir 75 mg tablets twice, and piperacillin-tazobactam 4.5 g trice per day were initiated. Her general condition recovered and she was successfully weaned from the ventilator support on the 4th day of her antiviral therapy. She was discharged to obstetric department on the 10th day of her admission. Our department was informed that the patient was positive for influenza virus H1N1 after the discharge.

**Conclusion:** Maternal and fetal risks associated with Influenza virus infection at pregnancy are at high rates due to hormonal, immunological and mechanical changes occurred. Complication and hospitalization rates increase as gestational week increases (1). Infection with influenza virus H1N1 should be suspected when a pregnant woman presents with the respiratory tract symptoms like sore throat, cough, dyspnea and fever. Early antiviral therapy by oseltamivir or zanamivir can save the lives of the mother and the fetus.

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P-74

### ACUTE POISONING CASES TREATED AT ACIBADEM KADIKOY HOSPITAL BETWEEN 2005 AND 2011

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Intoxication is a worldwide problem. We wanted to reveal it is epidemiology and other aspects at least in one tertiary hospital. A retrospective study of acute intoxication cases was performed at the Acibadem Kadikoy Hospital between January 2005 and December 2011 .

**Method and Material:**Data from a total of 128 patients were included. Various parameters (age, sex, time of ingestion, month of occurrence, chronology , agent responsible for the number and types of poisoning cases treated, history, symptoms, clinical development, treatment ) were analyzed.

**Findings:**The mean age of patients were 30 ± 15 years (77% women). Drugs of abuse were the most common toxic agents (78.9 %), followed by ethyl alcohol intoxication (14.8%) and carbon monoxide (CO) intoxication (4.6%). The problems most commonly resulting from the poisoning were neurological, and mortality rate was just 0.7%. One hundred and eight cases of poisoning occurred as suicide attempts. The ingestion of poison was the most common route of poisoning in 121 (94.5%). The remaining was poisoned by respiratory route in 7 patients (5.5 %). Peak of poisoning occurred in December and January (23.4%). Treatment was general decontamination and supportive-symptomatic therapy. One hundred and five patients were treated with activated charcoal, Gastric lavage was performed in 107 patients. Renal replacement therapy and inotropes was started for only one patient. Hyperbaric oxygen therapy was the treatment modality for three CO poisoned cases. Five patients were put on intermittent positive pressure ventilation (IPPV). One hundred and two patients were discharged from hospital within 24 hours. One of our patients died due to CO poisoning.

**Results:** Poisoning is a serious condition that needs rapid diagnosis and treatment. Early diagnosis, careful monitoring and appropriate management may decrease the mortality rate among these patients.

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### POISONING RESULTING IN DEATH IN INTENSIVE CARE MEDICAL APPROACH AND PROCESS ANALYSIS

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This study aimed to determine the relationship between different types of poisoning and death at crime scene or intensive care unit (ICU) to provide a guideline to prevent poisoning types resulting in death at the crime scene and to improve management of poisoning types resulting in death at emergency care units (ECU) and ICU.

**Method and Material:** A total of 103 cases of poisoning were investigated and classified into 13 groups according to poison types. The relationship between types of poisoning, gender and treatment in ICU according to 7 different age groups was evaluated.

**Findings:** Most frequent cause of poisoning was medical drugs (n=46; 44,7%). There is a statistically significant relationship between the cause of poisoning and those who receive an intensive care treatment (p=0,05). ICU treatment was significantly common in medical drug, amanita phalloides, methanol, organophosphate and other organic substance poisonings. Heroin, carbon monoxide and corrosive substance poisonings resulted in death at the scene or on the way to the hospital.

**Results:** We conclude that precautions and efforts to prevent people's contact with heroin, carbon monoxide and corrosive substances should be increased. The ICU treatment for those who were poisoned by medical drugs, amanita phalloides, methanol, organophosphate and other organic poisons should be improved. Presence of surgical transplantation teams in regions where mushroom poisoning (mycetism) is frequently seen could be beneficial.

P-76

### A PATIENT WITH SEVERE HYPERCALCEMIA IN INTENSIVE CARE UNIT

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**Objectives:** The control of electrolyte levels is essential in critically ill patients and the calcium is the one of these. Regulation of serum calcium is managed by two hormones, parathyroid hormone (PTH) and calcitriol. Several factors can affect this homeostasis (1).

**Case Report:** 37-year-old male patient admitted to Pulmonary Clinic due to fever and pneumonia. He has past medical history of alcohol abuse and he was in a bad hygienic condition. During his follow-up, he suffered from abdominal distension and constipation with hypoactive bowel sounds. Fleet enema was administered but the patient was not relieved. Cecal perforation was diagnosed on abdominal computed tomography and the patient was transferred to intensive care unit (ICU) after surgical repair of perforation and colostomy. His respiratory effort was not sufficient and he was mechanically ventilated. Weaning process was prolonged and extubation was not achieved. On the 14th day of his ICU admission the patient was tracheotomised. Pulmonary infiltration was aggravated and antibiotherapy was administered according to the susceptibility of the isolated pathogen. His vital signs were not stable and the septic condition made physical status worse with the necessity of high dose of vasopressors. During his follow-up, the serum calcium level showed gradual increment resistant to fluid therapy and loop diuretics. On the 50th day, the level of serum calcium was reached to 17.95 mg/dL and altered mental status, muscle twitches and electrocardiographic changes were determined. Immobilization hypercalcemia was considered after exclusion of other possible reasons. Continuous Venovenous Hemodiafiltration (CVVHDF) with citrate anticoagulation was carried out and the 2nd day of treatment the level of serum calcium decreased to normal values. The patient was weaned and decannulated on 95 the day. On the 104th day of his ICU admission, the patient was discharged to surgical clinic in a well-condition.

**Results and Discussion:** In critically ill patients, serum calcium level must be reduced as soon as possible. Long time to normalization is likely worsening the prognosis by inducing renal and cardiac dysfunction, gastrointestinal hemorrhage and acute pancreatitis. CVVHDF is a treatment of choice in treatment-resistant cases.

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### PROCEDURAL SEDATION AND ANALGESIA FOR BURN WOUND CARE IN CHILDREN

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Burn treatment includes daily cleaning, debridement, dressing changes and assessment regarding the need for skin grafting. These procedures are painful and usually require procedural sedation and analgesia. Our aim was to quantify efficacy and patient safety of procedural sedation and analgesia in a burn unit.

**Method and Material:** 213 procedural sedations and analgesia (PSA) in 103 pediatric burn patients have been reviewed over a 10-month period. Demographic and clinical data including patient age, gender, body weight, dates of burn injury and wound care procedures, length of procedure, PSA medications and doses, adverse drug events, difficulties encountered and related interventions have been assessed.

**Findings:** The mean length of the procedure was 23,4 minutes with a range of 5 to 60 minutes. The mean subject age was 4,7 years (range: 6 months to 18 years), 68% were male, and the mean TBSA was 13,7% (2-44%). This burn center used a procedural sedation regimen of fentanyl, midazolam, ketamine and propofol for their rapid onset and short duration of action. Forty adverse events were documented in patients. These events were hypothermia and shivering (20), hypertension (6), respiratory depression (4), allergic reactions (2), nausea and vomiting (2), agitation (2), hyper salivation (2) and inadequate sedation (2). No patient required intubation. Difficulties encountered were the physical condition of the patient monitoring and sedation (80), due to the patients' mental status (30) (Delirium, agitation, extreme fear, etc.), patients' comorbidities (10) and difficulties to intravenous access (10).

**Results:** Patient safety and comfort constitute the prime priorities in burned patient management. The provision of PSA in patients with severe burn carries the risk of potentially life-threatening complications. Good PSA practice involves pre-sedation assessment and optimal selection of patients, careful monitoring and support from dedicated staff, and adherence to recovery and discharge criteria.

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### THE SUCCESS RATE OF CAROTID ARTERY PALPATION GUIDED INTERNAL JUGULAR VENOUS CANNULATION IN A PATIENT WITH A NEUTRAL HEAD POSITION

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Internal jugular venous cannulation should be performed in patients while maintaining a neutral head position for a variety of clinical conditions. However, in this position, the landmark that should be used is unclear. Our aim was to evaluate the success rate of right internal jugular vein (RIJV) cannulation guided by carotid artery (CA) palpation in a patient with a neutral head position.

**Method and Material:** The prospective randomized study was designed as two parts. Part 1: Prior to this study we conducted a preliminary evaluation with CT scans of 30 consecutive patients to determine the relationship with RIJV and the CA. Part 2: A total of 150 patients who planned RIJV cannulation were included in the study. Each patient's head was placed in the neutral position. Under general anesthesia, the patient was positioned in the Trendelenburg position and ventilation was provided with a positive end-expiratory pressure. RIJV cannulation was performed by ten different clinicians using CA palpation to guide the needle, which was not angled either medially or laterally. The primary outcome variable was the cumulative success rate, which was defined as RIJV puncture achieved in the first 3 attempts using a needle.

**Findings:** The cumulative success rates on the first 3 attempts were 96.7%. No differences were observed between the clinicians. CA puncture did not occur in any patient.

**Results:** CA guided RIJV cannulation can be used effectively due to its high success rate in patients whose heads are maintained in a neutral position.

## P-79

## AMITRIPTYLIN INTOXICATION

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**Introduction:** Intoxication with Tricyclic antidepressants may cause 11.3-32 percent deaths(1). In this case report, we the importance of multidisciplinary approach to severe amitriptyline intoxication was emphasised.

**Case report:** 35 years old female patient, had taken 41 tablets of 25 milligrams of Amitriptylin, was brought to Emergency Room. On physical examination her Glasgow Coma Scale was 13, vital signs were stabil. Because of overdose of Amitriptylin she was transferred to intensive care unit (ICU). At the ICU, she was hydrated and gastric lavage was performed. On follow up at ICU the patient had sinus tachycardia. After 3 hours of hospitalization, because of she had convulsion and her respiration was depressed, she was intubated. Metabolic acidosis was revealed and bicarbonate infusion was started in dose of 1 mg/kg IV. 10 mg of diazepam was administered intravenously and 2x50 mg IV of epanutin were initiated for convulsions. 3 mg/hr midazolam were initiated for sedation. For treatment of hypotension 0.5 mg/hr noradrenalin was applied. After treatment of hypotension and metabolic acidosis, her blood pressure was 110/80 mm/hg and her metabolic acidosis was meliorated. After 48 hours of hospitalization in ICU, she was extubated.

**Discussion:** Safety dose range of TCA's is 1-5 mg/kg. In the case of overdose usage, intoxication occurs. Death usually occurs taking over doses of 1-3 grams, despite receiving very high doses (>4 grams of Amitriptylin) have been reported in cases without death(2,3). Severe intoxications can lead to cardiac arrhythmias, respiratory depression, convulsions, coma and even death(4,5). Patients who presented with signs of Amiritriptylin toxicity, despite normal ECG, according to cardiac point of view they must be monitored for 24 hours(6). Sinus tachycardia was the only finding in our patient. As a conclusion; in the case of intoxication of Amitriptylin, epileptic seizures and respiratory depression usually occur. Aggressive treatment with intravenous fluids and cardiovascular support are still mainstay of the current intoxication therapy.

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## P-80

## INTENSIVE CARE MANAGEMENT IN A CEREBRAL ANEURYSM CASE WHO DEVELOPED HEMORRHAGE DURING ENDOVASCULAR PROCEDURE

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**Introduction :** Re-bleeding and vasospasm are the most important complications of cerebral aneurysms. The main purpose of treatment through an endovascular approach is to alleviate the high risk of surgical complications and the risk of bleeding.

**Case report:** Saccular aneurysm (10x8 mm) was detected with DSA in the distal internal carotid artery (ICA) in a 32-year-old female patient who had presented with subarachnoid hemorrhage following the complaint of a severe headache (Image a). Endovascular treatment was planned. Consent for anesthesia was obtained with the ASA II risk and the patient was monitored before the procedure. She was connected to the mechanical ventilator after endotracheal intubation. Re-bleeding was detected on control DSA (Image b). 5000 IU of heparin were administered before the procedure was reversed with protamine. Hemodynamic parameters were stabilized by administration of beta-blocker and nitroglycerine. Hemorrhage was seen to have ceased on control DSA. Saccular aneurysm was embolized with Detachable Coil (Images c,d). Severe spasm was observed in the middle cerebral artery (MCA) (Image c-white arrows).

The patient was given intra-arterial 0.4 mg nimodipine (0.1 mg/min). Minimal regression of the spasm was seen (Image d, white arrows). She was administered 5000 IU of heparin. Heparin infusion of 1000 IU/hour was begun for maintenance therapy. Treatment was begun to keep the mean arterial pressure at the level of 140 mmHg. The patient was transferred to the intensive care unit and she was intubated after the procedure had been completed. She was sedatized at ICU. Heparin infusion continued for 12 hours longer and was then switched to low molecular weight heparin. Antiedema and antiepileptic therapy continued. Hypopotasemia and hypocalcemia developed postoperatively and was corrected with replacement therapy. The sedation dose was reduced and the patient was extubated 24 hours later. Her general condition was moderate, she was conscious and she had somnolence. The pupils were isochoric, and the light reflex (LR) was +/+. The Glasgow Coma Scale score was 12. All four extremities were mobile and there were no lateralization findings. Intracerebral hematoma was not detected on control CT. The patient was discharged on the 15. postoperative day (GCS score: 15).

**Discussion and conclusion:** Subarachnoid hemorrhage and vasospasm lead to high mortality and morbidity. The clinicians must be ready for potential hemorrhage and neurological complications during and after endovascular therapy. Follow-up and treatments must be carried out under intensive care conditions through a multidisciplinary approach.



P-81

## THE EFFECTS OF CPAP AND NASAL BIPAP THERAPY ON THE TREATMENT OF A PATIENT WITH COPD EXACERBATION HOSPITALIZED IN THE INTENSIVE CARE UNIT

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**Introduction:** Non-invasive mechanical ventilation (NIPPV) is a therapeutic method providing positive pressure breathing support through a mask without endotracheal tube (1,2). For this purpose, both standard mechanical ventilators and portable devices for NIMV providing positive airway pressure (BIPAP) are used by which continuous positive airway pressure (CPAP) or inspiratory and expiratory pressure levels can be determined separately(3). NIMV is effective by resting chronically fatigued muscles (4), correcting lung compliance disorder or by reducing alveolar hypoventilation (5). It reduces the workload of respiratory muscles by balancing positive alveolar pressure at the end of expiration in COPD (Chronic Obstructive Pulmonary Disease) patients(6,7). It is known that dyspnea complaints occur due to respiratory muscle fatigue in COPD patients and this fatigue is partly responsible for the deterioration in respiratory function (5,6).

**Case:** 80-year-old male patient who smoked half a packet a day for 40 years was being followed for COPD. He took 4x2 salbutamol puff a day. He came to the emergency service with the complaint of difficulty in breathing. His breathing was shallow and 32 in a minute. Oxygen was given 2 lt/min by mask. pH: 7.16 pCO<sub>2</sub>: 98mmHg PO<sub>2</sub>: 54mmHg HCO<sub>3</sub>: 34mmol / L, and peripheral oxygen saturation SaO<sub>2</sub>: 85 was observed in the arterial blood gas. The patient was taken to anesthesia intensive care unit with the diagnosis of COPD exacerbation. NIPPV was achieved in CPAP mode with FiO<sub>2</sub>: 50% O<sub>2</sub>, PEEP: 8, PSV: 12 cmH<sub>2</sub>O. CPAP was applied with auranasal mask 6 times a day for 2 hours, and arterial blood gas values were as pH: 7.31 pCO<sub>2</sub>: 74mmHg PO<sub>2</sub>: 66mmHg HCO<sub>3</sub>: 45mmol / L and SaO<sub>2</sub>: 96. The patient showed non-compliance to the auranasal mask in the ongoing process of the treatment. Since the required improvement in blood gas analysis was not observed due to the non-compliance, portable BIPAP device with nasal mask was used at the end of 6th day. BIPAP was administered 6 times a day for 2 hours as IPAP: 12 cmH<sub>2</sub>O EPAP: 5 cmH<sub>2</sub>O. The values of the arterial blood gas at the end of the second day were as follows: pH: 7.42 pCO<sub>2</sub>: 61mmHg PO<sub>2</sub>: 126mmHg HCO<sub>3</sub>: 39mmol / L and SaO<sub>2</sub>: 97. The patient was discharged from the Intensive Care Unit with these values and transferred to the service of Chest Diseases with portable BIPAP device.

**Results:** In previous studies, it was reported that the most important benefit of NIPPV in acute exacerbations of COPD and respiratory failure is to give opportunity for the muscle rest and to reduce air trapping by eliminating intrinsic PEEP (8,9). Cooperation of the patient during treatment is important. In our case, BIPAP was applied with nasal mask as the patient refused auranasal mask and he was discharged from the intensive care unit in short time, and his treatment continued under normal service conditions. Both the time in intensive care unit was shorter and the treatment process became faster. These devices are available recently and the treatment process can be provided at home as well.

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## NEUROGENIC PULMONARY OEDEMA AFTER CESAREAN SECTION

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**Introduction:** Neurogenic pulmonary oedema (NPO) is a life-threatening condition that develops after acute neurologic changes, such as head trauma, subarachnoid hemorrhage, and shock in the following hours (1). Hydrostatic pressure and capillary permeability changes occur in the lungs by central neurogenic mechanisms (2).

**Case:** A 35-year-old pregnant was underwent emergency cesarian section at 37 weeks of gestational age. Spinal anaesthesia was performed with 25 G Quincke spinal needle at L3-4 space with 2 ml of hyperbaric bupivacaine 0.5% to achieve a sensory loss upto a level of T 4 dermatome. Hemodynamic and respiratory parameters were stable during operation. She was shifted to gynecology clinic without encountering any complication. In the postoperative first day, she complained of dizziness, loss of sensation and weakness in the left leg. On the neurological evaluation, paraplegia (1/5) and urinary incontinence were observed. MRG imaging of lumbar and thoracic spine demonstrated hydroxyringomyelia and a thoracic mass (T1-2). We started dexamethasone 250 mg intravenously four times a day for a week. At the postoperative second day, patient admitted to intensive care unit because of occurring Cheyne-Stokes respiration. Her arterial blood gas report showed pH: 7.12, pCO<sub>2</sub>: 70 mmHg, pO<sub>2</sub>: 55 mmHg. She was intubated with 1mg/kg propofol, 2mg/kg succinylcholine and mechanically ventilated. Ground-glass appearance was seen on chest radiograph due to pulmonary oedema. Furosemide 0.3-0.5 mg / kg was started for diuresis. Seven days after treatment with diuretic, respiratory parameters returned normal and blood gas report showed pH: 7.45, pCO<sub>2</sub>: 36 mmHg, PO<sub>2</sub>: 105 mmHg. Hereby, we extubated and shifted her to an university hospital neurosurgery clinic. She was underwent arteriovenous malformation (AVM) operation and was discharged.

**Discussion:** We think that NPO might be caused by the release of mediators which increases the cerebrospinal fluid pressure, the effect of AVM in thoracic region, and the administration of 10 mg intrathecal hyperbaric bupivacaine in lumbar region. Due to the lack of specific criteria for the diagnosis of hypoxia and pulmonary oedema after a neurologic finding should be considered as NPO (1).

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## P-83

### THE RELATIONSHIP BETWEEN OXIDATIVE STRESS PARAMETERS AND CYSTATIN C LEVELS IN PATIENTS WITH SEVERE PREECLAMPSIA

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Oxidative stress is believed to have a role in the development of preeclampsia (PE). It is known that an increased cystatin C (CYC) level is also associated with PE. The aim of this study was to investigate the relationship between oxidative stress parameters and CYC levels in patients with severe PE.

**Method and Material:**Forty-four patients with severe PE and 40 healthy pregnant women were recruited to the study. All study subjects were divided into 2 groups; group 1(n=44) consisted of patients with severe PE, and group 2 (n=40) consisted of healthy pregnant subjects. Blood samples were obtained to measure CYC, total antioxidant status and total oxidant status from all subjects. Oxidative stress index was calculated.

**Findings:**Compared to group 2; group 1 had significantly higher CYC, total oxidant status, oxidative stress index and lower total antioxidant status levels ( $p = 0.001$ ,  $p < 0.001$ ,  $p < 0.001$ ,  $p = 0.036$ , respectively). Serum CYC levels were significantly correlated with oxidative stress index levels ( $r=0.609$ ,  $p < 0.001$ ).

**Results:**The present study demonstrated that both oxidative stress and CYC levels increased in patients with PE, and increased CYC levels seem to be a consequence of oxidative stress.

## P-84

### THE RELATIONSHIP OF GENDER AND GLASGOW COMA SCALE WITH LENGTH OF STAY AND MORTALITY IN ICU IN GERIATRIC PATIENTS

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Glasgow Coma Scale (GCS) score has previously been found to correlate with outcomes in critically ill patients. However, the influence of gender on ICU mortality is controversial. In this retrospective study, we aimed to evaluate the relationship of gender and GCS with length of stay (LOS) and mortality in ICU in geriatric patients.

**Method and Material:** Firat University Hospital Database was evaluated for all patients aged  $\geq 65$  years who admitted to adult ICU between January 2009 and January 2013. The primary objective of the study was to investigate the relationship of gender with overall LOS and mortality rate in ICU. The secondary objective was to investigate the relationship of GCS at the time of admission to ICU with overall LOS and mortality rate in ICU.

**Findings:** Three hundred and seventy-five consecutive geriatric patients consisting of 166 women and 209 men admitted to ICU during the period of evaluation. No correlation was found between gender and overall LOS and mortality rate ( $r < 0.50$ ,  $p > 0.05$ ). There was a significant but weak negative correlation between admission GCS score and overall mortality rate ( $r < -0.50$ ,  $p < 0.01$ ). Women had insignificant a lower mortality rate and a longer LOS in ICU compared with men. However, the differences between women and men in terms of the mean admission GCS, overall LOS and overall mortality rate in ICU were not statistically significant ( $p > 0.05$ ).

**Results:** The present study, shows that a weak but significant relationship of admission GCS with length of stay (LOS) and mortality in ICU in geriatric patients. However overall LOS and overall mortality rate in ICU of women and men was similar.

## P-85

### ULTRASOUND-GUIDED PERCUTANEOUS DILATATIONAL TRACHEOSTOMY IN A PATIENT WITH ANTERIOR APPROACH CERVICAL DISCECTOMY

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**Objective:** Percutaneous dilatational tracheostomy (PDT) is preferred widely over than surgical tracheostomy for long-term ventilator support in intensive care. However, it is difficult in some cases as patients with a short neck, enlarged thyroid gland or with previous neck surgery to determine only by palpation the exact position of the cricoid cartilage and first tracheal ring. It is recommended that ultrasound- guided puncture of the trachea can be useful to find the correct location for tracheostomy tube placement. We presented a patient with cervical discectomy with anterior approach in whom successful PDT with dilatation forceps was performed, guided by ultrasonography

**Case:** A 68-year-old female, intubated patient, who operated cervical discectomy with anterior approach, had chronic obstructive pulmonary disease and hypertension was admitted ICU with respiratory failure. The patient was mechanically ventilated for 12 days. There was no recovery of respiratory failure for 12-day. On the 13th day percutaneous tracheostomy was designed due to her anticipated prolonged mechanical ventilation. Ultrasonographically guided tracheal puncture was preferred because of her previous neck surgery. The patient was prepared for PDT in a standard manner but without hyperextension of the neck. With a sterile linear ultrasound transducer the trachea was visualized in longitudinal section. The space between the second and third tracheal ring was chosen easily by USG. The trachea was punctured through the incision at an angle of 90o with needle/cannula closely leaning to the ultrasound probe. The ultrasonographically guided procedure of PDT was performed without complications.

**Conclusion:** It was demonstrated that ultrasonographically guided puncture of the trachea can be used as a useful technique in difficult anatomical structures in the neck during a PDT in the present case. Furthermore, this technique may be a good alternative to other PDT-techniques in patients with difficult neck anatomies.

P-86

### CLINICAL APPROACH FOR ACUTE IRON POISONING: CASE SERIES

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Although acute iron poisoning is more common in the pediatric age, it may be seen any age and is an important clinical condition. The main causes of iron poisoning are intake of iron-containing drugs accidentally in children and suicide attempts or overdoses in adults. Acute iron poisoning can cause gastrointestinal hemorrhage, cardiovascular collapse, alteration of mental status and hepatic and renal failure. In this study, we aimed to evaluate the etiological factors and diagnosis and discuss treatment approaches in the patients who admitted to the intensive care unit due to acute iron poisoning

**Method and Material:** Eight patients who admitted to the intensive care unit due to acute iron poisoning were analyzed from January 2010 to December 2011. Data regarding age, gender, the cause of poisoning, toxic agents, the route of exposure, a history of previous toxicity, the time between exposure and ICU admission, the owner of the poisoning agent (the patient or someone else), consciousness status on arrival, glasgow coma score, the length of ICU stay, the results of laboratory tests, methods of treatment, and outcome were evaluated.

**Findings:** All 8 patients were female and the mean age was 22 (18-32) years. The cause of poisoning was suicide attempt with high dose of the drug. The time between exposure and ICU admission was average of 4.2 (1.5-9) hours. The most common symptoms were abdominal pain (n = 7), vomiting (n = 5) and diarrhea (n = 4). The amount of received elemental iron was 20-75 mg / kg. The biochemistry and coagulation parameters did not change clinically important in all of the patients. Nasogastric catheters inserted and gastric lavages performed to all patients in the emergency department. Deferrrioksamin treatment was not implemented because of serum iron levels were not higher than 500 mg / dL. After patients was observed two days, one patient was transferred into psychiatric clinic, 7 patients were discharged in a good health.

**Results:** Acute iron poisoning is a clinical diagnosis and its conventional diagnostic tests are not 100% specific and sensitive. The patient history and clinical suspicion is very important. The basic supportive therapy with gastric lavage and desferriksamine therapy should be managed timely.

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### A "POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME (PRES)" IN INTENSIVE CARE UNIT- CASE REPORT

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**Objectives Of Study:** Posterior reversible encephalopathy syndrome (PRES) is a transient clinical situation diagnosed by neurological examination and radiologic findings. This situation is usually presents with headache, generalized convulsions, disturbances in vision, changes in mental status, hypertension and focal neurologic deficits. It is defined by cerebral vascular otonomic insufficiency due to immediate blood pressure changes. Here we discussed a case with PRES who is in dialysis programme because of chronic renal failure.

**Case:** 32 years old female patient with previous diagnosis of chronic renal failure was admitted to emergency department with of loss of concious after dialysis. Cranial tomography was assessed normal. She was admitted to intensive care unit after having seizure and symptoms of dyspnea. Her Glaskow Coma Scale score was 4, pupils were isochoric and had bilateral light reflex. Treatment for brain edema was started. Laboratory findings were normal except BUN: 85 mg/dl, Creatinine: 7.4 mg/dl, potassium: 4.8 mEq/L, Hemoglobin: 10.8 g/dl and White Blood Cell count: 11900/mm<sup>3</sup>. Thiopenthal sodium infusion and epanutin were given to control convulsions. Routine dialysis programme was continued. On the 20th day in ICU her GCS score was still 4, but hemodynamic parameters were more stable. A diffusion magnetic resonance imaging revealed diffuse edema especially at cortex of bilateral frontal and parietal lobes, posterior side of temporal lobe. "Posterior reversible encephalopathy" was her preliminary diagnosis. The treatments for convulsions, hypertension, infections and other supportive treatments were continued. She became concious on 26th day and was discharged on the 49th day.

**Conclusions:** PRES is a multifactorial disorder that presents different clinical findings and exact diagnosis depends on radiologic findings. Symmetric brain edema at parietooccipital areas of the brain is typical for cerebral imaging. It is reversible without any disability. PRES should be in mind for all intensivists as it is a rare situation.

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### OUR INTENSIVE CARE EXPERIENCE WITH OUR FIRST LIVER TRANSPLANTATION CASE

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**Introduction:** Intensive care after liver transplantation bears a significant importance. Maintaining a multidisciplinary approach in the follow-up and treatment of these patients should be the basic principle. Most patients with final stage liver failure experience problems such as ascite based preoperative atelectasis, pleural effusion, functional residual capacity and reduction in vital capacity. Therefore, respiratory complications are among the most important causes of mortality and morbidity after liver transplantations. In our case which was intubated again because of pulmonary complications after the transplantation, we aimed to emphasize the importance of early diagnosis and intervention.

**Case:** Liver transplantation from a live donor was planned for a 32 year-old female patient (Child score: C, MELD score: 24) diagnosed with decompensated chronic liver failure on cryptogenic cirrhosis level. Graft extraction from the donor took 290, the dissection of the receiver took 304min, anhepatic phase 80min and the total duration of the operation was 11 hours. For intraoperative replacement purposes, a total of 3 units of erythrocyte suspension, 3 units of TDP and 6200 mL crystalloid were induced. Hemodynamic parameters were stable throughout the operation. At the end of the operation, the patient who was transferred to the organ transplantation intensive care unit with mechanic ventilation support, was screened for biochemical, full blood, artery blood gas and PA lung graphs. The patient who had sufficient spontaneous respiration was extubated on the 1st postoperative day. On the 3rd postoperative day, she was intubated once again because of disruption in the ventilation of the left lung and worsening of her general condition. A condense secretion was detected in the left main bronchus proximal in the post-intubation bronchoscopic examination. Mucous was cleared with tampon aspiration and bronchi seemed to be open. The patient who was extubated on the 5th postoperative day after respiration physiotherapy and postural drainage treatment was transferred to the service on room on the 9th day and discharged with good health on 16th as there were no problems in the patient follow-ups (vascular problem in graft, insufficient graft function, sepsis lung oedema, etc.).

**Conclusion:** A good preoperative anaesthetic preparation in liver transplantation cases can reduce any problems that may arise during the surgery and the postoperative period. A close follow-up of the patients in the intensive care unit with a multidisciplinary approach and enough monitoring is important in decreasing morbidity and mortality.

P-89

### FIRST EXPERIENCE WITH THE VENO-VENOUS CARBON DIOXIDE REMOVAL SYSTEM (VVCO2 R) IN THE INTENSIVE CARE UNIT

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**Objectives:** Respiratory failure is a condition in which the respiratory system fails in one or both of its gas exchange functions, oxygenation of and/or elimination of carbon dioxide from mixed venous blood. This occurs due mainly either to lung failure resulting in hypoxemia or pump failure resulting in alveolar hypoventilation and hypercapnia. Both types of respiratory failure may coexist in patients with chronic obstructive pulmonary disease (COPD) (1). Recently introduced veno-venous carbon dioxide removal (VVCO2R) system (Decap®, Hemodec, Salerno, Italy) has been used to reduce tidal volume and plateau pressure in COPD patients (2). We reported our first case using extracorporeal VVCO2 to maintain normocarbina in a patient having hypercapnic respiratory failure.

**Case:** A 58 year old male patient was admitted to the Emergency Service with the respiratory insufficiency and loss of consciousness. He was heavy smoker with the 120 package/year and he was using oxygen concentrator at home for a long time. His past medical history revealed repeated intensive care unit admissions. His last admission was approximately 10 days before and following discharge from hospital his symptoms were aggravated again. His initial arterial blood gas analysis was as follows: pH: 7.20, PaCO2: 115.9 mmHg, PaO2: 27.7 mmHg, BE: 17.3, HCO3: 45.2 mmol/L. so the patient was required tracheal intubation, sedation and mechanical ventilation. PaCO2 level decreased gradually to 60.5 mmHg on the 2nd day of his admission but on the 3rd day, his arterial blood gas parameters returned to the initial values (pH: 7.22, PaCO2: 108.1 mmHg, PaO2: 65.2 mmHg, HCO3: 34 mmol/L, BE: 10.5, SpO2: 87%). The patient was decided to connect the veno-venous carbon dioxide removal (VVCO2R) system to control the progressive hypercapnia. The right femoral vein was accessed via 14 F double-lumen catheter inserted through the Seldinger technique. Blood flow averaged 350 ml/min to allow the CO2 extraction and heparin was needed in order to prevent thrombus formation. Arterial blood gas analyses and ventilatory parameters were checked every 4 hrs and the procedure was maintained for 36hrs at which time the level of PaCO2 reached to normal values (pH: 7.49, PaCO2: 56.9 mmHg, PaO2: 94 mmHg, HCO3: 41.3 mmol/L, BE: 17.3, SpO2: 97.5%). Thorax CT revealed a giant emphysematous bulla and surgical resection of bulla was scheduled. The whole surgical procedure lasted six hours without any complications and the patient's condition was stabilized during postoperative period. Spontaneous breathing was sufficient but extubation attempts were failed. A percutaneous tracheotomy was performed to facilitate weaning from mechanical ventilation on the 14th day. Weaning process was successfully managed on the 18th and the patient was awake, spontaneously breathing with oxygen supply. Arterial blood gas levels were within normal values. He was decannulated on the 32th day of his admission and discharged on the 34th day.

**Conclusions:** Our experience demonstrated that this system can effectively remove CO2 without any hemodynamic changes and adverse reactions. So this is a promising technique for the reduction of CO2 in a patient with respiratory failure but more clinical experience is needed.

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P-90

## HORNER SYNDROME IN A PATIENT WITH SEVERE CHEST TRAUMA

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**Objective Of Study:** Horner's syndrome (HS) is the combination of pupillary miosis, eyelid ptosis, enophthalmos and facial anhidrosis on the same side of the face due to a lesion or compression injury of the cervical or thoracic sympathetic chain. We present a case of Horner's syndrome in a patient who was admitted to the intensive care unit (ICU) with chest trauma.

**Case Report:** A 51-year-old male patient was admitted to our ICU following thoracic trauma without losing consciousness. Upon admission the neurological examination was normal. The patient had fractures on right scapula, right clavicle, multiple rib fractures (from the first to the seventh) besides right pneumothorax and pulmonary contusion. A chest tube was inserted through the fifth intercostal space on the anterior axillary line. On admission and during the follow up we did not observe any ptosis or miosis. He was ventilated non-invasively, but on the fourth day of his ICU stay invasive mechanical ventilation was started due to progressive respiratory compromise. Anisocoria (L>R) was observed on the eighth day. There was no pathological sign on ophthalmological and neurological examination and cranial BT. He underwent an operation for rib stabilization on the tenth day. The patient was successfully weaned from the ventilatory support and he was extubated on the eighteenth day. We observed ptosis and miosis on the right side which are the other components of HS, after complete recovery. The chest tube was removed on the nineteenth day and the patient was discharged to the thoracic surgery department. On the tenth day after the removal of the chest tube, the clinical appearance of the right eye showed regression.

**Conclusion:** There are case reports on HS related to chest tube insertion, thoracic trauma and thoracic surgery. There is a thin endothoracic fascia between the parietal pleura and stellate ganglion. This anatomical feature explains the occurrence of Horner's syndrome in the apical thorax injuries (1). In our patient, HS was probably due to either fractures of the ribs or chest tube placement. It should be kept in consideration that the presence of anisocoria in the unconscious patient with thoracic trauma can be related to HS.

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P-91

## THE EFFECT OF CARE BUNDLES BASED ON GUIDELINES OVER THE CENTRAL VENOUS CATHETER INFECTIONS IN AN INTENSIVE CARE UNIT

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Catheter-associated bloodstream infections are one of the major problems with healthcare mainly caused by use of central venous catheter in the intensive care units. Our objective is to perform administration, use and care stages of central catheter in patients who receive a treatment and are monitored in the intensive care unit in compliance with care bundles prepared by recommendations in the guidelines, and to identify the effectiveness of care bundles in preventing central catheter-associated bloodstream infections and the risk factors that might cause such infections.

**Method and Material:** The patients with central venous catheter who had received a treatment and had been monitored for a year were planned to prospectively monitor for development of catheter infection. A care bundle created based on the guidelines was applied to all central venous catheters. All catheters were evaluated for use requirements and development of local or systemic bloodstream infections regularly each day. Data derived from our study were compared with the previous year data, and reviewed in order to identify the risk factors that might cause catheter-associated bloodstream infections.

**Findings:** In this study, 413 different central venous catheters were used for 2100 central catheter days in a total of 374 patients, 212 males and 162 females. A total of 13 catheters had a central catheter-associated bloodstream infection and the rate of central catheter-associated bloodstream infection was found to be 6.19/1000 catheter days. APACHE II scores, use period of central venous catheter, number of catheter cares of the patients who developed a central catheter infection were found to be significantly higher than the patients who did not develop an infection. Development of an infection in patients who received blood/blood product and TPN treatment was higher than those who did not. In addition, increase in number of days with delivery of TPN raised the risk of infection. Furthermore, infection rate of central venous catheters placed at operating room and in the intensive care unit was found to be similar, and this rate was significantly lower than the rate of catheters placed at outside services.

**Results:** Following administration of care bundles, use rate of central venous catheters and number of central venous catheter-associated bloodstream infections were found to be lower than of those in previous year. This decrease in use rate was statistically significant however decrease in infection rate was not significant.



## P-92

### RESPIRATORY DISTRESS DUE TO VOICE PROSTESIS ASPIRATION: REPORT OF A CASE

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**Introduction:** Foreign body aspiration may cause fatal respiratory insufficiency (asphyxia) if it obstructs the trachea. Foreign bodies reaching more distal parts of the tracheobronchial tree, on the other hand, may cause ventilation defects in the affected region and they may cause predisposition for infection. Here we report a patient admitted to our ICU for respiratory dysfunction and eventually found to suffer from foreign body aspiration.

**Case Report:** A 55-year-old male was admitted to the ICU due to respiratory dysfunction. His medical history included total laryngectomy + modified neck dissection + tracheostomy for laryngeal cancer 10 months before, followed by chemotherapy (taxotere+5-FU+Cisplatin) and radiotherapy. Hospitalized 9 months later for second-line chemo due to recurrent tumor and pulmonary metastases, his condition deteriorated. He was connected through his tracheostomy canula to the mechanic ventilator to overcome respiratory acidosis and tachipnea. Thorax CT revealed multiple mediastinal lymph nodes, multiple metastatic lesions on both hemithorax, and additionally a tubular structure in the right main bronchus, resembling a fragment of an intubation canula. He was using a voice prosthesis, which was removed by immediate bronchoscopy. Although the patient improved initially, tracheal aspiration and bronchoalveolar lavage cultures revealed *Acinetobacter baumannii*, the patient developed septic shock, and died on the 9th day.

**Discussion:** The definitive diagnosis of aspiration of foreign bodies is made by bronchoscopy, although clinical suspicion and radiological investigations are suggestive. In the patient reported, such an unlucky occasion might have influenced the already critical clinical condition negatively. Although immediately removed, the foreign body probably accelerated the irreversible scenario in this case.

## P-93

### INCIDENCE AND RISK FACTORS FOR VENTILATOR-ASSOCIATED PNEUMONIA IN OUR INTENSIVE CARE UNIT

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We conducted a study to determine the incidence and risk factors for ventilator associated pneumonia (VAP) and to detect the most common pathogen causing VAP for the empirical use of antibiotics in the case of VAP in our intensive care unit.

**Method and Material:** This retrospective database study included patients admitted between 2009 and 2010 to a 15-bed medical/surgical ICU in an university hospital. We analyzed data from 80 patients with VAP diagnosis. We evaluated the laboratory results, radiological findings, culture-antibiograms of these patients. Chronic diseases, diagnosis for the acceptance to the ICU, Glaskow Coma Scale (GCS) scores and APACHE II scores of these patients were recorded. We used clinical pulmonary infection score for the diagnosis of VAP

**Findings:** The overall incidence of VAP was 19 cases per 1000 ventilator-days in 2009 and 14.34 cases per 1000 ventilator-days in 2010. *Acinetobacter Baumannii* was the most frequent bacteria isolated in patients with VAP diagnosis. Old age, low GCS and high APACHE II scores were the most important risk factors for VAP. Hypertension was the most frequently seen chronic disease in the VAP patients. Respiratory failure, abdominal surgery and trauma were the most frequent reasons for the acceptance into ICU. Reintubation, blood transfusion more than 2 units, vasopressor support and trachostomy were the other risk factors.

**Results:** Awareness of the risk factors and knowledge of the most common pathogen causing VAP is important for the early diagnosis and treatment of VAP in ICU.

## P-94

### AIRWAY MANAGEMENT IN A PATIENT WITH UNRESECTABLE TRACHEAL TUMOR

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**Objective:** Primary airway tumors are rare and usually diagnosed after airway obstruction and hemoptysis. We present a case of airway management difficulties in a patient with unresectable tracheal tumor in the intensive care unit (ICU).

**Case:** 67 year-old male patient was admitted to the thoracic surgery department following diagnosis of his tracheal tumor. After his initial assessment of tumor resectability elective tracheostomy was performed. The tumor was found unresectable due to the long segment involvement. Following a cardiac arrest during the first tracheostomy tube change due to airway obstruction the patient was oro-tracheally intubated and admitted to the ICU. On the next day an adjustable tracheotomy cannula (ATC) was planned to be inserted but the patient was desaturated and had a cardiac arrest again. This time he was intubated with a flexibl endotracheal tube thorough the stoma. The day after ATC was successfully inserted and the patient was ventilated and sedated for two days in the ICU. He was discharged to thoracic surgery department on the third day of his re-admission to ICU. On the ward ATC migrated under the skin. In order to find a permanent solution, silicon T tube was placed by thoracic surgeon under general anesthesia and he was re-admitted to the ICU for the third time for ventilatory support. But the T tube connection to the ventilator failed. The silicon tube migrated to underskin easily during the spontaneous breathing. We performed an adaptation with the use of an endotracheal tube connector (no:8) (image 1). Finally we were able to ventilate the patient successfully and also his follow-up during the spontaneous breathing was without any compomise. The patient was weaned from the ventilatory support and he was discharged to the thoracic surgery department on the fourth day of his final admission. His tumor was later managed by radiotherapy and chemotherapy.

**Conclusion:** Airway management of a patient with tracheal tumor is challenging. The airway experts may choose different airway management strategies, but in clinical intensive care, there may be no correct answer or alternatively several appropriate answers. We believe that airway patency in this patient was maintained with the consideration of several practical means of knowledge and skills inspite of limited equipment.

## P-95

### VALUE OF PERIPHERAL AND CENTRAL VENOUS PRESSURE MEASUREMENTS IN PREDICTING ACUTE RENAL FAILURE IN INTENSIVE CARE PATIENTS

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Previous studies in adults demonstrated a useful correlation between central venous (cvp) and peripheral venous pressure (pvp) measurements. However there is not sufficient data between the association of some common complications observed in intensive care units (ICU) like acute renal failure and cvp and pvp values. In this study we aimed to analyze if there is any relationship between acute renal failure and cvp-pvp measurements in adult ICU patients who did not have renal failure history before hospitalization.

**Method and Material:**For this purpose we included 39 patients (16 F, 73.6 ± 13.9 years old) who were hospitalized in ICU for at least 6 days for any reason. Basal and daily creatinine values, daily systolic, diastolic and mean blood pressures, and daily cvp-pvp measurements were recorded. Patients who had more than 50% increase in creatinine levels during follow-up were accepted as acute kidney injury (AKI, n: 12) group according to AKIN criterias while patients with stable creatinine values were accepted as no-AKI (n: 27) group. AKI patients were also grouped and evaluated for RIFLE criterias (risk n: 5, injury n: 4, failure n:3)

**Findings:**Considering all patients we found that pvp and cvp measurements were positively correlated (r:.882, p:.0001). Mean pvp was 10.6 ± 2.4, mean cvp was 6.4 ± 2.4 and mean pvp-cvp was 4.1 ± 1.1 mmHg. AKI and no-AKI groups were similar in means of demographic characteristics. AKI group had both higher pvp (p:.008) and higher cvp (.039) values compared to no-AKI group. AKI group also had lower systolic and mean arterial pressure (p.024, .035) compared to no-AKI group. Patients with renal failure has the highest cvp and pvp values and lowest blood pressures compared to injury and risk groups (p: .01)

**Results:**We think that pvp and cvp measurements are highly correlated in adult ICU patients and both could be used as early markers for venous congestion, lower arterial filling and AKI.

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## P-96

### SUICIDAL HIGH DOSE SUBCUTANEOUS INSULIN INJECTION: CASE REPORT

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**Introduction:** Self applied insulin injection is a widely used treatment method for diabetes mellitus (DM) patients all over the world. It is also known that diabetic and non-diabetic patients have used insulin overdosage for suicidal puposes. In this case we aimed to present a patient, who have injected hisself high dose insulin for suicid.

**Case:** A 35-year-old male patient attempted to suicide was examined in the emergency department. According to the anamnesis of the patient, he received 20 pieces of coversyl 5 mg tablet, 10 pieces of oral iron tablet, abdominal subcutaneous injection of 1000 units of NPH-insulin. Loss of consciousness was observed during transport to hospital and after infusion of 100 mL of 20% dextrose the consciousness was better. At the admission in the emergency department findings were; HR 120/min, BP 200/95 mmHg. Laboratory values of blood were glucose 63 mg/dL, potassium 2.9 mEq/L, insulin levels 2444.3 U/mL, respectively. Other values of the patient were normal. After gastric lavage, we applied activated charcoal via nasogastric tube. An intravenous bolus of 100 mL of 30% dextrose was given. With dextrose infusion maintenance for 24 hours blood glucose level was kept between 100-200 mg/dL. In 4. hour of injection serum insulin level peaked once. For preventing hypoglycaemia we required a 48 hours dextrose infusion. The patient did not develop any complications due to insulin overdosage.

**Discussion:** Cerebral damage, pulmonary edema, hypertensive crisis, and respiratory failure due to insulin overdosage have been described. Insulin is one of the hormone regulators not only for potassium also for magnesium and phosphorus. High-dose insulin application might cause hypokalemia, hypomagnesemia and hypophosphatemia in addition to hypoglycemia. In our patient, there was a moderate hypokalemia. Although antihypertensive drugs were taken hypotension was not observed. To treat these kind of patients dextrose infusion and close monitoring for electrolyte changes is recommended.

## P-97

### SPIDER BITES INDUCED BY MYOCARDITIS, AND PULMONARY EDEMA: CASE REPORT

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**Introduction:** Spider venom causes local and systemic toxic effects, but the most important predictor of mortality and morbidity is cardiovascular involvement. In this presentation, we will discuss 15-year-old male patient which developed myocarditis and pulmonary edema bitten by a spider known as "Karadul=Black Widow".

**Case Report:** Patient apply to the emergency room with the symptoms of abdominal pain, shortness of breath and chest pain after the spider bite. Pulmonary edema was diagnosed by having diffuse bilateral inspiratory crackles in the lungs, bilateral diffuse infiltration in the chest X-ray and with coughing pink frothy sputum extraction. Patient accepted in the intensive care unit and diagnosed as myocarditis by having left ventricular global systolic dysfunction in electrocardiography, decreased on ejection fraction (25%), detected heart failure, elevation on the Troponin and CRP levels. The patient treated with diuretic therapy and applied non-invasive mechanical ventilation with PEEP. Signs of pulmonary edema declined in a few hours. On 10<sup>th</sup> day of hospitalization, ECG was taken and ejection fraction was normal (65%), and left ventricular dimensions were decreased. As a result, the spider bites, particularly in children may result life-threatening disorders in the cardiovascular system. Especially shortness of breath and general poor health symptoms may be considered as myocarditis.

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## P-98

### DEVELOPMENT OF NEUROLEPTIC MALIGNANT SYNDROME (NMS) AFTER SWITCHING THE QUETIAPINE THERAPY TO CHLORPROMAZINE AND RISPERIDONE COMBINATION IN A SCHIZOPHRENIC PATIENT

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**Objective Of Study:** NMS is a life-threatening idiosyncratic reaction that occurs after the administration of neuroleptic drugs. It also occurs just after changing the drug dosage or switching the therapy with high-potency agents during antipsychotic (AP) treatment. The aim of this report is to present a NMS development depends on altering the therapy agents.

**Method and Material:** 20 years old schizophrenic male patient received Quetiapine agent for one year, turned to his psychiatrist with a complaint of not having benefit. Therefore, his AP treatment was switched to Chlorpromazine and Risperidone combination 10 days ago. He was brought to our emergency clinic with confusion, slowness of movements and speech, decline in oral intake lasted for 3 days. Because of his altered mental status, muscular rigidity, AP treatment history and elevated serum creatine phosphokinase (CPK) enzyme level (10 times the normal), he was admitted to our intensive care unit with the diagnosis of NMS.

**Results:** According to our first physical examination, the patient was confused, GKS: 13, TA: 194/72 mmHg, pulse rate: 70/minute, respiratory rate: 10/minute, body temperature: 36.9°C. Extensive rigidity was determined in both upper and lower extremities. Diaphoresis and speech difficulty were conspicuous. There was no symptom set us thinking infection. There were no pathological finding in computed thorax and brain tomography and EEG was normal. Urogram and chest radiography assessed as natural. Laboratory workup was as follows: WBC: 4300/μL, HB:15,4 gr/dl, PLT: 175000/μL, c-reactive protein (CRP):0,623mg/dl, glucose: 95 mg/dl, AST: 52 U/L, ALT: 20 U/L, CPK: 1959 U/L, CKMB: 80 U/L, LDH:606 U/L, ure: 28 mg/dl, creatinine: 0,8 mg/dl, Na:138 mmol/L, K: 4,3 mmol/L, Ca: 9,3 mg/dl. No pathology was detected in arterial blood gas analysis. 4 major criteria (hyperthermia, elevated serum CPK enzyme, autonomic dysfunction and altered mental status) consistent with NMS were present. We terminated the present AP therapy in the beginning. Within four hours of his admission, he was intubated for invasive mechanic ventilation support because of severe dyspnea due to 39,5°C fever and dystonia. Intravenous sedatives initiated. Supporting treatment (iv hydration, paracetamol and passive external cooling) was applied. Serum CPK value regressed to 600 U/L at the end of the second day. WBC and CRP values persisted normal during follow-up. No bacteria reproduction obtained from culture outcomes. Sedatives stopped and the patient extubated the third day. He hadn't fever anymore, his confusion and muscular rigidity improved, serum CPK level decreased to 142 U/L. At the end of the sixth day, serum CPK was 42 U/L. The patient discharged from the intensive care unit and transferred to neurology clinic.

**Conclusion:** NMS, is a rare and potentially fatal complication of AP medication. It is believed to result from dopaminergic blockade in central nervous system. It usually appears within the first two weeks of neuroleptic treatment, characterized by hyperthermia, autonomic dysfunction, altered mental status, muscular rigidity and increased serum CPK enzyme. The main points in treatment are terminating the present AP medication and performing supporting treatment. Bromocriptine can be used to improve the muscular rigidity. However, early diagnosis and intervention are the most important factors to prevent mortality. We consider that those patients who need continue monitoring and mechanic ventilation support should be followed in intensive care units.

## P-99

### FSM EDUCATION AND RESEARCH HOSPITAL REANIMATION INTENSIVE CARE UNIT 2010-2011-2012 INVASIVE EQUIPMENT RELATED INFECTION RATE AND EFFECTING FACTORS

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It is intended to semtinize the effecting factors and rate of the equipment related inasive infections between 2010-2012 in FSM Education and Research Hospital Reanimation intensive care unit.

**Method and Material:** In our clinic, we perform active prospective patient based surveyons. In Nazokamiyal invasive infection diagnosis, CDC criteria are taken as bases. The tool related infection number in one year period /The invasive tool usage day number x1000 formula is used in calculating invasive equipment related infection rate.

1. The aspirations applied with one sterile gloved person and one assistant;

2. The repeated oral cleansing procedure during the pre-Intubation tube changes.

3. The repeated changing of catheter lints in every 24 hour period. And the date noted on

#### Findings:

2010-2011-2012 equipment related infection rate is shown in graphic 1

#### Results:

In 2010 we had a great remarkable increase in VIP, we had that procedure as our method in 2011. We succeeded and had a decrease in VIP. Despite the increased usage rate, a remarkable diminution is provided in VIP as SVKI-KDE rates were increase minimally. Meanwhile, we realized, that the increase in KDE during 2012 is overlooked; and it decreases when attracted attention. The reasons for the increase in 2012 again are; decrease in intern number, replacement of nurses and the increase in patient number. Our results are similar as literature (1,2). The invasive equipment related infections are depend on not only to the patient, but to the environmental factors, the personnel's attention and the persistence of care.

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## P-100

### THE ASSESSMENT OF ANTIBIOTICS SENSITIVITY OF NOZOKOMBIAL INFECTION AGENT PROBLEMICAL GRAM NEGATIVE ISOLATES IN 2010-2012 IN FSM EDUCATION AND RESEARCH HOSPITAL

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The antibiotics resistance proceed being an important problem obstructing the treatment of nozokombial infections flourishing in intensive care units. In this study, the Acinetobacter spp, Pseudomonas aeruginosa, Klebsiella spp and Escherica coli isolates's change in antibiotics sensitivity patterns between 2010-2012 are inquired.

**Method and Material:** In Fatih Sultan Mehmet Education and Research Hospital, by using conventional methods, 154 samples

obtained in 2010 and 92 samples obtained in 2011 are compared in terms of antibiotic sensivity rates. The disc-diffusion method suggested by CLSI is used.

**Findings:** For the 154 samples isolated in 2010, the dispersions are like following: Acinetobacter spp 67, Pseudomonas aeruginosa 69, Klebsiella spp 20, E. coli 14. In 2011, the rates of the 92 samples were Acinetobacter 39, Pseudomonas aeruginosa 19, Klebsiella spp 20, E. coli 14. And in 2012, the rates in samples changed as following: Acinetobacter spp 71, Klebsiella spp 21, Pseudomonas aeruginosa 21, E. coli 9. The sensitivity of these isolated bacterias to several antibiotics are shown in graphic 1. Antimicrobials are used both in order to prevent and treat the infection and the overuse of antimicrobials causes a very important financial burden which is clearly augmented by resistant antimicrobials (1).

**Results:** In three years period, in all medicines inspected for Klebsiella spp samples, the resistance rates are increased. In E. Coli samples, only the ciprofloxacin resistance rate is increased. No kolistine and tigesikline in Acinetobacter isolates are determined. And no kolistine resistance in Pseudomonas aeruginosa isolates is determined. This augmentation indicates the requirement of more attention in antibiotics usage.

**Tablo 1.** Nozokomiyal Enfeksiyon etkeni Dört Gram Negatif bakterinin Antibiyotik Duyarlılıkları

	Klebsiella spp	E.coli			Acinetobacter spp			Pseudomonas					
		2010	2011	2012	2010	2011	2012	2010	2011	2012	2010	2011	2012
Amikasin	100	90	86	73	92	100	31	24	0	58	60	70	
Gentamisin	40	25	89	42	46	56	34	46	0	18	25	70	
Imipenem	0	95	86	69	92	100	22	5	0	37	35	43	
Sefriakson	80	5	0	9	18	14	-	-	0	-	-	-	
Ciprofloxacin		60	69	23	9	43	9	0	0	29	36	50	
Kolistin							100	100	100	100	100	100	

## P-101

### SUICIDE WITH 3600 IU INSULIN GLARGINE AND HYPOLYCEMIA LASTING MORE THAN 120 HOURS

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**Abstract:** Insulin glargine is an analogue insulin that produced to provide basal insulin requirement. Hypoglycemia as a side effect of insulin glargine is quite rare if it is used at therapeutic range. Our aim in this case is to emphasize life threatening, difficult to cope and prolonged hypoglycemia caused when insulin glargine used at too much higher than the therapeutic dose.

**Case:** 45 year old male patient was brought to the emergency room unconscious and cut his wrists. At the history taken from his relatives 12 empty insulin pen was found near the patient and he was injected 3600 IU insulin glargine subcutaneously for suicide attempt. Glaskow Coma Scale of patient was 7/15 at admission, 8-10 injection scars at abdomen were detected with physical examination and blood glucose level was 20 mg/dl. % 20 glucose infusion was started, incisions were sutured and patient admitted to Intensive Care Unit(ICU). Glucagon hydrochlorure 1mg (1IU) was given at recurrent hypoglycemia intravenously. He was followed while glucose infusion paused and 120 hours lasting infusion need observed. At the end of the fifth day throughout 24 hours patient had no hypoglycemia without glucose infusion, he was consulted to psychiatry and then due to his high suicidality at sixth day he was transferred to high security psychiatry clinic.

**Discussion:** Insulin glargine is a long-acting insulin; it's effect prolongs for 24 hours. There is no clear data about how long it's effect continue when it is used over the therapeutic doses. Also related datas only limited with case reports. In the literature, a case with a maximum intake of 2700 IU of insulin glargine intake and eventually glucose infusion up to 96 hours has been reported; as our case with a high dose as 3600 IU and so long lasting hypoglycemia has not seen yet. Therefore, in cases of intoxication with very high doses of insulin glucose infusion should not be cut immediately, though normoglycemia is provided at least one more day blood glucose level should be monitored closely. Accompanied by depression in patients with diabetes mellitus treated with insulin; with a multidisciplinary team working with psychiatry has a substantial role to prevent those kind of cases.

## P-102

### HAEMOLYTIC URAEMIC SYNDROME SUCCESSFULLY TREATED BY PLASMA EXCHANGE, CORTICOSTEROIDS AND ECULIZIMAB (CASE REPORT)

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**Introduction:** Hemolytic uremic syndrome (HUS); destruction of red blood cells by the effect of toxins and clogging of capillary vessels as a result of abnormal red blood cells. The characteristic triad of HUS: Microangiopathic hemolytic anemia, thrombocytopenia, and renal failure.

**Case report:** A 17 years old male was admitted to our hospital, with a history of bloody diarrhea lasts 4 days, weakness, pallor and neurological symptoms. His parents told that he ate chicken about 7 days ago before appear symptoms. Physical examination revealed tachycardia (130 b.p.m.), low blood pressure (90/60 mmHg), tachypnea (35/dk) and oliguria (450 ml/day). The patient white-cell count: 10,600/ $\mu$ l (84,5% neutrophils, 23% band forms, 10,2% lymphocytes, and 5,3% monocytes), Hgb: 8.5g/dl, Htc: 25%, the platelets: 50,000/ $\mu$ l, urea: 152mg/dL and creatinin: 3,44mg/dL. Abdominal USG and brain CT didn't include any pathologic findings. Hemoptysis and dispnea developed in patients. We transferred patient to ICU. Patient arterial blood gas analysis was pH: 7.37, pCO<sub>2</sub>: 39mmHg, pO<sub>2</sub>: 43mmHg, SaO<sub>2</sub>: %78. We intubated patient and supported with mechanic ventilation. We consulted patient with hematology clinic and decided to plasma exchange (PE) and fresh frozen plasma for 7 days (35ml/kg per PE). Also methylprednisolone (1mg/kg/day) was started to reduce immune mediated hemolysis. Platelet count changed between 20.000-45.000/ $\mu$ l. The Coomb's test is negative and the peripheral blood smear is characterized by the large number of schistocytes and helmet cells. 10. day on ICU, platelet count was still 37.000/ $\mu$ l, and developed macroscopic hematuria and the urine analysis eritrosit: +++ and massive proteinuria (4g/l). ADAMTS-13 activity was within the normal range (64%), and ADAMTS-13 auto-antibodies were negative (5,9 U/ml). A low C3 level (60mg/dl, n: 90-180 mg/dl) and a normal C4 level (20mg/dl, n: 10-40mg/dl). We thought about atypical hemolytic uremic syndrome (aHUS); which is caused by genetic defects resulting in chronic, uncontrolled complement activation. The patient was vaccinated against pneumococ, meningitis, influenza and then eculizimab (Soliris®) was administered 900 mg weekly. After the 2. dose of eculizumab, patient blood analyse was Hgb: 9.8g/dl, platelets: 104,000/ $\mu$ l, urea: 45mg/dL and creatinin: 0,8mg/dL. Then the patient was extubated. Patient discharged from the ICU and internal medicine department were internalized in order to arrange eculizimab continuation of therapy.

**Discussion and Conclusion:** The diarrheal illnesses have developed a potentially fatal hemolytic uremic syndrome. 5-10% of HUS cases are aHUS and is largely due to one or several genetic mutations that cause chronic, uncontrolled, and excessive activation of complement. Plasma exchange, which removes the plasma with the shiga-like toxin and its breakdown products, may decrease the effects of the toxin. Given the lack of response to therapy and the occurrence of kidney failure requiring different ways for treat of aHUS. We used eculizumab as therapy. After two week from the second administration, we observed a significant improvement of all clinical and laboratory. This case demonstrates that complement inhibiting treatment allows the preservation of renal function and avoids disease relapses.



## P-103

### POSTPARTUM INTRACEREBRAL HEMORRHAGE: A CASE REPORT

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**Introduction:** Intracerebral hemorrhage (ICH) is composed of many reasons in every age and a life-threatening acute hemorrhagic cerebrovascular event. Postpartum ICH incidence is more frequent than antepartum and control groups (1,2). We wanted to provide a case about a patient who had intracerebral hemorrhage and follow-up of brain death in postpartum period after caesarean section (C/S) operation.

**Case:** 32-years-old female patient had severe headache after C/S operation and she thought that it may be due to spinal anesthesia. She didn't apply any medical help about this complaint. When she had loss of consciousness she was admitted to the emergency department at postoperative 36 hours. She had a history of smoking and epilepsy for 15 years. She had discontinuation of antiepileptic drug therapy together with the pregnancy was learned. Preoperative laboratory values were normal. Because of preeclampsia, emergency C/S operation was planned. Subarachnoid block selected as a method of anesthesia in this case with full stomach. The first examination in the emergency department glasgow coma scale (GCS) was 5. She was intubated to ensure the air way safety. Cranial computerized tomography (CT) scan showed that; on the left parietal lobe's cortex approximately 45x65 mm in size hematoma, the left lateral ventricle deletion, false herniation and intraventricular hemorrhage existed. The patient was evaluated by neurosurgery was not suggested surgery. She was considered anti-edema treatment. She was admitted to the intensive care unit was undertaken on the control of mechanical ventilation. In the intensive care unit hemodynamic parameters and vital signs were stabilized. Although she had not given sedation and curarization, GCS decreased to 3 at the fourth day of admission. So brain magnetic resonance (MR) angiography for questioning vascular malformations and hemorrhagic tumors of the brain was taken. Monitoring of the internal carotid artery to the level of the skull base, but intracranial internal carotid arteries, the anterior and middle cerebral artery, intracranial vertebral arteries and basilar artery failure to follow, and increase in the external carotid artery vascularization suggested the diagnosis of brain death. After completion of the tests used in the diagnosis of brain death, patient was diagnosed with brain death and died at the seventh day of hospitalization.

**Discussion:** Although the most important risk factors that led to the formation of ICH are elder ages and acute or chronic hypertension; pregnancy and the postpartum period have very high risk (1/9500 birth). The most commonly associated with eclampsia and pre-eclampsia but it also happens associated with vascular malformations and hemorrhagic tumors. In addition, the lumbar puncture may increase the possibility of subdural or subarachnoid hemorrhage. Hemorrhage after lumbar puncture may be extradural, subdural and in the subarachnoid space but epidural space is more often (3,4). In our case, as ICH risk factors for postpartum preeclampsia were having a history of smoking and applying spinal anesthesia for C/S operation. In this case, in spite of the development of headache, the patient applied to the hospital after loss of consciousness and neurological deficits so early intervention was prevented. Late interventions may lead to fatal neurological deficits. Closely following ICH patients by early intervention has vital importance. Developed headache after spinal anesthesia should be due to multifactorial causes and we think should be monitored closely for neurological point of view.

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## P-104

### THERAPEUTIC HYPOTHERMIA: ENDOVASCULAR COOLING IN A PATIENT WITH A TRAUMATIC BRAIN INJURY

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**Objective Of Study:** Hypothermia has profound effects on the brain function but importantly is potentially protective against both focal and global injuries (1). We present a case of multitraumatized patient with accompanied brain injury in whom we initiated therapeutic hypothermia in the intensive care unit (ICU).

**Case Report:** A 22 year-old tourist woman who had a bicycle accident was admitted to the emergency department. Multiple fractures were identified at nasal, frontal and palatine bones. She had also right clavicular fracture and pulmonary contusion. During her follow-up she had a generalized seizure and Glasgow coma scale (GCS) decreased to 3 from 11. Following intubation hemorrhagic secretions were suctioned from the tube. Chest x-ray revealed infiltration and the patient underwent diagnostic bronchoscopy and exploratory laparotomy, but nothing pathological was found. Cranial CT revealed frontal contusion and brain edema. Mechanical ventilation and sedation were started on admission to the ICU. On the second day of her admission and 36 h after the accident, therapeutic hypothermia was initiated following the placement of endovascular cooling catheter in the inferior vena cava via the femoral vein. She was cooled over a 24 hour period, with a target temperature of 32–34 °C and passive rewarming was started at the end of the 24th hour. On the fourth day, the patient's GCS was 10. She was finally weaned from ventilatory support on the fifth day of admission with a GCS 14. Hypothermia catheter was left insitu and later used for cooling the patient as her body temperature raised. Finally the catheter was removed on the 9th day and she was discharged to surgical department on the 10th day of her admission to ICU.

**Conclusion:** Although some trials support the benefit of hypothermia as a primary neuroprotective strategy in patients with severe traumatic brain injury there is no consensus yet for use of therapeutic hypothermia. This case was our first experience with the induction of hypothermia that probably improved outcome in our patient.

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## P-105

### ACCIDENTAL POISONING WITH HERBAL TEA IN INTENSIVE CARE UNIT

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**Objectives:** The use of herbal medicines can cause severe toxicity and even death. These medications may contain variability of active or toxic ingredients due to growing conditions, processing or preparation. They may be also misidentified (1).

**Case:** A 25 years-old male patient admitted to Emergency Service with shivering, nausea and loss of consciousness following 20 minutes after drinking a couple of herbal tea with unknown ingredients. He has flu-like symptoms for a few days with no history of drug ingestion. On physical examination, he was agitated with Glasgow Coma Scale of 5/15. He has tachycardia (150 beats/min), dilated and non-reactive pupils. Computed cranial tomography did not reveal any pathology. He was intubated and transfer to intensive care unit (ICU). Laboratory findings were within normal limits. Treatment included mechanical ventilation and supportive ICU therapies. His mental status was gradually improved and 22 hours later he was extubated. He defined an open package containing dried and chopped green leaves given by his friend. On the 24 hours of admission, the patient was discharged to Internal Medicine Clinic.

**Results and Discussion:** The dominant clinical features of this case are the characteristics of the anticholinergic poisoning. The popularity of herbal medicine is increasing but it must be considered that it has a high potential of intoxication especially in uncontrolled and unidentified products.

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## P-106

## THE ASSESSMENT OF ISOLATED NOZOKOMİYAL INFECTION FACTORS AND THE RESISTANCE RATES IN 2010-2012 IN FSM EDUCATION AND RESEARCH HOSPITAL REANIMATION INTENSIVE CARE UNIT

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The antibiotic resistance and the range of nozocomial infection agent micro-organisms in intensive care units are changing time to time. For this reason, persistent pursuit of the surveillance of agent and resistance mechanisms are assisting for designating the treatment and the infection control protocols. For this purpose, the range distinctions of hospital infection agent micro-organisms and resistance mechanisms in FSM Education and Research Hospital Reanimation intensive care unit during 2010-2012 are determined.

**Method and Material:** In 2010-2012, the micro-organisms that are isolated as invasive equipment related hospital infection agents are evaluated retrospectively. The conventional methods are used for determining the isolated micro-organisms. The antibiotics sensitivity tests are applied according to the disc-diffusion method suggested by CLSI. The vancomisin resistance in enterococci are considered in 2011

### Findings:

**Table 2.** Pathogen Antimicrobial in ICS

	2010 (%)	2011 (%)	2012 (%)
GSBL	16,47	36,99	38
VRE	0	50	18,18
KD	2,68	2,6	37,5
MRKNS	87,5	50	0
MRSA	100	85,71	50

**Table 2.** Pathogen Antimicrobial in ICS

	2010 (n)	2011 (n)	2012(n)
Acinetobacterspp	67	39	71
Klebsiellaspp	5	20	21
Paeruginosa	69	19	21
E.coli	13	14	9
Enterokoksp	1	10	11
KNS	16	8	-
S.aureus	7	7	14
Enterobacterspp	5	5	1
C.albicans	0	3	4
Proteus	7	1	2

### Results:

In 2010, 190 micro-organisms are isolated as hospital infections, in 2011 this number decreased to 126. In 2010, while the most frequently isolated bacteria were *Pseudomonas aeruginosa* and *Acinetobacter* spp, in 2011 and 2012, *Acinetobacter* spp was in first rank. In 2011 and 2012, the increase in *Klebsiella* spp and *Enterococ* spp rates are remarkable. And KNS is decreased in 2011 and not seen in 2012. The diluted beta-lactamase production and the carbapenem resistance in gram-negative bacteria (remarkably increased in 2012), the vancomisin resistance in enterococci and the oxasiline resistance in KNS and *Staphylococcus*. Infection control measures, adherence to guidelines, surveillance and rational antibiotic use are important in decreasing the impact of resistance problem (1).

For our hospital, *Acinetobacter* spp remains important as nozocomial infection agent. In the isolated samples the carbapenem resistance increased. Increasing of the GSBL production rate in the gram-negative bacteria and the *Klebsiella* spp's boom in the isolated hospital infection agents become instructive in ampicillin antibiotics selection and indicated the requirement of the infection control precautions.

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P-107

**TOXIC EPIDERMAL NECROLYSIS (TEN)****YİĞİTÖZAY H, BENZONANA N, KUZUCUOĞLU T, TUNÇAY E, ACAR H, ÖZER S***Dr.Lütfi Kırdar Kartal Training And Research Hospital Intensive Care Burn Center Cevizli, Istanbul, Turkey*

**Introduction:** Toxic epidermal necrolysis (TEN) is a severe idiosyncratic reaction which is mostly induced by drugs and characterized by affecting greater than 30% of body surface area and almost all mucosae and by prevalently causing loss of epidermis. The patients with TEN carry high risk of infection and sepsis is the leading factor of mortality. The patient followed-up for TEN in our Burn Intensive Care Unit (BICU) in whom *Acinetobacter* wound infection and bacteremia developed during disease course has been presented.

**Case:** The 30-year-old male patient used cefuroxime axetile for URTI 10 days ago and he was hospitalized in a health institution with prediagnosis of TEN depending on fever and development of diffuse maculopapular rash. He was administered an unknown iv antibiotic. The patient who developed bullous lesions in 60% of his body was administered iv Prednol 1gr in dosage 1x1. Due to the increased lesions; he was taken to an isolated treatment room in the BICU. His first examination revealed open consciousness, cooperation, orientation, PHR 87/min, TA 128/81mmHg, fever of 38,8°C and laboratory findings within normal limits. There were maculopapular, morbilliform, nikolsky+ rashes and bullous lesions that covered 85-90% of his body. Diffuse mucosal lesions were existing in his mouth, nose and eyes. He was supported by crystalloid fluid to maintain CVP value of 6-8 cmH<sub>2</sub>O and urinary output of 1-1,5ml/kg/hour. The gastroprotective pantoprazole and analgesic tramadol HCL were given. The combination of TPN+ENT was applied according to Harris Benedict formula. In the second day of admission; the lesions increased to 90-95% of the body surface area. Totally 210 gr of IVIG (2-2.5g/kg/dosage) was administered for 5 days. His daily blood and wound cultures were obtained. In the sixth day of his admission, İmipenem 4x500mg and Colistin 3x100mg IV were initiated because of 38,8°C fever, growth of gram (-) bacteria in the tissue culture and positive signal from blood culture obtained from CVP catheter. His CVP catheter was withdrawn. The skin lesions regressed in the following day. Fever increased to 39,2°C and tissue, blood and catheter cultures grew *Acinetobacter baumannii*. The dosage of Colistin was elevated to 3x150mg. Tigecycline was added to the treatment protocol. The dosage of Colistin was regulated to be 3x120mg and 3x100mg in the 5th and 8th days of the treatment; respectively. The treatment of tigecycline was completed by 10 days while combination of İmipenem+Colistin treatment was finalized in the 14th day of the treatment. He was discharged by full recovery in the 24th day of his admission.

**Discussion And Conclusion:** It is essential to follow-up these patients in an isolation room with a multidisciplinary approach and to determine the potential factors for antibiotherapy and to initiate the treatment timely by obtaining their surveillance cultures regularly

P-108

**PLAZMA EXCHANGE FOR HYPERTRIGLYCERIDEMIC ACUTE NECROTIZING PANCREATITIS IN ICU: CASE REPORT****GOLBOYU BE, KARAEGETERZI GN, KATIRCIOLU K, SENCAN A, AKSUN M, KARAGOZ I, ARAN G, KARAHAN N***Izmir Katip Celebi University Ataturk Training And Research Hospital Anesthesiology And Reanimation Clinic, Izmir, Turkey*

**Introduction:** Hypertriglyceridemia (HTG) is a rare cause of pancreatitis. Hyperlipidemic pancreatitis (HLP) secondary to HTG presents typically as an episode of acute pancreatitis or recurrent acute pancreatitis or rarely as chronic pancreatitis. It is generally accepted that a TG level more than 1 000 mg/dL is needed to precipitate an episode of acute pancreatitis. Plasmapheresis has been claimed to reduce triglyceride level rapidly in HLP and is believed to halt the progression of HLP.

**Case Report:** 22 years old man was admitted to hospital with abdominal pain and vomiting. In his medical history : Type I hyperlipoproteinemia and two times pancreatitis. His abdomen was markedly distended and there was severe tenderness in the upper abdomen with muscular defense. The result of laboratory studies showed marked hypertriglyceridemia of 2142 mg/dl and hiperamylasemia 268 IU/L. Abdominal computed tomography scan performed at hospital admission showed diffuse pancreatic swelling with peripancreatic effusion and perfusion of contrast was low. Conservative treatment (fasting, lipid lowering drugs, insulin and fluid restoration) started. And plasmapheresis performed immediately in 2nd hours of ICU. After plasmapheresis serum TG level was 270 mg/dl. CT scan at 36 hours after the on set of symptoms showed decreased effusion and he was discharged from ICU on 6th day.

**Discussion:** It has been generally believed that a TG level of more than 1 000 mg/dL was needed to precipitate an acute pancreatitis. The hypothesis of hyperlipidemic pancreatitis is that pancreatic damage was resulted from toxic injury to the capillary endothelium and the damage of pancreatic acinar cells was caused by free fatty acids liberated by pancreatic lipase. Conservative treatment (fasting, lipid lowering drugs, insulin or fluid restoration) might decrease TG level slowly in a time span of days to weeks. In contrast, plasmapheresis might remove excessive lipid from serum in about 2 h.

We used plasma exchange with replacement of fresh frozen plasma (FFP) in the treatment of HLP in this case. FFP could supply lipoprotein lipase and apolipoprotein from the healthy donor. Lipoprotein lipase and apolipoprotein were essential for the catabolism of TG.

The time of plasma exchange might be the critical point. If patients with hyperlipidemic pancreatitis can receive plasma exchange as soon as possible, better result may be predicted.

## P-109

### ILA-ECMO- STEM CELL APPLICATION IN THE INTENSIVE CARE PROCESS OF A CASE FOR LUNG TRANSPLANTATION MADE PROBLEMATIC BY PULMONARY FIBROSIS: CASE REPORT

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**Introduction:** Pulmonary fibrosis (PF) is severe disease that lung function becomes irreversible with alveolar epithelial damage. In recent years, transplantation has become one of the treatment choices for PF. In some cases, a sufficient period for transfer to transplantation can be provided with the use of extracorporeal membrane oxygenation (ECMO) systems. Also, approaches based on stem cells have come onto the agenda in the treatment.

A case management is here presented to whom ILA and ECMO were implemented in the waiting period for a donor organ. In the postoperative period ECMO support was continued, at the same time nitric oxide inhalation and stem cell transplantation were applied.

**Case report:** A 49-year-old male patient underwent 6 cycles of chemotherapy (cisplatin, vinblastin and bleomycin) because of pulmonary metastasis associated with embryonal carcinoma of the testis 27 years previously. During follow-up, PF associated with bleomycin was diagnosed. Lung transplantation was recommended for chronic respiratory failure (RF). The patient was admitted to the hospital with a pre-diagnosis of ileus and dyspnea 1 day previously then transferred to the Intensive Care Unit (ICU) with pneumonia. Noninvasive mechanical ventilation (MV) was started with a diagnosis of hypercarbic RF. On the 3rd day the patient was intubated. As hypercarbia continued, the treatment was changed on the 4th day to Interventional Lung Assist (ILA). As the case, for whom lung transplantation was planned, was not suitable for transport because of haemodynamics and oxygenation, special permission was granted by the Ministry of Health for evaluation by the surgical team and preparations were made at our hospital for the transplantation. As the waiting period for a donor organ lengthened, 23 days after the application of the first ILA device, hypoxia and hypercarbia developed so the ILA device was changed. A fat tissue sample was taken from the patient as stem cell treatment was being considered. As hypoxia became more severe 11 days after starting using the 2nd ILA device, ECMO support was started. On the 4th day of ECMO support (39th day in ICU) a donor lung was obtained for the patient. Left lung transplantation was made with ECMO support, which continued perioperatively and postoperatively. In the postoperative period, nitric oxide inhalation was started for pulmonary hypertension and haemodialysis + ultrafiltration treatment was applied because of acute renal failure. The stem cell therapy was performed into intrabronchial and intravenous as sequentially twice a day at 7 day intervals. Despite the supportive treatments, the patient died of multiple organ failure on the 53rd day in ICU (15 days after transplantation).

**Conclusion:** When it is considered that the waiting period for donor organs is lengthy in our country, the use of extracorporeal membrane support systems in cases which develop acute decompensation, should be thought of as a choice to increase the chance of the patient to be able to undergo transplantation.

## P-110

### THE EFFECT OF USING CPFA AND CARBON DIOXIDE REMOVAL FILTRATION (DECAP®) ON PROGNOSIS IN THE TREATMENT OF ELECTRICAL BURN CASE WITH ARDS

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**Introduction:** In the recent years; using coupled plasma filtration adsorption (CPFA) and carbon dioxide removal systems (DECAP) is becoming widely used in treatment of sepsis-induced ARDS. Our case report aimed to present the effect of using CPFA+DECAP to prognosis of ARDS in the 30-year-old patient with ARDS who received high voltage electrical shock.

**Case:** He was conscious, cooperative, oriented and had 2nd-3rd burned areas covering 30% of TBSA, including entry site of electrical voltage in his hand and exit site of electrical voltage in his right inguinal region (existing tissue defect) at the admission to BICU. He had right thoracic tube, L1 burst compression fracture and rib fractures. He was followed-up in the coronary intensive care unit for 24 hours because of ST elevations in ECG. The lungs are ventilated bilaterally equal by auscultation. HR:111/min, rhythmic, and BP:140/86mmHg was measurement. He had tea colored urine (myoglobinuria). A 3-way CVP catheter was connected through right v. subclavia. Fluid resuscitation was initiated maintain CVP value of 4-6 cmH<sub>2</sub>O according to modified Parkland formula. Urine amount was over 1,5ml/kg/hour. Renal protective CVVHDF (with citrate) was initiated. An antibiotic was selected depending on culture test: CK-MB:288.3,TNI:1.881, BNP: 70,2, PCT:5.23, CRP: 177, ESR: 23, AST:613, ALT:156.3. The values found in the second admission day: CKMB:88.5, TPNI:1.208, PCT: 2,06. CVVHDF was continued. The urine color was lightened in the fourth admission day. The desaturated patient (75%) with developed tachypnea (48/min) was intubated. The patient was connected to mechanical ventilation on SIMV mode (FiO<sub>2</sub>:0.50, f:14/min, TV:550ml, PEEP: 5 cmH<sub>2</sub>O). The follow-up of the patient who was self-extubated in the 5th day was continued under O<sub>2</sub> mask. CVVHDF was finalized. His right thoracic tube was withdrawn in the 10th day. His fever was 38,3°C and Colistin and İmpenem treatment was initiated in addition to teicoplanin due to growth of Acinetobacter. In the 11th day of admission; the patient was intubated due to development of acute respiratory failure and was connected to mechanical ventilation on IPPV mode (FiO<sub>2</sub>:% 0.80, TV: 500ml, PEEP: 10cmH<sub>2</sub>O, f:18/min). PA lung graphy revealed bilateral pleurisy and ARDS. Fever was 39°C while CRP>204. He was performed CPFA+DECAP using Infomed device due to Horovich value <150 and severe sepsis findings (PCT: 11.89, lactate:1,9). The blood gas and respiration values obtained from the patient during procedure were presented in the Table 1. His antibiotherapy was adjusted in HF dose. Mechanical ventilation support was reduced during his follow-ups. DECAP and CPFA procedure was finalized after performing for 48 hours because of the values: Fever 37°C, Horovich>327. CVVHDF was continued. PA lung graphy was within normal limits while PCT: 0.855. The patient was extubated one week after. In the 31th day of admission; he was referred to the Orthopaedic Service with values of GCS: 15, pH:7.44 under room air condition, PCO<sub>2</sub>: 44.9mmHg, PO<sub>2</sub>:107mmHg, HCO<sub>3</sub>: 30mmol/l, BE: 5.3, SpO<sub>2</sub>: 98%, PCT: 0,136.

**Discussion and Conclusion:** We conclude that CPFA+DECAP system is effective in treatment of sepsis-induced ARDS and it improves the prognosis of the patient accompanied by selection of appropriate antibiotic according to culture test and supportive treatments.



P-111

### PNEUMOCYSTIS CARINII PNEUMONIA IN PATIENT WITH HIV WHO DOES NOT KNOW HE IS INFECTED

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Pneumocystis carinii causes a potentially fatal pneumonia in patients with AIDS. We describe a case of disseminated Pneumocystis carinii infection in a patient who does not know that he is HIV-infected.

**Case:** A 37 year old male patient presented with a dry cough, fever, severe back pain and increasing dyspnoea. He had fever (40°C), tachypnoea, tachycardia, hypotension and arterial blood gas analysis confirmed severe hypoxia. Chest examination revealed that few bilateral diffuse crepitations were heard on auscultation. A clinical diagnosis of sepsis and ARDS was made. Echocardiography revealed that Left ventricular ejection flow decreased. (48%). X-ray chest PA showed diffuse bilateral shadowing. Patient was transferred to the ICU where initial evaluation revealed elevated inflammatory markers and white blood cell count, abnormal liver function, and renal failure. He was put on intermittent positive pressure ventilation (IPPV). Initial settings were: volume control mode; Fi O2 100%, PEEP 15 cm of water; initial tidal volume 6 ml/kg body weight. These settings were adjusted from time-to-time on the basis of patient's arterial blood gas analysis. Strict fluid balance and inotropic therapy were maintained. He was started on high dose intravenous caspofungin, meropenem, teikoplanin, ciprofloxacin. Hydrocortisone was also started. Blood, urine cultures were negative. The patient consented to HIV testing and was found to be positive with CD 4 count of 5.2 /uL. Pneumocystis carinii DNA were positive. He was treated with trimethoprim-sulfamethoxazole, imipenem and caspofungin, teikoplanin, ciprofloxacin. In addition to Ganciclovir therapy was started on high dose intravenous, oral lopinavir-ritonavir, fluconazole, and tenofovir/ emtricitabine. On the 33th day he had a right tension pneumothorax that required an intercostal drain and a moderate right pleural effusion. After 50 days, there was complete clearing of X-ray shadows and arterial blood gases were within normal limits. He was discharged on the 54th day

**Conclusion:** We represented a patient with pneumocystis carinii pneumonia who was newly diagnosed HIV Infection. HIV infection possibility must be considered in a patient has severe pneumonia.

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### NECROTIZING FASCIITIS AND SEVERE SEPSIS COMPOSED OF OVARIAN HYPERSTIMULATION SYNDROME (OHSS)

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**Introduction:** Ovarian hyperstimulation syndrome (OHSS) is a rare but serious complication after the medical ovarian induction. The most of OHSS cases with mild symptoms are self-limiting and have regression. Severe form with heavy clinic can be seen, which may result mortality. (1). Here, the authors present the patient who had iatrogenic necrotizing fasciitis after severe OHSS. **CASE:** 23-years-old female patient was admitted to the emergency room, who had severe abdominal pain bloating, fatigue and fever. Past medical history of the patient had ovarian induction therapy due to the polycystic ovarian syndrome (PCOS) two weeks ago. It was detected by ultrasound that there was free fluid in the abdominal cavity. The patient hospitalized to the women's health service diagnosis with OHSS. Percutaneous sampling procedure was done with paracentesis two days later. The patient was diagnosed as Necrotizing Fasciitis (NF), aggressive debridement and abdomen lavage applied by general surgery. Postoperatively the patient was undertaken on the control of mechanical ventilation in the intensive care unit. After epidural catheter used for pain relief, medical dressing daily and debridement every other day applied to the patient by general surgery. She had hypoalbuminemia, ARDS and signs of severe sepsis. In the intraabdominal collection culture reproduced enterococci so the patient's current antibiotic therapy was reconstructed. The patient showed clinical improvement and she was extubated 24th day and respiratory physiotherapy was started. Skin flap repair was performed by the plastic surgeons, and epidural catheter was withdrawn. The patient's performance status was good at the 32 day, she turn over to the clinic with healing.

**Discussion:** OHSS is an iatrogenic serious complication occurring after ovulation induction. The risk group consists of young, poor and diagnosed with PCOS cases (2). In most cases, symptoms are self-limiting and regressed. High mortality rates are available in the heavy type. As cites, pleural effusion, clotting disorders, ARDS, impaired liver function tests and septic shock may occur in severe OHSS. Severe cases constitute 68% of all OHSSs and hospitalization is required. Our case who had iatrogenic OHSS accompany with severe sepsis and NF after the ovulation induction, was treated in intensive care unit. NF requires early and aggressive surgical treatment, which is a serious bacterial infection, and has quite high morbidity and mortality. Microorganisms enter the body via surgical wounds on the skin, abrasions, burns, and injections. As a result, clinical pattern may vary from mild clinical symptoms to the ARDS in OHSS. The patients should be treated in intensive care unit, which have developed ARDS. In addition this, we think that epidural anesthesia may suplay shortening intubation time and length of stay in intensive care unit for the patients who were made constant debridement of necrotizing fasciitis.

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### PROTECTIVE EFFECT OF THERAPEUTIC HYPOTHERMIA IN TRAUMATIC BRAIN INJURY WITH SUBDURAL HEMATOMA

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**Introduction:** Traumatic brain injury(TBI) remains a significant cause of morbidity and death in the world. Therapeutic moderate hypothermia (cooling to 32–34°C) has been shown to improve functional and cognitive outcomes in brain injury studies.

**Case report:** 20-years-old healthy male patient. The patient after a motor vehicle accident reaches the emergency department with Glasgow coma scale(GCS) of 3. Pupils were anisocoric and mid-dilated. Patient was intubated immediately. Diffuse brain oedema and a subdural hematoma (SDH) on the right frontoparietal region was found commonly after all computed tomography (CT). Craniotomy was performed to removal of SDH and he admitted to the ICU as intubated. We decided to application hypothermia to protect the brain. Foley catheter as temperature probe and Alsius thermoregulatory catheter from femoral vein was performed 6 hours after accident for this purpose. Measured temperature was 37.5°C. Our target temperature was 33°C. Body temperature reached to target in 5 hours. Patient had positive light reflex, pupils were isocoric and patient was localized the pain as motor reaction on the fourth day. GCS was 8 at 7 day. We had applied therapeutic hypothermia for 7 days. Brain oedema was decreased at control CT. Therefore the patient's temperature was to be increased at 0.2°C/h to provide normothermia. The target body temperature was 36°C. 15 hours later, we reached the target body temperature. The patient's hemodynamics were stable. On the 8th day we extubated the patient and GCS was 15. Thermoregulatory device was closed and the patient's catheters were removed. Within a few days, the patient was interned to service.

**Discussion and Conclusion:** The neuroprotective effects of hypothermia are related to prevention of postschaemic hypoperfusion, reduction of functional and basal metabolism, decreased accumulation of lactic acid and oedema formation, inhibition of excitatory neurotransmitter release, prevention of Ca<sup>++</sup>- and Na<sup>+</sup>- influx, inhibition of free radical formation. We concluded that early prophylactic mild hypothermia in patients with TBI (GCS<8) to decrease the mortality and improve neurologic recovery without the side effects of hypothermia include myocardial ischaemia, cardiac arrhythmias, coagulation abnormalities and suppression of metabolic and immunological processes.

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### ISOLATED CENTRAL NERVOUS SYSTEM INVOLVEMENT FAT EMBOLISM SYNDROME: CASE REPORT

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**Introduction** Into the circulation as a result of fat globules (brain, kidneys, eyes, skin and clogging of the capillaries of various organs) occurring in the clinical picture is called fat embolism syndrome (YES) (1). In this presentation, without signs of peripheral post-traumatic fat embolism syndrome associated with isolated central nervous system involvement is presented. **Case Report** For the revision of hip replacement surgery are found of the 41-year-old female patient, preoperative evaluation, physical examination, and laboratory values were normal. Echocardiogram revealed moderate mitral stenosis, mild aortic regurgitation was detected. Patient not having any post-operative problem during intraoperative term was received intensive care unit because of patient couldn't being wake up as intubated. Arterial blood gas values were: pH: 7.41, PaO<sub>2</sub>:72 PaCO<sub>2</sub>:38 HCO<sub>3</sub>: 21 BEECF: -4. In the patient's cranial diffusion MRI, on bifrontoparietal, the right occipital and the cerebellum cortical-subcortical restricted areas commonly observed and fat embolic events in multiple areas of infarction were evaluated. Patients were followed up for the ventilator. Corticosteroids, cerebral vasodilator drugs and albumin was used as a supportive therapy. **Discussion** Fat embolism syndrome is usually characterized by respiratory failure developed after pelvic and long bone fractures, cerebral dysfunction and petechiae. The incidence of fat embolism syndrome ranges from 0.5% - 5 percent (2) and its mortality different from 5% to 10% (3). Fat embolism syndrome is a multisystemic disorder characterized by the respiratory system, circulatory system, central nervous system, urinary tract, eye, and skin symptoms and signs in 24-72 hours after trauma (2,4). For the prevention of YES can be performed early and rapid stabilization of long bone fractures given prophylactic corticosteroid, prevention of hypovolemic shock, provision of adequate oxygen delivery, provision of analgesia therapy and intramedullary pressure reduction during surgery (1). **Result**, We believe that it is helpful to be thought YES table can be flourish during long-bone and pelvic fracture surgery and is standard supportive treatment with YES cases which have isolated central nervous system.

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## İNHALASYON SONUCU GİS VE GÖZ TUTULUMUYLA GİDEN AĞIR METANOL ZEHİRLENMESİ

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**Giriş:** Metil alkol, endüstride, boya sanayinde (çeşitli solventler, boya çıkarıcı, vernik, teksir makinasi sıvıları, antifriz sıvıları, araba camı yıkama sıvıları, kolonya, ispirto) yaygın olarak kullanılan toksik bir sıvıdır. Zehirlenmesi (gastrointestinal sistem, böbrek, karaciğer ve kalp) hasarlara, beyin ödeme, retinal ödem ve hatta körlüğe neden olabilir. Büyük miktarlarda alımında deliryum ve koma gelişebilir. Tedavisinde semptomatik (sodyum bikarbonat) ve spesifik (etanol, fomepizol) ajanlar kullanılır. Ağır olgularda hemodiyaliz de gerekebilir (1).

**Olgu:** Bilinen herhangi bir hastalığı olmayan 58 yaşındaki erkek hasta, genel durum bozukluğu, bulantı, hematemez ve görme kaybı şikayetleriyle Acil Servise getiriliyor. Geldiğinde şuuru açık, koopere, oryante imiş. Anamnezinde yaklaşık 90 saat kağıt boyama işi yaptığı (bu sürede hep aynı ortamda kalmış) öğreniliyor. Göz muayenesinde papil ödemi (pupiller midriyatik, ışık refleksi bilateral yok, fundusta sağda daha fazla olmak üzere optik disk sınırları silik) tesbit edildi. Bilgisayarlı beyin tomografisi ve PA akciğer grafisi normaldi. Laboratuvar bulguları BUN/Cr: 85/1,49 lökosit 38,3 idi. Takibinde şuuru kapanan, solunumu kötüleşip, arter kan gazında ciddi anyon açıklı metabolik asidoz (pH: 6,83) gelişen hasta entübe edilip yoğun bakım ünitesine yatırıldı. Öykü, fizik muayene ve metabolik asidoz nedeniyle metanol intoksikasyonu olabileceği düşünülüp, acil hemodiyafiltrasyon ve spesifik tedavilere (fomepizol, nazogastrik sondadan etil alkol, folat ve bikarbonat) başlandı. Tanı hemodiyafiltrasyon başlamasından 12 saat sonra kesinleşti. Nazogastrik sondadan aktif kanaması görülen hastaya 24 saatte 5 Ünite Eritrosit süspanasyonu ve 2 Ünite Tam Kan verildi. Yapılan endoskopide küçük kurvaturun tamamını dolduran hematoma saptandı, aktif kanama görülmeydi. Tansiyonu düşük seyreden hastaya dopamin ve noradrenalin infüzyonu başlandı ve yaklaşık 24 saat sonra kesildi.

Hemodiyafiltrasyona 30 saat devam edildi. Şuuru açılan, koopere olan ve kan gazında asidozu düzelen hasta 48. saatte ekstübe edildi. Ancak 48 saat sonra solunum sıkıntısı olan, solunum sayısı artan, PaO<sub>2</sub>/FIO<sub>2</sub> oranı 102 olan, PA akciğer grafisinde bilateral infiltrasyonları olan hasta, TRALİ düşünülerek tekrar entübe edildi ve mekanik ventilasyona başlandı. 72 saat sonra solunumu yeterli, PaO<sub>2</sub>/FIO<sub>2</sub> oranı düzelen (320) ve PA akciğer grafisinde infiltrasyonları da düzelen hasta tekrar ekstübe edildi. 72 saat daha aralıklı noninvaziv mekanik ventilasyon desteği verildi. Göz muayenesinde papil ödeminin devam ettiği görülen hastaya steroid tedavisi başlandı.

Genel durumu iyi, şuuru açık, koopere, oryante olan; hemodinamik ve solunumsal parametreleri stabil seyreden hasta yatışının 14. gününde yoğun bakımdan çıkarıldı, görme kaybı devam etmekteydi.

**Tartışma:** Zehirlenmelerde erken tanı ve tedavi çok önemlidir. İnhalasyona bağlı metanol intoksikasyonu nadir olup, hastamızda uzun süreli inhalasyonla metanol maruziyeti söz konusuydu.

Kan metanol ve formik asit düzeyi tesbiti tanı koydurucudur. Ancak hastanemizde yapılmıyordu. Hastamızda tanı kesinleşmeden öykü, fizik muayene ve metabolik asidoz nedeniyle metanol intoksikasyonu düşünülüp acil hemodiyafiltrasyon ve spesifik tedavilere başlanması, hayat kurtarıcı olmuştur. Hemodiyafiltrasyon, metil alkol ve formik asidi kandan uzaklaştırır ve asidozu kontrol altına alır. Bizim hastamızda da hemodiyafiltrasyona kısa sürede yanıt alındı. Uzun süreli maruziyet, geç başvuru ve TRALİ gelişmesi tedavi sürecini uzattı. Hasta yatışının 14. gününde taburcu edildi ancak görme kaybı devam etmekteydi.

Özetle; şüpheli olgularda semptomatik tedavi ile birlikte öykü, fizik muayene ve laboratuvar bulguları değerlendirilerek hızla etkin tedaviye başlanması, tablonun ağırlığına rağmen hayat kurtarıcı olabilir. Bizim hastamızda da gelişinde APACHE skoru 42 ve beklenen mortalite %92 olmasına rağmen erken hemodiyafiltrasyon ve spesifik tedaviler hayat kurtarıcı olmuştur.

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## A CATHETER MALPOSITION CAUSING FACIAL AND NECK EDEMA: CASE REPORT

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**Objective Of Study:** Central venous catheterization is an invasive procedure that is performed frequently in intensive care units for various indications like fluid and drug administration, hemodialysis and hemodynamic monitoring. The advancement of the central venous catheter into a nontargeted vessel during insertion is an important complication. Here we report a case of malposition of a central venous catheter causing facial and neck edema.

**Case:** A 73-year-old male patient, who had a history of chronic obstructive pulmonary disease and coronary artery bypass grafting, were arrested at home following dyspnea while under medical treatment of exacerbation of COPD. He was resuscitated by his family members initially for 25-30 minutes. CPR was continued on the way to and at hospital. He responded to CPR and he was admitted to intensive care unit. He was consulted to our clinic for placement of a central venous catheter for parenteral nutrition. Central venous catheterization was performed by using Seldinger technique with a 7F double lumen 20 cm catheter from right subclavian vein without any complication. The day after he was consulted again because of facial and neck edema. When chest radiograph, which was obtained after placement of the catheter, was evaluated, and the catheter was found advanced from right subclavian vein to right internal jugular vein. The catheter was removed, and the facial and neck edema was resolved near totally in 24 hours.

**Discussion:** Right subclavian vein cannulation is associated with the highest risk of malposition. More commonly, malpositioning is towards the internal jugular vein of the same side. Although the catheter size was relatively small, the infusion of parenteral nutrition was thought to be the triggering and accelerating factor for edema in the present case. As a result, we would like to emphasize the importance of radiological verification of central venous catheter position just after cannulation of central line.

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### MASSIVE PULMONARY EMBOLISM IN CHILHOOD: CASE REPORT

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**Introduction:** Stasis in bloodstream, intimal injury and hypercoagulation were claimed to be main causes of deep vein thrombosis by Wirshow. The thrombi arising from popliteal or more proximal veins have a tendency to cause more severe pulmonary tromboemboli (PTE). PTE is the 3rd most common cause of death related to cardiovascular disease. Shock and massive embolism accompanying cardiovascular arrest cause death in minutes. We aimed to discuss the diagnosis and management of massive tromboemboli on a child which was discharged from the hospital without any squela after cardiopulmonary arrest four times arised from massive tromboemboli.

**Case:** A 15 year boy was hospitalized in the orthopedi clinic with the complaint of pain in hip, fever and rise in CRP. The findings of an ultrasonographic examination was confident with gluteal abscess. An improvement in clinical signs was obtained with intravenous antibiotics and anticoagulan treatment. He was transferred to intensive care unit due to a sudden cardiopulmonary arrest just before discharge attempts. A transtoracic echocardiography revealed right ventricular dilatation and severe pulmonary hypertension. Thrombus in bilateral main pulmonary arteries and its branches were observed on thorax computerized tomography. Three additional cardiopulmonary arrest were reversed by proper attempts. On blood examinations, D-dimer was found to be <50,000 ng/ml and thrombosit count was found to be normal. A thrombolytic treatment was started. Intravenous anticoagulan treatment was changed to oral treatment on 4th day. The patient was extubated after normalization of D-dimer and arterial blood gase analysis. Repeat echocardiography revealed that right ventricular and pulmonary artery pressures were normal. Venous Doppler of lower extremities showed that there are partial thrombus in right main femoral vein, external and internal iliac veins and common iliac vein. It was learned that his mother had been treated for deep vein thrombosis during pregnancy period. Protein C, Protein S, ATIII values were found to be 61% (N:70-130), 52% (N:55-140) and 31% (N:80-120) respectively and Factor 8 and 9 were found to be normal. He was transferred to the cardiology clinic on 7th day for the arrangement of varfarin dose. Then he transferred to the children's hospital for further examination.

**Discussion:** The mortality of massive embolism is very high. Thrombolytic treatment is life-saving in high risk patients. Early diagnosis and prompt initiation of thrombolytic treatment has an favorable impact on prognosis.

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### FOODBORNE BOTULISM TREATED WITH ANTITOXIN IN LATE PERIOD: A CASE REPORT

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**Background:** Botulism is a disease caused by clostridium botulinum bacteria which is an absolute anaerobic bacillus with gram positive spore. It is the strongest toxin with known exotoxin, and causes the development of flask paralysis which is the main characteristic of the disease, by blocking acetylcholine release from peripheral cholinergic nerve endings. Type a, b and e is effective types in humans.

**Case:** Fifty year old female patient with known hypertension and diabetes mellitus was transferred to ICU to receive invasive mechanical ventilator support after long apnea attacks in the 7th day of the follow-up with diagnosis of Myastenia Gravis in neurology clinic with complaints of double vision, swallowing difficulty, weakness on both arms, head ache, throat ache, hoarseness and difficulty in breathing. The patient to whom weaning was applied in the 7th day during ICU follow-ups, was re-intubated in the 13th day due to the apnea attacks developed. After the relatives of the patient who was again extubated in the 26th day of the follow-up, stated her consumption of homemade canned food, she was given 500 ml Trivalan botulism antitoxin in the evening with botulism pre-diagnosis after presynaptic type neuromuscular junction dysfunction was seen in EMG performed on the 27th day. With the recovery of speech and swallowing on the 28th day, eye lid opening occurred spontaneously. The patient to whom 250 ml anti-toxin was administered on the 29th day due to continuing weakness and exhaustion, started walking on the 30th day. The patient was transferred to neurology clinic on the 35th day.

**Discussion & Conclusion:** Because botulism was not considered in early period differential diagnosis, toxin screenings were not performed with the serum that could be performed until the 3rd day and anti-toxin was not administered in early period. After confirming the diagnosis on the 27th day with clinical findings, history and EMG findings, Myastenia Gravis treatment of the patient was discontinued and her clinical findings got better with anti-toxin administration. Successful results are reported with anti-toxin administration in many cases even it is administered lately (1, 2, 3).

In conclusion anti-toxin treatment is recommended even though botulismus intoxication diagnosis is established in late period.

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### AMANTADINE ADMINISTRATION IN PONTIN INFARCT: CASE REPORT

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Since recovery after intracerebral infarct is a long process, supportive medications are popular tools in the treatment strategies. Lately, amantadine sulphate has been accepted in the treatment of non-traumatic brain injuries. In this case report, we present our experience on amantadine in pontin infarct.

**Case:** A 58 years old woman was accepted to our intensive care unit after acute multiple pontin infarct. She had hypertension for 12 years and was operated for meningioma five years ago without neurologic sequelae. At admission she was unconscious, Glaskov Koma Score (GKS) was 4, she was orotracheal intubated and needed mechanical ventilation support. During six weeks of supportive therapy tracheostomy and percutane endoscopic gastrostomy (PEG) were placed. Her consciousness did not recover and GKS remained 4. Amantadine sulphate (200mg\*2) was infused for two weeks and given by PEG (100mg\*2) for additional two weeks. After 6 days of infusion treatment, she established eye contact and was able to answer questions by winking. Unfortunately her motor functions did not regain. Finally she was able to breath without mechanical ventilation support and she was discharged with spontaneous breathing effort and PEG feeding.

**Conclusion:** This case showed that amantadine might be a trigger to enhance brain injury recovery, especially infarct. Because of the unknown mechanism of action, we think, that further clinical studies should be implemented.

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### MONITORING THE MICROCIRCULATION WITH NEAR-INFRARED SPECTROSCOPY(NIRS) IN A PATIENT WITH SEPTIC SHOCK

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Septic shock is characterised by the derangements in regional blood flow distribution and microcirculation disorders. We present a case in whom we monitored microcirculatory changes as well as the macrodynamic and laboratory parameters to show how the patient responded to the therapeutic interventions.

**Case report:** 38 years old patient who had been under immunosuppressive therapy for connective tissue disease admitted with pneumonia leading to septic shock. She was sedated, mechanically ventilated, her respiratory and hemodynamic parameters were monitored. Tissue oxygen monitorisation (StO<sub>2</sub>) was also performed (NIRS technology, Inspectra 300) on the thenar muscle of the hand. Antibiotics, volume resuscitation followed by dopamin and nitrates were given as rescue therapies while recording the changes in monitored parameters as follows:

Admission: SAP:74mmHg, CVP:8cmH<sub>2</sub>O, StO<sub>2</sub>:68% lactate 6,14mmol/l, urine output:-

After one hour: SAP:84mmHg, CVP 10mmHg, stO<sub>2</sub> 66%, lactate 5,33mmol/l, urine output: >0,5ml/hour

+Dopamin 5 to 10mcg/kg/hour(4th hour) : SAP:90mmHg, CVP 10mmHg, stO<sub>2</sub> 70%, lactate 4,93mmol/l, urine output>0,5ml/hour

Dopamin 10mcg/kg/hour +Nitrate 20mcg/min( 6th hour) : SAP:98mmHg, CVP 12mmHg, stO<sub>2</sub> 73%, lactate 2,34mmol/l, urine output>0,5ml/hour

Dopamin+Nitrate 20mcg/min + noradrenaline 5mcg/hour; 18th hour: SAP:95mmHg, CVP 8mmHg, stO<sub>2</sub> 85%, lactate 1,62 mmol/l, urine output>0,5ml/hour

Fluid management and vasoactive agents were adjusted according to the monitored parameters and the patient was stabilised within 24 hours.

**Discussion:** NIRS offers a technique for continuous, non-invasive bed-side monitoring of tissue oxygenation. The 'real time' assessment of the peripheral microcirculation can potentially be useful in managing the ICU patients. In our case, we followed the changes in StO<sub>2</sub> in parallel with the lactate levels, which seem to be competitive. The normal StO<sub>2</sub> level of 75-95% were reached before the normal blood lactate levels were obtained, which means that StO<sub>2</sub> monitorisation can be promising for the fluid resuscitation in septic shock patients.

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## OUR ANAESTHETIC EXPERIENCE IN THE INFANT WITH A FULL-THICKNESS FACE AND NECK BURNS WITH HIGH MORTALITY

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**Introduction:** The burn injuries show a clinical progression with high mortality and morbidity rates in the infants. The treatment of the burn case which occurred due to parental negligence and was assessed as a difficult airway by an appropriate anaesthetic administration and a multidisciplinary approach has been presented in this case report.

**Case:** A TBSA 18% 3° burn (full-thickness facial burn elongating to the cranial vertex) according to Lund-Browder was detected in a 35-day old female infant due to ignition of the baby cradle. The infant was orotracheally intubated and inserted a 3-way cvp catheter in her right v. femoralis due to the developed respiratory distress. At the admission to burn intensive care unit; she had bad general condition, periorbital puffiness due to periorbital edema and was intubated and sedated. Motor response showed full range of motion in bilateral extremities, PIR: +/+, isochoric, bilaterally equal breath sounds, PHR: 152/min, TA: 87/52 mmHg, fever 36.5°C, SpO<sub>2</sub>: 99%, venous blood gas values: pH: 7.08, PCO<sub>2</sub>: 52.3, PO<sub>2</sub>: 36.3, HCO<sub>3</sub>: 15.2, BE: -14.6, Hb: 11.5, Hct: 31.4, Wbc: 38400, Plt: 756000 INR 1.09, Na: 132, K: 5.2, Cl: 107, Ca: 11, urea: 23, creatinine: 0.9, glucose: 93, alb 2.4, AST 112 ALT: 25.4. Mechanical ventilation in SIMV-P mode (FiO<sub>2</sub>: 0.50, f: 40/min, PEEP: 2/10) under monitorization was initiated. Procalcitonine was found 8.5 in the third day. IV fluid was administered according to Shriners Cincinnati Formula to provide a urine output of 1.5-2 ml/kg/day. Antibiotherapy was initiated according to culture test results. She was breastfed. The patient with sufficient spontaneous respiration was extubated in the 4th day of hospitalization. In the 18th day of hospitalization; the patient, for whom an operation was planned for debridement and grafting, was assessed as difficult airway due to the full-face and neck burns in. An operation to open a preoperative tracheostomy was planned via consultation with The Department of Otolaryngology. The induction was performed using 5-8% sevoflurane and 10 mcg fentanyl. An airway was provided using No:1 Cobra LMA. An surgical tracheostomy was made by Department of ENT. A No:3 cuffed tracheal cannula was inserted. The maintenance of anaesthesia was provided using 10 mg esmeron, sevoflurane %2 and 3/3 O<sub>2</sub>/N<sub>2</sub>O. Isotonic fluid and erythrocyte replacements were administered due to 80 ml bleeding and 100 ml urine output during the operation which took 3,5 hours in the patient for whom debridement was performed in the burned fields while full-thickness face and partial-thickness cranial graftings were used. The perioperative ABG analysis of the patient with stable hemodynamic status revealed measurements: pH: 7.51, PCO<sub>2</sub>: 31, PO<sub>2</sub>: 73 mmHg, HCO<sub>2</sub>: 24.7, BE: 1.7, Sat O<sub>2</sub>: 96%, Hb: 12.1, Hct: 39, glucose: 125, Na: 134, K: 4.0, Cai: 1.15. The postoperative tracheostomized patient with full-motion extremities and free O<sub>2</sub> support was interned to the intensive care unit due to measurements of f: 38/min, PHR: 128/min and SpO<sub>2</sub> 100%. Her wound dressings were performed under sedation in every other day during hospitalization. In the 33rd day of the hospitalization; she was decannulated and transferred to the service via following conditions: GCS: 15, on room air, f: 35/min, HR: 153/min, SpO<sub>2</sub>: %99, fever: 36.3°C, PCT: 0.162

**Conclusion:** We conclude that a multidisciplinary approach, timely applied treatment interventions and intensive care support therapy improve the prognosis of the burned infant cases that progress with high mortality and morbidity rates.

## P-122

## ACUTE IRON POISONING IN ADULT MALE

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The main causes of iron poisoning in adults include suicide attempts and iron overdose during pregnancy. A 40 years old man was brought to our emergency service due to consumption of a high dose iron drug and alcohol. History of case revealed that 10,38 mg/kg elemental iron was taken orally. At admission his body temperature was 36.7 C, blood pressure was 110/65 mmHg, heart rate was 82/min and respiratory rate was 21/min. He complained of epigastric pain, emesis and vomiting. The patient underwent gastric lavage with normal saline. Serum iron level was 134 mcg/dl (1.5 hours after ingestion) and ethanol level was 242.7 mcg/dl. Clinical follow-up included hemodynamic parameters and laboratory results. The patient's highest serum iron level was 210 mcg/dl at the 14. hour after ingestion. Serum iron levels started to decline and 31 hours after ingestion the serum iron level was 136 mcg/dl. After 48 hours follow-up, the patient was discharged in good general condition, with laboratory findings within normal limits. Iron is an essential element for normal cell metabolism, but in excess quantities is highly cytotoxic, and even lethal. The time of ingestion, form of iron supplement ingested, the amount of elemental iron ingested, and the start time of gastrointestinal symptoms should be identified in order to determine the potential severity of toxicity as well as treatment strategies. If the amount of ingested iron is < 20 mg/kg the risk for toxicity is little, if the amount is between 20-40 mg/kg the risk for toxicity is moderate and elemental iron ingestions of 60 mg/kg or greater is considered severe toxicity. Laboratory values and changes in patient presentation should guide decision-making and treatment options. Patients complaining gastrointestinal symptoms such should be treated by intravenous hydration and gastrointestinal cleaning. Serum iron concentration of 500 mcg/dL or above represents severe toxicity and specific iron chelator, deferoxamine, can be administered. In this case, serum iron level was below 500 mcg/dl and had minimal toxicity, the patient was discharged after 48 hours follow-up.



## P-123

### DIAGNOSIS AND TREATMENT OF MASSIVE PULMONARY THROMBOEMBOLISM IN A PATIENT WITH METASTATIC COLON ADENOCARCINOMA

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Massive pulmonary thromboembolism (PTE) is one of the main causes of unexpected deaths in hospitalized patients. Especially the patients with cancer are at risk of high venous thromboembolism (VTE). Our aim is to present diagnosis and treatment of massive pulmonary thromboembolism in a patient with pneumonia and metastatic colon adeno cancer admitted the general internal medicine intensive care unit. A 52 years old male with a metastatic colon adenocarcinoma, admitted to the emergency department with shortness of breath after right hemicolectomy and chemotherapy. Pneumonia was diagnosed. The patient's general condition was bad. BP:90/52mmHg, Pulse:110/min, Fever: 37°C, RR:24/min, Sofa Score:8, RS:tachipnea, rals at the basalline of the left lung, CVS:sinus tachycardia, GIS:abdomendistended, sensitivity(+), rebound(+), Laboratory: leukocyte 21.000K/ml, Hemoglobin: 8.75g/dl, platelet: 798000K/ml, PT: 14.8, INR :1.24, fibrinogen: 520, D-Dimer: 0.39, CRP:28mg/dl, urinalysis:leukocyte:100, Blood:250, Urinary culture: E.Faecalis, arterial blood gase:Ph:7.46, PaO2:56.6, PaCO2: 23.2, SO2:%82, HCO3: 19.8. Meropenem was applied 3x1g/day for pneumonia. Deep vein system of bilateral lower extremities were normal in the doppler USG. Echocardiography: Expansion in the right cardiac cavity. Tricuspid insufficiency (2nd degree) and PABS: 50-55 mmHg. CTPA: There are hypodense filling defects in both pulmonary artery and its branches. Common mosaic perfusion appearance in both lungs and together with prominence in the interlobular septas in these areas secondary to PTE. PTE was considered after tachypnea, tachycardia, hypoxia, hypocapnia, and respiratory alkalosis. Echocardiography revealed an expansion in right heart chambers and for definite diagnosis the patient's CT pulmonary angiography (CTPA) was filmed and massive pulmonary embolism detected. 50 mg Flakon Alteplaz was applied to the patient. The second flakon caused nasal bleeding so, thrombolytic therapy stopped. Patient was observed for a day in intensive care unit, general condition was improved and in the arterial blood gases pH:7.37, PaO2:85, 1, PaCO2: 38,9, SO2: 98,5 %, HCO3: 20,3. Pneumonia, may mask the diagnosis of PTE and should be considered in patients with dyspnea, hypocapnia, hypoxia, and hypotension. Early diagnosis and treatment is life saving in the PTE. Thrombolytic therapy is the treatment choice in the massive PTE.

## P-124

### HYPOKALEMIC THYROTOXIC PERIODIC PARALYSIS IN ICU

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**Introduction:** Hypokalemic thyrotoxic periodic paralysis (HTTP) is an infrequent and dramatic complication of hyperthyroidism.

**Case:** A 28-year-old man was admitted to emergency service for his weakness at lower extremities. He didn't report any diagnosed medical disorder ,but he had weakness at lower extremities in past 6 months intermittantly. Physical examination evaluated blood pressure: 110/60 mmHg, full consciousness, heart rate: 85/min, moist skin, and anxiety. Flexion-extension limitation was found at hip joint. Achille tendon reflexes were poor and sensory deficit on L3 dermatome accompanied. He was diagnosed as Guillan Barre Syndrome in ER and admitted to ICU. Laboratory findings were severe hypokalemia (2,24 mmol/L), CPK 2359 U/L, glycemia 115 mg/dl, hemoglobine 15,7 g/dL, ALT 58 U/L. Potassium (K) infusion started with 10 mEq/h. Control K value was as low as 1,86 mmol/L. ECG findings were U wave and biphasic T wave. Thyroid function tests were TSH <0.0025 µU/mL, T3 9.05 pg/mL, T4 2.73 ng/dL. Propylthiouracil 50 µg pill 3\*3/day and propranolol 40 mg pill 2\*1/2/day treatment started. 15 hours later K were found 5,6 mmol/L and then infusion stopped. Anti TG and anti TPO were found 79.69 U/mL and 294.85 U/mL , respectively. On day three weakness recovered and T3: 4.08, T4: 2.77 and TSH <0.0025 found. He has been transferred to internal disease clinic. One week after his discharge from hospital T3: 3.50, T4: 1.02 and TSH <0.0025 as found.

**Discussion:** After reaching euthyroid state hypokalemia gets normal in HTPP cases. Massive K infusions without attention may cause complications. Sodium-Potassium pump serving for cell homeostasis can be stimulated both with catecholamines and insulin. Focusing on transcellular shift firstly for the cause of sudden hypokalemia would be a better approach rather than renal loss and inadequate intake. In ICU setting a careful treatment algorithym should be obeyed ,because endocrine emergencies are complicated and may be underdiagnosed at busy working emergency departments.

## P-125

### THE MANAGEMENT OF SEVERE IMPORTED FALCIPARUM MALARIA IN OUR ICU

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**Objectives of the study:** Falciparum malaria may mimic many disorders related with central nervous system. Recognition of severe cerebral malaria may be delayed in non-endemic areas. Higher survival rate could be achieved with a rapid and aggressive treatment approach to coma. The purpose of this case report is to describe the clinical management of severe imported cerebral malaria in our ICU.

**Materials and methods:** A 47 year old male was admitted in the ICU with complaints of progressive high grade fever, altered sensorium, poor feeding for 3 days and one episode of seizure 2 hours before admission. Computerized imaging of brain was normal despite the presence of deep coma. Besides performing routine cultures, Giemsa stained thick and thin blood smears were investigated for defining a possible parasitaemia as the patient had a history of a visit to an endemic country for malaria 10 days ago.

**Results:** Blood films revealed the presence of falciparum malaria parasite. Quinine sulphate , 3x600 mg p.o, tetracycline 4x250 mg p.o and intravenous artesunate 2.4 mg/kg were administered at 8th hour of admission.. Artesunate (1.2 mg/ kg) was repeated at 12 ve 24 hours. Quinine sulphate and tetracycline therapy was preceded for 7 days. The patient was intubated at 12 hours of admission because of progressive tachypnea and hypoxemia. Whole body cooling with blanketrol, intravenous infusion of crystalloid solutions at +10 C and gastric/vesical lavage with distilled water at +4 C and antipyretic drugs were performed to maintain the body temperature < 39 C. Fluid and electrolyte replacement, mechanical ventilation, enteral nutrition, sedation and organ preservation strategies were carried out for 5 days. Comatose state was dissolved, blood cell count abnormalities slightly improved and serum bilirubine levels decreased on day 5. The patient was transferred to Infectious Diseases ward the next day. Conclusions: Cerebral malaria is a life-threatening complication seen in 2% of malaria cases, particularly in Plasmodium Falciparum infection. Early diagnosis and treatment in the ICU is therefore crucial to obtain the best outcome.

## P-126

### NURSE ATTEMPTED SUICIDE WITH INTRAVENOUS INJECTION OF HOUSEHOLD BLEACH AND PRILOCAINE HYDROCHLORIDE; CASE REPORT

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**Abstract:** Sodium hypochlorite (NaOCl) is a solution made from reacting chlorine with a sodium hydroxide solution. NaOCl, which is known as household bleach(contains 5% sodium hypochloritewith pH:11), is a whitening agent and used in disinfection. Prilocaine hydrochloride is a local anesthetic agent of the amide family. Onset and duration of the local anaesthetic effect of prilocaine depend on the dose and the site of administration. Systemic toxic reactions primarily involve the central nervous system (CNS) and the cardiovascular system (CVS). Also Methaemoglobinaemia may occur after the administration of prilocaine.

**Case:** A 36 year old female nurse was admitted to the emergency department. She attempted suicide by infusion of 150 mL household bleach (Domestos)(sodium hypochlorite 5%) and 20ml prilocaine hydrochloride(Citanest%2)into left antecubital vein with intravenous (IV) line, one hour before admission. She had a history of depression since 6 months and this was her third suicide attempt. The patient was hemodynamically stable. She was oriented and obeys commands. The patient was hemodynamically stable. Pulse rate 90 beats per minute, blood pressure 100/50mmHg, and his respiratory rate was 12breaths/min. Patient arterial blood gas analysis was pH:7.43, pCO2:39mmHg, pO2:141mmHg, SO2:%98.9. Her methemoglobin level is %9.95 (normal range %0.4-%1.5). Patient was transferred to intensive care unit. We gave her an initial intravenous bolus injection of 20% lipid emulsion 100 ml and continuous infusion 0.25 mL/kg/min. In clinical examination, her left arm was painful and swollen. Doppler ultrasound examination of her arm was normal. 24 hour later oliguria (<0.5 mL/kg/h) was occurred. At that time laboratory findings were blood urea nitrogen:198mg/dL and creatinine:6.38mg/dL. Patient was consulted by nephrology and diagnosed with acute interstitial nephritis. Steroid treatment(60mg/day) and haemodialysis (2 times a week) were started. The patient was treated in intensive care for 14 days. Characterized by stable vital signs, the patient transferred to the department of nephrology to be applied two times a week hemodialysis.

**Discussion and Conclusion:** Suicide risk appears to be elevated in medical practitioners. Poisoning by drugs was far more common among the medical practitioners than the general population. This patient injected herself household bleach and prilocaine hydrochloride. Prilocaine hydrochloride cause methemoglobinaemia. If clinical methaemoglobinaemia occurs, it can be rapidly treated by a single intravenous injection of a 1% methylene blue solution. Our patient did not have any clinical findings, so we did not use methylene blue solution. The author thought that the renal failure was due to the direct toxic effect of sodium hypochlorite on the renal tissues and recommended forced diuresis, hydration and haemodialysis.

P-127

**PULMONARY INJURY AND DIABETIC KETOACIDOSIS ASSOCIATED WITH CANNABIS SMOKING****BÜYÜKKOÇAK Ü, YAMAN F, GENÇAY I, ÖZTÜRK A***Kirikkale University Faculty of Medicine, Kırklareli, Turkey*

**Introduction:** Cannabis is the most widely used illicit drug worldwide. The use of cannabis with bonsai and tobacco with diabetic ketoacidosis(DKA) is a rare condition that we have never encountered before.

**Case:** 17-year old man presented with fatigue, respiratory distress, mental disorder at emergency department. He was dehydrated, tachycardic, tachypneic, normotensive and confused when admitted to intensive care unit. His arterial blood gas measurement revealed clinically important metabolic acidosis (Table 1).His blood glucose level was 520 mg/dL. Urine analysis showed ketonuria. Immediately intravenous rehydration, regular insulin and potassium replacement administered. He had abnormal auscultation as rhonchus especially at the right side and chest X-ray showed that the left hemithorax ventilation was less than the right and also atelectatic zones were seen at the left. Laboratory tests were normal. The patient was placed on mask O2 at 4L/min. On day 2, despite improvement in metabolic acidosis (Table 1), respiratory distress still persisted. On suspicion of pulmonary embolism, CT pulmonary angiogram was performed and revealed main pulmonary artery and right-left pulmonary artery were normal, consolidation was occurred at posterior left upper lobe and posteriorbasale segment of right lower lobe, also hyperinflation at the left lung was considered. On day three wide inflammation according to the inhalation of the substance was observed in bronchoscopic evaluation. The obstructive plugs were aspirated and the sample was defined as fibrinous and necrotic. Five days after bronchoscopy the patient was relieved and discharged from ICU to thorax surgery ward.

**Tablo 1.**

	1.day	2.day	3.day	4.day	5.day	6.day	7.day	8.day
pH	6.99	7.20	7.37	7.41	7.47	7.48	7.54	7.43
pO2	89	72	86	68	72	85	59	95
PCO2	18.8	12.5	21	22.5	32.5	36	29.3	37.3
HCO3	4.6	4.9	12	14.4	23.9	27	25.3	26.5
BE	-22.4	-20	-10	-8.9	0	3.6	3.1	7.1
SpO2	90.9	91.1	96.6	94.1	95.5	97.2	93.6	98.9

**Discussion and Conclusion:** Smoking cannabis leads to respiratory symptoms as cough, increased sputum production and wheezing and also associated with dyspnea, pharyngitis and exacerbations of asthma as a result of toxic effects on bronchial mucosa. In conclusion, cannabis has been shown to have harmful effects on lung function but the relationship with diabetic patients is not clear. Cannabis smoking history should become as common as recording tobacco exposure. Also the patients admitted for DKA should be questioned for drug abuse.

P-128

**CARDIORENAL SYNDROME: TREATMENT WITH LEVOSIMENDAN AND ULTRAFILTRATION DURING POSTOPERATIVE PERIOD****ARSLANTAŞ MK, SUNGUR F, CİNEL I***Marmara Üniv. Pendik Education and Research Hospital, Istanbul, Turkey*

**Introduction:** Cardiorenal syndrome (CRS) is categorized into 5 types based upon the organ that initiated the insult as well as the chronicity of the precipitating event. Type 3 is characterized by acute worsening of kidney function leading to heart dysfunction. This report discusses a case diagnosed type 3 CRS who was successfully treated with levosimendan and ultrafiltration in intensive care unit (ICU).

**Case:** A case of a 60-year-old, female and type II diabetic patient with a prosthetic aorta and mitral valve that underwent a total prosthetic of hip joint replacement was referred to the ICU. CRS associated with acute renal injury was diagnosed. Patient displayed volume overload because of acute decompensated heart failure. Standard therapy including diuretics and high dose inotropes failed to ameliorate hypotension, tachycardia and elevated central venous pressure. The patient's urine output decreased over the therapy period, levosimendan and ultrafiltration therapy was initiated at the simultaneously. After starting therapy with ultrafiltration and levosimendan at the third hour, urine output increased, mean arterial pressure and heart rate improved and need for inotropes decreased.

**Discussion:** The vasodilatory effect of levosimendan, a myofilament Ca<sup>2+</sup> sensitizer with inotropic effects, is achieved through activation of ATP-dependent potassium channels. This leads to a decrease in both afterload and preload without impairing the diastolic function of the heart. Continuous hemofiltration, which has minimal effect on cardiovascular stability, is a very effective method of renal support for patients with acute renal failure, especially in those with oliguria and anuria. In our patient with CRS, hypervolemia leading to cardiac decompensation must be treated urgently. Ultrafiltration and levosimendan can be additional treatment options in patients with CRS that is refractory to standard diuretic and inotrope therapy.

## P-129

## H1N1 IN PREGNANCY: TWO CASES

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**Objective:** H1N1 infection is usually associated with seasonal influenza-like symptoms such as fever, coughing, and sore throat. The infection may be a more severe prognosis for risk groups: over 65 years of age; children under 5 years of age; pregnant women; health workers; patient with chronic diseases including lung disease, neurological disorders, and diabetes; and those receiving immunosuppressive therapy<sup>1</sup>. In this report, we summarize the cases of 2 pregnant women with H1N1 Influenza.

**Cases:** The study included 2 pregnant women hospitalized in our hospital between October and December 2009. The diagnosis of pandemic H1N1 Influenza was confirmed on nasopharyngeal specimens using real-time reverse-transcriptase polymerase chain reaction in both patients.

**Case 1:** 30-years-old patient, gravida 1 para 0, went to a hospital in an other city, triplet pregnancy, 15-weekgestation, complaining of high fever, cough, rhinorrhea and myalgia. Antibiotherapy had been given. After 5 days, bilateral pneumonic infiltration was identified and 2x75 mg dose of oseltamivir (tamiflu) was administered orally. Because of dyspnea, cyanosis, bloody sputum and agitation, 2 days after oseltamivir treatment beginning she was accepted to our intensive care unit (ICU). In admission respiratory rate; 36/min, heart rate; 138/min and blood pressure were 170/80mmHg and had 390C fever. Laboratory findings were WBC;10000/µl, Hb;9.6gr/dl, PLT;165000/µl, AST;40 U/L, ALT;36U/L and blood gas values were pH:7.4 pO<sub>2</sub>:46, pCO<sub>2</sub>:22, SpO<sub>2</sub>; 84, HCO<sub>3</sub>;13.9. Beside oseltamivir treatment, 3x1gr dose of meronem was also given. Though mechanical ventilation with FiO<sub>2</sub>:%100, SpO<sub>2</sub> was under %50 and she died after 30 hours of ICU admission.

**Case 2:** 21-years-old patient, gravida 1 para 0, went to a special hospital, 34-weekgestation, complaining of high fever, cough, rhinorrhea. After a week she was accepted to our ICU complaining of dyspnea, cyanosis, nausea, vomiting, diarrhea, limbs weakness and myalgia. Bilateral pneumonic infiltration was identified and 2x75 mg dose of oseltamivir (tamiflu) was administered orally for ten days. In admission respiratory rate; 45/min, heart rate; 108/min and blood pressure were 150/90mmHg and had 38.70C fever. Laboratory findings were WBC;9400/µl, Hb;8.4gr/dl, PLT;184000/µl, AST;120 U/L, ALT;66U/L and blood gas values were pH:7.4 pO<sub>2</sub>:48.6, pCO<sub>2</sub>:17.4, SpO<sub>2</sub>; 85.1, HCO<sub>3</sub>;19.2. She was followed with mechanical ventilation for 10 days and then extubated. On the 8th day of ICU, MRSA from the central catheter tip culture and Acinetobacter baumani from three blood sample culture were identified. Beside oseltamivir treatment, 3x2gr dose of meronem, 1x400mg dose of teikoplanin (Targosid) and 2x500mg dose of klaritromisin were also given. On the 14th day the patient was discharged from ICU and received in the infection diseases ward to undergo support and finish the treatment. 5 days later patient was discharged from hospital.

**Discussion:** Although the H1N1 Influenza infection causes symptoms in pregnant women similar to those observed in seasonal influenza (fever, coughing, sore throat, nasal discharge), when compared with the normal population, more severe symptoms and a greater number of complications may be observed in pregnancy.

**Conclusion:** A more detailed physical and obstetric examination and early treatment are important in the prevention of maternal-fetal morbidity and mortality.

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## P-130

## EXTRA-PULMONARY TUBERCULOSIS

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**History:** A 42 year-old woman, who has a history of 50kg weight-loss over the past 3 months, visited several health facilities upon realizing the fast-growing mass on her neck. She was assumed to have anaplastic thyroid cancer and therefore she was admitted to general surgery.

**Imaging:** CT scans of thorax and neck were performed. They showed a 46x37mm abscess formation which is originated from the left lobe of Thyroid tissue. Moreover, a miliary pattern on both lungs and a few lymph nodes (largest 15x9mm) were also observed.

**Lab:** Aspiration biopsy of the abscess resulted with positive acid fast bacilli. Then the patient was definitely diagnosed to have extra-pulmonary tuberculosis.

**Progress:** She was right away put on oral multi-drug anti-TB regimen with INH, PRZ, RIF and ETB at the General Surgery ward. Later, she developed shortness of breath due to the abscess' pressure over trachea. The consultant intensivist considered intubating the patient, but she could not perform the oro-tracheal intubation with a ID:7,0mm endotracheal tube therefore the patient could be intubated with a ID:5,0mm tube.

After intubation, the patient was admitted to the ICU. She was put in an isolated room. ICU physician decided to place a nasogastric tube in order to administer the oral anti-TB medications. However, she was not able to direct the tube to the stomach. General Surgery consultant used an endoscope for placing the tube but the endoscope could not pass the obstructed oesophagus either. Finally the patient was taken into OR and a surgical feeding gastrostomy was performed and later the medications were successfully administered via this route.

After a couple of days of ICU follow-up, tracheal obstruction was still present and the patient could not be weaned off the tube. Therefore, ENT consultation was made and later same day the patient was surgically tracheostomized. During the operation, the ENT surgeons decided to reduce the size of the abscess by aspiration of the pus, however due to the nature of caseous necrosis no pus could be aspirated from the abscess.

7 days after the tracheostomy, the patient's respiration was dramatically improved and she could be discharged to pulmonary diseases for her further treatment and follow-up.

**Discussion:** Everyday we see patients with acute respiratory distress. We should always bear in mind that acute respiratory distress may be the result of a tracheal compression by a tumour, abscess or etc. Therefore, we should perform a thorough physical exam and run relevant imaging studies.

P-131

### METABOLIC ACIDOSIS, RHABDOMYOLYSIS AND CARDIOVASCULAR COLLAPSE AFTER PROPOFOL INFUSION: CASE REPORT

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Metabolic acidosis, rhabdomyolysis and cardiovascular collapse after propofol infusion: Case report Introduction: Common presenting features of propofol infusion syndrome (PRIS) are new-onset metabolic acidosis, cardiac dysfunction, rhabdomyolysis, renal failure and hypertriglyceridemia. Patients of all ages with severe critical illness such as neurological injuries, severe trauma, severe sepsis are at risk for PRIS. Case presentation: A 58 year-old man was assessed in the emergency department. His initial Glasgow Coma Score was 8 (E2V1M5). The patient was sedated and intubated. The patient's vital signs were stable. Computed tomographic (CT) scan showed intraparenchymal hematoma diffused to lateral ventricles. ICP monitoring via ventriculostomy was performed for intracranial pressure evaluation (initial ICP was 38 mmHg). Deep sedation with midazolam 0.12 mg/kg/h and fentanyl 0.02 mcg/kg/min and osmotherapy with mannitol was maintained. Cerebral perfusion pressure (CPP) between 60-70 mmHg and ICP below 20 mmHg was targeted. Laboratory values were within normal limits. Midazolam was replaced by propofol 6 mg/kg/h on day 6 for a rapid recovery. Repeated CT scans showed no hematoma growth but moderate diffuse brain edema with no indication for neurosurgical intervention. Lactate and base excess (BE) values remained within normal ranges. On the 30th hour of propofol infusion green discoloration of urine was noted. Following the urine discoloration, the patient developed a severe shock state with metabolic acidosis (BE -6 mmol/L), lactate elevation (3.5 mmol/L), and creatine kinase activity increased to 1505 U/L. Renal and hepatic impairment were developed. Respiratory function was impaired also (PaO<sub>2</sub>/FIO<sub>2</sub> ratio: 100 mmHg). Propofol infusion was stopped. The patient suddenly developed ventricular tachycardia, fibrillation and arrest. CPR was started. However, after 50 minutes, resuscitation efforts ceased. Conclusion: High-dose propofol for prolonged periods (>4 mg/kg/h for >48 h) should be avoided, or if used, should only be with regular CK and lactate monitoring. Warning signs such as lactic acidosis must lead to the immediate cessation of propofol infusion. Early hemofiltration and ECMO are essential for the successful treatment of PRIS, but in general, prognosis is poor.

P-132

### LOCKED-IN SYNDROME CAUSED BY THE PRESSURE EXERTED BY THE SOUND GUN

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Locked-in syndrome caused by the pressure exerted by the sound gun

**Background:** Locked-in syndrome is a clinical condition characterized by the experience of quadriplegia and anarthria with preservation of consciousness as a result of damage to the ventral pons. Patients can only communicate with vertical eye movements and blinking. We are presenting the case of a 19 year-old male patient with a head injury that occurred as a result of sound gun trauma, where increased intracranial pressures lead to cerebellar damage and post-traumatic locked-in syndrome.

**Case report:** A 19 year-old male patient who wounded himself with a sound gun in the right temporal region had a Glasgow Coma Scale of 3E. Light and corneal reflexes were bilaterally negative. The patient was not breathing spontaneously and was intubated when admitted to the intensive care unit and was treated with mechanical ventilation. The patient had low blood pressure and CVP and was administered a crystalloid fluid. Despite the adequate fluid resuscitation the desired increase in blood pressure was not obtained, thus dopamine and noradrenalin infusion were started and titrated according to the patient's hemodynamics. Other medical treatment (nutrition, mannitol, furosemid, metoclopramide HCl, famotidine and acetylcysteine) were started. At post-traumatic day 3, the patient began to open and close his eyes intermittently. A percutaneous tracheotomy was performed on the 6th post-traumatic day. At post-traumatic day 7, locked-in syndrome was considered upon detection of vertical eye movements, meaningful winks and quadriplegia. Apart from the classical view, computed tomography of the brain showed an infarct area in the cerebellum. An MRI was planned, but the MRI was delayed due to the increase in accompanying hemodynamic problems, fever and infection. The patient died at post-traumatic day 36 due to multiorgan failure. The postmortem examination showed ischemia in the cerebellum, however the vertebrobasilar artery system was normal. No further examination could be done due to the severity of the situation, although careful clinical follow-up and examination of the patient lead to the locked-in syndrome diagnosis.

**Discussion:** As a result, we suggest that careful clinical follow-up and neurological examination in patients in the intensive care unit could allow for a faster diagnosis of LIS. In addition, in post-traumatic cases that are not like ischemic patients, specific CT findings may not be observed and the pressure produced by the sound gun may cause ischemia in the cerebellum, which may lead to the formation of LIS.



## P-133

**PROTECTIVE VENTILATION WITH CO<sub>2</sub>-REMOVAL TECHNIQUE**

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30% of ARDS patients ventilated according to the standardised protocol presents morphological and functional conditions of hyperinflation even with plateau pressures (Pplat) < 30 cmH<sub>2</sub>O. Values of Pplat lower than 26 cmH<sub>2</sub>O are associated with a condition of more protective ventilation with the risk of severe respiratory acidosis [1]. In such patients, use of alternative techniques such as CO<sub>2</sub>-removal may allow the reduction of Tidal Volume (Vt) and Pplat. (1) We present a case with severe ARDS where the CO<sub>2</sub> removal technique was used to control severe hypercarbia and acidosis.

**Case:** 48 years old woman was admitted with polytrauma following a traffic accident. She had hemorrhagic shock, cerebral contusion (GCS:7), multiple rib fractures and lung contusion on the left hemithorax, pelvic fracture, multiple fractures on the right arm and open fracture on the right crus. She was operated, sedated and mechanically ventilated (MV). She developed abdominal complications followed by sepsis and ARDS on the 7th day of her stay.

MV parameters were adjusted to keep the PIP below 30 cmH<sub>2</sub>O; when FiO<sub>2</sub>:70%, Vt:6-7 ml/kg (Vt.450 ml), f:18 and PEEP 16 cmH<sub>2</sub>O, blood gas measurement revealed as PaO<sub>2</sub>:92 mmHg, PaCO<sub>2</sub>:112 mmHg, PaO<sub>2</sub>/FiO<sub>2</sub>:131, HCO<sub>3</sub>:22 and pH:7.02. We decided to use extracorporeal carbon dioxide removal technique (Decap®, Hemodec, Salerno, Italy)

Blood gas analysis were done every half an hour, hourly and every two hours for 24 hours without changing the ventilatory parameters:

PaO<sub>2</sub>: 92, 89, 100, 120, 127, 98, 92, 104, 114, 153, 155, 121, 78, 115, 121, 95 mmHg

PaCO<sub>2</sub>: 112, 79, 74, 70, 57, 76, 71, 75, 95, 87, 80, 75, 82, 78, 60, 64 mmHg  
 PH: 7.03; 7.16; 7.20; 7.22; 7.04; 7.18; 7.20; 7.19; 7.11; 7.15; 7.12; 7.13; 7.10; 7.11; 7.20, 7.20

The CO<sub>2</sub> removal and the rise in pH was significant in the first four hours, the effectivity of the technique was decreased in the following hours resulting a poor control of acidosis. After the 36th hour, CO<sub>2</sub> removal was stopped. CVVHDF was initiated. MOF was developed and the patient died on the 11th day.

**Conclusions:** Severe hypercapnic acidosis that can be seen during protective ventilation in ARDS is detrimental and should be avoided. Moreover, the buffering of acidosis with bicarbonate may be deleterious in some conditions. Low-flow veno-venous DECAP can help gain time in patients with severe refractory respiratory insufficiency. In our case, CO<sub>2</sub> retention could be lowered with DECAP in the early course, but the acidosis has become aggravated by metabolic derangement of the patient and although CVVHDF was added to the treatment she deteriorated very fast.

**Reference**

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## P-134

**THE EFFECT OF INFECTION ON MORTALITY RATE OF PEDIATRIC PATIENT IN BURN INTENSIVE CARE**

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This study in pediatric patients with burns in intensive care unit mortality, to determine the effect of the infection and the patient was to evaluate the prognosis.

**Method and Material:** Burn intensive care unit between December 2008 and December 2012 the 0-14 age group follow-up of 105 patients were screened retrospectively. The age, gender, length of stay, type of burn, burn, degree of burn severity, living situation, need for mechanical ventilation, ABSI (Abbreviated Burn Severity Index / burn severity score), presence of catheter, culture, and the results to be evaluated. SPSS 15.0 statistical software package was used to evaluate the data

**Findings:** Of the patients 41 (39%) female and 64 (61%) were men and the mean age was 3.62. By type of 65.7% of the hot liquid burns, 23.8% of the flame burns, 7.6% of electricity was burn. 25.7% of burn between 11-20% (27), 21-30% from 26.7% (28) between 31-40%, and 17.1% (18). Degree burns, 24.8% 2<sup>o</sup>, 2<sup>o</sup>-3<sup>o</sup> 53.3%, respectively. Mortality rate was 16.2%. Patients, 36.2% had received mechanical ventilatory support. Average length of stay 7.67 days. 11.6% mortality in patients with burning with hot liquid, flame burns was 28%. Mean score of 7.47 ABSI patients who died, patients who score ABSI was 5.08 and statistically was significant (p = 0.001). 43 patients (41%) patients 'arteries, dialysis, central venous pressure' at least one of the catheters was performed. 76.2% of blood cultures, catheter tip were positive in 18.1% (p > 0.05). Tissue cultures were found to be inadequate. *Acinetobacter baumannii* blood culture positive rate of 12.8% (14), *Pseudomonas aeruginosa* 8.25% (9), MRSA (methicillin-resistant *Staphylococcus aureus*) 4.58% (5), respectively. 20.8% nonfermentative Gram-negative bacilli of the catheter tip (5), *Acinetobacter baumannii* 12.5% (3) and *Pseudomonas aeruginosa* 8.3% (2) seen by breeding. ABSI score of 8-9 according to the scores of the 12 patients of 32 patients with 100% of 6-7 points 78.1% when the score of 4-5 in 36 patients and 77.8% when the breeding group (p < 0.001).

**Results:** According to Abside expected mortality, intensive care unit mortality was consistent with. Absi score and score were significantly higher in patients with high reproductive rates. This is an advanced level was significant (p < 0.001). A multidisciplinary approach to these patients, possible factors for the purpose of early detection and timely initiation of antimicrobial therapy will increase surveillance of the opinion that taking regular surveillance cultures.

P-135

### NONINVASIVE VENTILATION BY HELMET OR FACE MASK IN ACUTE EXACERBATION OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE: A COMPARATIVE STUDY

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We aimed to compare the efficacy of face-mask and helmet in acute exacerbation of COPD cases.

**Method and Material:** Fifty patients who had acute exacerbation of COPD were included to this study. Patients were divided into 2 groups as face mask (Group F) and Helmet (Group H). Age, gender, body mass index (BMI), forced expiratory volume at 1 sec (FEV1), presence of additional disease, hemodynamic parameters, respiratory rate (RR), peripheral O<sub>2</sub> saturation (SpO<sub>2</sub>), APACHE II scores, arterial blood gas measurements, intubation requirement, duration of noninvasive mechanical ventilation (NIMV), ICU and hospital stay, and complications were recorded. Parameters were recorded as follows: 20th min before the NIMV, initial time of NIMV, every 30 min of NIMV until 120th min. Thirty min, 24 and 48 hours after NIMV, and prior to ICU discharge.

**Findings:** Forty eight patients completed this study. Two patients were excluded from study due to resistance respiratory acidosis in Group F. Hemodynamic parameters, SpO<sub>2</sub>, RR, PS, P<sub>peak</sub>, PEEP, FiO<sub>2</sub>, and ABG values were similar between the groups. Diminishing of PaCO<sub>2</sub> was statistically significant at time 60th min of NIMV in Group F ( $p < 0.05$ ), whereas there was no significant difference in Group H according to initial PaCO<sub>2</sub> value. ICU stay, duration of NIMV, and mortality rate were not different between the groups.

**Results:** However all parameters including PaCO<sub>2</sub> values were similar between the groups, declining of PaCO<sub>2</sub> in Group F was significant at 60th min of NIMV. Therefore, physician should pay attention for hypercapnia related complications in case of Helmet usage.

P-136

### WEANING MODES FROM MECHANICAL VENTILATION FOR SURGICAL INTENSIVE CARE UNIT PATIENTS

ŞEN S

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Surgical intensive care unit patients, weaning from mechanical ventilation process plays an important role in mortality and morbidity. The aim of this study is to investigate the modes used for weaning in the surgical intensive care unit patients receiving mechanical ventilation in the postoperative period.

**Method and Material:** February, 2012-March, 2013, between 654 patients who were followed in the surgical intensive care unit, invasive mechanical ventilation therapy ( evolution® 3e Ventilator, e Vent Medical) were retrospectively analyzed in 140 cases. Patients were separated according to surgical clinics. After then age, sex, invasive modes of ventilation, duration of mechanical ventilation and intensive care, and mortality rates were recorded. Patients treated with mechanical ventilation were evaluated for presence of COPD, ARDS, sepsis and morbid obesity. Ventilator modes were also investigated in those patients.

**Findings:** 140 patients were treated with invasive mechanical ventilation (General surgery (n = 96), orthopedic (n = 11), neurosurgery (n = 9), cardiovascular surgery (n = 10), urology (n = 7), obstetrics (n = 6) and plastic (n = 1)). When analyzed 140 patients, 94 patients with COPD, 38 patients with ARDS (22 patients with sepsis and ARDS), 8 patients had morbid obesity. For all patients, the P-SIMV (Pressure-Synchronized Intermittent Mandatory Ventilation) was the most commonly used mode. While the mode of BIPAP (Bilevel Positive Airway Pressure) was used in COPD and morbidly obese patients, PRVC (Pressure Regulated Volume Control) mode was used in patients with ARDS. Mortality rate for all mechanically ventilated patients was 16.42 % (n = 23).

**Results:** Although P-SIMV is more preferable weaning mode in patients undergoing mechanical ventilation, different modes can also be selected according to the patient's clinical characteristics.

## P-137

### COST REDUCTION ASSOCIATED WITH USE OF SUBGLOTTIC ASPIRATION TO REDUCE VENTILATOR-ASSOCIATED PNEUMONIA IN TURKEY

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*Covidien*

Ventilator-associated pneumonia (VAP) is a serious complication risk for patients who require invasive mechanical ventilation (IMV). VAP is associated with longer intensive care unit and hospital stays, which may increase healthcare expenditures. VAP may occur in 8% of IMV patients (insert reference). Subglottic aspiration (SA) may decrease VAP by up to 45% in IMV patients (insert reference). The goal of this analysis is to calculate the potential cost reduction associated with SA use for VAP reduction in IMV patients in Turkey.

**Method and Material:** A literature analysis was conducted in PubMed (2000-present) to determine the published cost of VAP in Turkey. "Cost of VAP," "IMV," and "Turkey" were used as keywords. The costs of VAP in Turkey were published in three separate cost analyses with costs stated in United States Dollars (USD). Published costs were used for the conversion to Turkish Lira (TL). An annual inflation rate of 3% was applied to the cost data to project the estimated cost in 2013. The exchange rate for USD to TL was estimated at 1.8. A weighted average of the number of patients in each study was used to calculate the cost of treatment. The cost of SA to the Social Security Institution (SGK) was calculated as 33.94 TL, which includes the cost of the SA tube (TaperGuard EVAC; 25 TL) and the SA service reimbursement amount from the SGK of 8.94 TL. 8% and 45% were taken as the VAP rate and the VAP reduction with SA rate in IMV patients, respectively. The number of patients requiring IMV in a hospital was estimated at 1,000 per year.

**Findings:** The average inpatient costs of IMV patients with and without VAP were identified in three published cost analyses and were calculated to be 13.556 TL and 3.971 TL, respectively. The total VAP cost, based on 80 VAP cases in 1,000 IMV cases without SA, was calculated as 1.085.297 TL. A hospital using SA for all IMV cases is estimated to have VAP costs equal to 488.384 TL and SA costs of 33.940 TL for a total cost of 522.324 TL. Cost reduction from SA use was calculated as 562.973 TL.

**Results:** VAP increases health expenditures by 9.595 TL per patient. A hospital with 1,000 IMV patients per year that uses SA in all IMV patients, has an average 8% VAP rate as published, and achieves a 45% reduction in VAP rate as a result of SA usage, may realize an estimated cost reduction of 562.973 TL associated with use of SA in IMV patients.

## P-138

### WHAT HAPPENS IF A BLOOD GROUP CAN NOT BE DETERMINED BY ROUTINE TESTS?

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Human red cell membranes are estimated to contain at least 300 different antigenic determinants. At least 20 separate blood group antigen systems are known, under genetic control from a separate chromosomal locus. This was a case that whose blood group could not be determined by routine analysis.

**Case:** A 35-year-old male patient who was polytraumatic following an accident needed blood grouping as a routine procedure. The blood sample was sent, but the blood group of the patient could not be determined by the methods for the routine typing. The blood sample then was sent to the Blood Center of Istanbul University, but the methods there were again unsuccessful for grouping of the sample. The blood group of the patient was accepted to be "O" type in accordance with the procedure followed in this type of patients; Rh depending on the patients being (+) or (-). The blood transfusion was not indicated for the patient during the follow-up.

Determination of the blood group in the most centers is done by using hemagglutination methods using microplate technique. This method works with reverse blood grouping principle. When this method fails, both reverse and forward grouping are performed using gel centrifugation method. In this method, the antigen and the antiserum were looked together. When the blood group can not also be determined in this way, further investigation for subgroups of ABO blood group system is performed according to "blood type chart". This chart is performed under the guidance of Diamed in our hospital. If the blood group can not also be determined through this chart, the blood group of the patient is included into the category of "blood group not determined by routine methods". The blood group of our patient could not be determined by the aforementioned methods and it was considered to be "O" type blood group. In such situations, washed human erythrocyte suspension of type O blood is prepared. Another option is to move forward with a further investigation step. Erythrocytes can be investigated genetically by elution method, but regarding the cost-effectivity, the general approach of the blood centers is to accept the blood group of the patient as "O" type blood group.

**In conclusion;** the blood group not determined by routine methods can be defined by genetic tests with very high costs, but when cost-efficiency matters, it is accepted that transfusion of washed O type of human blood and follow-up of the patient is sufficient.

## P-139

**PRELIMINARY REPORT: METHYLPREDNISOLONE THERAPY IN SEVERE ARDS****BİNGÖL T, KOLTKA N, GÜRAÇELİK M, ÖNER E, GÜNDÜZ Ö***Medeniyet Üniversitesi Göztepe Eğitim Ve Araştırma Hastanesi Anesteziyoloji Ve Reanimasyon Kliniği, İstanbul, Turkey*

It was aimed to determine the effectiveness of low-dose methylprednisolone therapy in critically ill patients with diagnosis of Acute Respiratory Distress Syndrome (ARDS).

**Method and Material:** 21 patients in whom ARDS was developed during Intensive Care Unit (ICU) follow-up period, could not be treated by conventional methods and received methylprednisolone therapy were included in the study. The demographic data and diagnoses of ICU admission were recorded. All patients with the diagnosis of ARDS underwent standard methylprednisolone protocol. Day 1: 2 mg/kg loading dose; Days 2-15: 4x0.5 mg/kg; Days 16-22: 4x0,25 mg/kg. Physiological improvement in the respiratory system was evaluated with the 4-point Lung Injury Score (LIS) and the presence of multi-organ failure with the Multiple Organ Dysfunction Syndrome Score (MODS). Length of stay in the ICU and survival rates of the patients were also recorded.

**Findings:** Demographic data of the patients were similar. 10 patients were discharged from the ICU, 11 patients died. The rate of ARDS with pulmonary origin was higher in the survivors. LIS and MODS scores of Day 22 were significantly lower than baseline scores in all patients ( $p < 0.0001$ ,  $p < 0.001$ ). Baseline LIS scores and the LIS scores at days 6, 9, and 12 of nonsurvivors were significantly higher ( $p < 0.001$ ) than the patients who survived. There was no difference between the survivors and nonsurvivors in terms of length of stay in ICU.

**Results:** The treatment with low-dose methylprednisolone provides a significant improvement in pulmonary function in ARDS patients who do not respond to conventional therapies. ARDS patients with pulmonary origin response better to methylprednisolone therapy than ARDS patients with extrapulmonary origin.

## P-140

**PULMONARY EDEMA DUE TO CHLORINE İNHALATION****DOĞAN E, AKDEMİR MS, DEDEOĞLU A, YILDIRIM A, KAYA S, UKİLİŞİLDAK F***Dicle University Medical Faculty, Diyarbakır, Turkey**Diyarbakır Education And Research Hospital, Diyarbakır, Turkey*

**Introduction:** Chlorine gas, which destroyed the lungs is a yellow, green gas that is soluble in water. The most common cause of poisoning by mixing hypochlorite and acid containing cleaning agents results bronchoconstriction. Mild symptoms as well as pulmonary edema, chemical pneumonitis, tracheobronchitis, adult respiratory syndrome (ARDS), respiratory failure can lead to fatal and severe consequences.

**Case:** Fifty-one-year-old female patient was brought to the emergency room with cough, chest pain and respiratory distress complaints after using mixed spirit of salt with bleach for household cleaning. Dopamine infusion was started to patient in the emergency department with respiratory arrest and was taken to anesthesia intensive care under these conditions. Bilateral diffuse coarse crackles were present by listening the lungs. Pink color, foam liquid was aspirated from the endotracheal tube. Addition to dopamine, noradrenaline infusion was started. Bedside echo was done. Ejection fraction was 50%. Caps were in normal view, there were no signs of the right loading. There was no cardiac pathology determined to create this table. Pulmonary edema was present, was not considered pulmonary embolism as the differential diagnosis. The patient was extubated at the 18. hour and was discharged home at the 3. day of acceptance to intensive care unit.

**Conclusion:** Most accidents that occur while cleaning the house is the result of carelessness. Society needs to be trained about the appropriate use of cleaning agents and the serious consequences of poisoning with the help of media.

## P-141

**POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME; A CASE REPORT****ALTINAY E, ORHAN R, KOZANHAH B, CEBECİ Z, EĞİLMEZ Aİ, ÖZMEN S***Konya Education And Research Hospital, Konya, Turkey*

**Introduction:** Management of the patient with seizures in antepartum and postpartum periods whom diagnosed with posterior reversible encephalopathy syndrome (PRES).

**Case Report:** A 27 year female in 36th week and 5 days of pregnancy had sudden loss of consciousness, high blood pressure and convulsion. After she loaded with IV MgSO<sub>4</sub> emergency cesarean was done under general anesthesia. Peroperative and postoperative period hypertension persisted. After extubation she developed generalized, tonic-clonic convulsion. Postoperatively, she was admitted to the intensive care unit with the diagnosis of eclampsia. Her CT brain revealed an hypodense areas regions of bilateral parieto-occipital lobes and cortical-subcortical areas of both vertex level. In her MRI Brain showed edema-like hyperintense signal changes on T2-weighted imaging bilateral frontoparietal, occipital and cortical-subcortical areas. Appearance was consistent with PRES. Patient received anti-edema and anti-hypertensive therapy and her hypertension and convulsion was fully controlled, and she discharged from ICU on day 3.

PRES is a recently described clinoradiologic syndrome that is associated with several medical conditions such as pregnancy, solid organ or bone marrow transplantation, immunosuppressive therapy, cancer chemotherapy, autoimmune diseases, hypertension. (1) It has been described as clinical findings of headache, visual changes, altered mental status, and seizures with radiologic findings of posterior parieto-occipital region of the brain edema typically. (2) PRES is usually reversible with appropriate treatment. However, rapid diagnosis is important to prevent complications such as infarction and haemorrhage. Proper diagnosis requires careful attention to the clinical and radiographic presentation. Our patient developed PRES due to a pregnancy-induced hypertension and eclampsia.

**Key Words:** Hypertensive encephalopathy, cerebral edema, preeclampsia / eclampsia, posterior reversible encephalopathy syndrome

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## P-142

### PULMONARY CANDIDIASIS PRESENTING AS TUMOR-LIKE SHADOW

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Fungal infections, might clinically and radiologically be confused with lung Ca and are usually seen as a result of infection by *Aspergillus* species. In this report we present a patient with a tumor-like shadow in his chest x-ray and disseminated invasive candidiasis. A 76-year-old male who suffered from cough, general weakness, general poor health for the last six months, and tumor-like shadow in his chest x-ray was prediagnosed with Lung CA in the right middle lung field. Further evaluation and treatment of the patient was not accepted by patient and his family. 40 days later after he applied to the emergency service and was found to be in an alerted state of consciousness and have shortness of breath in first evaluation. He was intubated in the emergency department and hospitalized to the ICU. In his history, he had a history of 60 pack years of smoking. No rales were evident on auscultation of both lungs. He was not clinically febrile (36,6 C). BP 61/21 mmHg, heart rate 128 beats / min, GCS: 3, APACHE: 38, respectively. Dopamine 5 -20 mcg / kg / min, noradrenaline 0.1 to 1 mcg / kg / min infusion were initiated. Laboratory investigations were as follows; WBC: 18.9x10<sup>3</sup> / ul, Sedimentation 77mm/hr, C-reactive protein 17.4 mg/dL, procalsitonine 0.5 ng/m L. There was a 4 cm sized slightly necrotic soft tissue mass on the first CT scan of thorax. From blood, urine, tracheal aspirates, and rectal swab culture *Candida tropicalis* was identified. No other bacterial or fungal growth was observed. The fiberoptic bronchoscopy (FOB) was performed and bronchial specimen was negative for malignant cells. The patients was put on ertepenum and caspofungin acetate treatment. CT controls showed reduction in the size of the mass to 8 \* 10 mm. We thought that the image in CT was due to infection with *Candida tropicalis* and regressed by the antifungal therapy. However patient was lost due to ventilator associated pneumonia caused by *Acinetobacter baumannii* in following days. As a conclusion, pulmonary candidiasis may present with atypical radiological findings. In cases with confusing mass-like images, fungal infections should be kept in mind for differential diagnosis of lung cancer and the appropriate methods should be used for differential diagnosis.

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## P-143

### REACTION TO CONTRAST AGENTS

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Adhesions could be formed in the epidural space after lumbar disc herniation operations. This might cause pain, sensory and motor deficits in the lower extremities. Caudal neuroplasty applications are being used for relieving these adhesions and reducing the inflammation. In this case report we wanted to present the management, diagnosis and treatment of myoclonic contractions in the lower extremities after Racz catheter placement.

**Case:** 46 year-old female patient with the diagnosis of postlaminectomy syndrome is admitted to Algology Unit of Anesthesiology Department of Istanbul Medical Faculty. Anamnesis reveals asthma, TAH+BSO and lumbar disc hernia operation in 1997. 19G Racz needle is placed and 16G Racz catheter is advanced to the right location and distribution of 4 cc contrast material is checked with fluoroscopy in prone position under sedoanalgesia. Eight mg dexamethasone is given through the catheter. No hemodynamic instability is observed during the intervention.

After the intervention during the first hour the patient is cooperative and conscious. However myoclonic contractions started from the lower extremities through upper extremities, hypertension and tachycardia is seen at the same time. Due to increased frequency of contraction and respiratory distress patient is orotracheally intubated and transferred to intensive care unit.

In the ICU follow-up to exclude epileptic seizure EEG is checked out and non-convulsive myoclonic contractions are evaluated. Neurosurgical consultation suggest intravenous hydration in order to increase the CSF production and 45O head elevation in order to prevent the spread of contrast material. The patient is followed with the mechanical ventilation and midazolam infusion to prevent the myoclonic contractions. After 1 day follow-up contractions are seized, midazolam is stopped and weaning is attempted. Lumbar CT and MRI are checked to exclude hematoma or infection due to ongoing lumbago and leg pain. No difference is noticed compared to previous imagings/scans. After 2 days in ICU the patient is extubated and discharged to the ward. The patient is dispatched to the Algology clinic after observation of numbness and limited range of motion of the left leg in the beginning of the ward follow-up. After physical therapy exercises the patient is discharged to home on the postoperative 7th day.

**Result and Discussion:** In the literature some lethal neurotoxic reactions after ionic contrast material use are reported(1). Therefore it is recommended not to use any ionic contrast materials in the radiological interventions affiliated with the central nervous system.

#### Reference

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P-144

**METHANOL POISONING****SEN O, YASAR M, NAYMAN F, AYDIN N***Sb Haseki Eğitim Araştırma Hastanesi, İstanbul, Turkey**Sb Haseki Eğitim Araştırma Hastanesi Anestesioloji ve Reanimasyon Clinics, İstanbul, Turkey*

**Intraduction:** Methanol poisoning may result in metabolic acidosis, blindness, and death. Treatment of methanol poisoning includes basic supportive care, alcohol dehydrogenase inhibition, and hemodialysis. Recent data have suggested that hemodialysis may not be necessary in case of methanol poisoning that can be treated with fomepizole as blocking therapy before acidosis or renal dysfunction develops.

**Case Report:** A 46 year-old man admitted to the emergency department with neurologic deficit and coma. During the last days, patient was reported a repetitive abuse of wine with wood alcohol(methanol).

Vital signs were it follows: blood pressure 110/70 mmHg, pulse 54 beats/minute, respiratory rate 6-8 breaths/minute, GKS: 5/15, pupils bilateral fixed dilated and no reaction to light. At blood gas analysis: pH: 6,9, HCO<sub>3</sub>: 4 mmol, BE: -22. Patient was crush intubated and hemodialysis began as soon as possible. After dialysis, 10% ethyle alcohol solution was given 10 mLkg-1 bolus dose and maintained with 1,4 mLkg-1, NaHCO<sub>3</sub> infusion was started with 10 mEqhour-1 intravenously(IV). Twelve hours later fomepizole was supplied and a loading dose of 15 mgkg-1 was administered (over a 30 minutes period), followed by 10 mgkg-1 IV every 12 hours. Oral folic acid was also given every 6 hours. Vital signs, conscious level, vision and acid-base status got better quickly with fomepizole. Twenty-fourth hour of admission of hospital patient was extubated. Serum methyl alcohol concentration was 44 mgdL-1 after dialysis and 10% ethyle alcohol treatment. Serum chemistry and arterial blood gases on the second day of hospitalization were within normal ranges. Ophthalmic evaluation revealed a normal visual acuity. The patient was discharged after 4 days of hospital stay.

**Discussion:** Clinical manifestations of methanol poisoning are nonspecific and making the diagnosis challenging. Early signs include abdominal discomfort, nausea, vomiting and central nervous system depression. Late onset signs include anion gap acidosis, neurologic dysfunction and visual disturbances. Definitive diagnosis requires measurement of the serum concentration of methanol level more than 20 mgdL-1.(1)

The appropriate management relies on the prompt inhibition of enzymatic oxidation of methanol to formic acid through fomepizole or ethanol. Patients with severe anion gap metabolic acidosis which pH less than 7,20, signs of end organ toxicity including coma, seizure and renal failure, therapy should be started with hemodialysis(2).

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**INCIDENCE OF DIFFICULT INTUBATION IN OUR INTENSIVE CARE UNIT****ERKAL H, TEMİZEL F, ARSLAN G, ÖZŞEKER M, ÇEVİK B***Dr.Lutfi Kırdar Kartal Research And Education Hospital, İstanbul, Turkey*

**Objective:** The difficult airway is a common problem in adult critical care patients. The aim of this study is to analyze the incidence of difficult intubation and characteristics, complications and mortality of endotracheal intubation (ETI) in critically ill patients.

**Method and Material:** The study was conducted in the intensive care units of the Dr. Lütfi Kırdar Kartal Research and Education Hospital, which are managed by the Department of Anesthesiology. The units have a total of 35 beds for postoperative and emergency trauma patients. Retrospective chart-review of all intubations performed over a one year period where direct laryngoscopy was attempted initially. Difficult intubation (DI) was defined as > 3 attempts. Demographic data, blood pressure and O<sub>2</sub> saturation with pulseoximetry before and after ETI, indications, place where the technique was and complications were collected.

**Findings:** 189 patient's hospital records were evaluated. Total ETI number was 200. Average attempts: 1.16 (SD: 0.42). Sex: male: 139(74%), female 61(26%). Age: 67 years (16 to 86). Indications for ETI: low level of consciousness 64(33%), excessive work of breathing 53(28%), airway protection: 23(12%), poor secretion management: 21(11%), endotracheal tube change: 20(10%), self-extubation: 10(5%). Two or more indications agreed in % 8 of patients. The total number of complications was 22(11%). Hemodynamic deterioration: 12 (0.6%), hypoxemia: 8 (0.05%), esophageal intubation: 4 (0.02%), impossible ETI: 1 (0.005%). Our DI rate 0.02. Total mortality of the study was 0.

**Conclusions:** Difficult intubation occurs more frequently in the intensive care unit than in the operating room and is associated with severe life-threatening complications(1). They also have less physiological reserve than patients undergoing airway interventions in association with elective surgery. Critical care physicians are presented with a significant number of difficult airway problems both during the insertion and removal of the airway. Our DI rate found lower than literature. Every effort should be made to limit the number of airway manipulations and secure the airway as quickly as possible in order to avoid the possibility of increased mortality related to airway management.

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P-146

## DELAYED NEUROPSYCHOLOGICAL SEQUELAE AFTER CARBON MONOXIDE POISONING

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**Objective:** Carbon monoxide (CO) intoxication is one of the most common types of poisoning, and it is the leading cause of death by poisoning in the world. Brain and heart may be severely affected by CO exposure because these organs are very sensitive to hypoxic injury(1). We report 2 cases of CO poisoning who exposed to the same amount of CO in the same room but showed different delayed neuropsychiatric sequelae and variable course of recovery.

**Cases:** 40-year-old female, 35-year-old male and their child 7-years-old girl exposed CO for all approximately 12 hours. When they were found 7-years-old girl was death and the other patients had been unconscious. They had been brought to a hospital in an other city. The first CO-Hb levels were 58% for male and 56% for female patient. We learned from the relatives that male patient is a cigarette smoker for more than 15 years, 2 pack of cigarettes/day. 24 hours after exposure two patients were accepted to hyperbaric oxygen (HBO) and then to our Intensive Care Unit (ICU). Before 1st seans of HBO Glasgow coma scale (GCS) were 8 for both patients. Between HBO treatments both patients were administered 100% oxygen till carboxyhaemoglobin level dropped. And then O2 administration was subsequently stepped down to 4L/minute. After second seans of HBO male patient's GCS was 13, female patient's GCS was still 8. After 2nd seans of HBO female patient was discharged to an other ICU. Male patient's GCS became better progressively after the HBO seans. But it was learned from HBO specialist that there wasn't any change female patient's GCS score. After 5th seans HBO male patient GCS was 15 and became conscious. Ten HBO seans were applied for male patient and then discharged to a clinic. Though 20 seans of HBO, female patient's GCS was still 10. It was learned from the patients relatives that on the 30th day of ICU admission female patient was discharged with PEG to an other ICU in the other city. 70 days after exposure we made a phone contact with the patients' relatives and learned that female patient was also conscious and could feed orally.

**Discussion:** HBO therapy is believed to decrease neurologic injury that may occur after a latent period of 2 to 21 days ("delayed neurologic sequelae") after mild to moderate CO poisoning. Our decision to treat with HBO was based on the patient's loss of consciousness and neurologic symptoms. Male patients showed better recovery then female one, may be because of being cigarette smoker.

**Conclusion:** HBO treatment of severely poisoned patients appeared to reduce the risk of serious neurological deficit.

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P-147

## POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME IN AN ECLAMPTIC PATIENT AFTER CARDIAC ARREST: CASE REPORT

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**Introduction:** Posterior reversible encephalopathy (PRES) is a disorder characterized by hypertension, headache, seizures and visual impairment. Causes of PRES include; severe hypertension, pre-eclampsia or eclampsia, sepsis, history of renal and autoimmune diseases and use of immunosuppressive or cytotoxic agents. Diagnosis of the syndrome can be difficult. For this reason clinical and radiological findings should be evaluated together. In this report, 19-years old, 32 week pregnant eclamptic woman, who had been diagnosed with PRES is presented.

**Case:** A 19-year old primigravida at 32 weeks gestation was admitted to emergency service with complaints of acute onset headache, confusion, altered sensorium and one episode of seizure. Her arterial blood pressure was 150/100 mmHg. Urine analysis revealed proteinuria +4. She was diagnosed as eclamptic and given a loading dose of magnesium sulphate (MgSO4) IV. She had a generalized seizure in the emergency service and went into cardiac arrest. The patient fully recovered after prompt cardiopulmonary resuscitation with chest compression, manual ventilation with oxygen and rapid injection of epinephrine. On bed -side ultrasound, fetal distress was found and she was taken to the operating room for an emergency cesarean section. In the operating room, the patient was disoriented. Routine monitors (ECG, pulse oxymeter, SPO2) were attached. Blood pressure was 162/100 mmHg with a heart rate of 105 beats per minute. Room air saturation was 97%. Propofol 2 mg/kg and succinylcholine 1m/kg IV was administered for rapid sequence induction. Her trachea was intubated with a 7.5 mm-sized oral cuffed endotracheal tube and anesthesia was maintained with 1% MAC sevoflurane in nitrous oxide and oxygen. A live female baby weighing 1750 gr was delivered with APGAR scores of 5 and 6 at 1 and 5 minutes respectively. After the operation, the patient, still entubated, was transferred to the intensive care unit for planned mechanical ventilation (SIMV, f: 12/min, FiO2:60, TV: 500 ml, I: E: 1/2) and invasive monitoring. MgSO4 (2g/h) infusion was continued. Her blood pressure remained stable. As she gained consciousness and spontaneous breathing, the patient was extubated. The patient was confused again in the postoperative second day. Neurology consultation was obtained and MRI brain showed T1 weighted hypointense and T2 weighted hyperintense areas in the bilateral parieto-occipital, frontal lobes and cerebellum. The patient was diagnosed as PRES. MgSO4 IV infusion therapy was continued in the postpartum period for 48 hours. Although typical HELLIP did not develop, her platelet values decreased to 69000/mm3, aspartat aminotransferase (AST) increased to 168 U/L and lactate dehydrogenase (LDH) increased to 458 U/L. On the fourth postpartum day, control CT revealed regression of the lesions. As her general condition improved and her liver enzyme and LDH levels started to decrease, the patient was transferred to the obstetric clinic on the fourth postoperative day. The patient had confusion and ptosis on the sixth postpartum day and was taken to the intensive care unit again. She was treated with MgSO4 and amlodipine 10 mg. Blood pressure was around 140/80 mmHg. A repeat MRI showed near resolution of the prior MRI findings ten days after initial presentation consistent with the diagnosis of PRES. She was charged home in stable condition.

**Conclusion:** PRES is caused by multifactorial etiological factors and the clinical presentation may be nonspecific. Early diagnosis and intensive management is essential to minimize complications such as intracranial hemorrhage, status epilepticus and cerebral infarction which lead to significant morbidity and mortality.

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## STRATEGIES FOR PREVENTION OF ISCHEMIA-REPERFUSION DAMAGE IN HYPOVOLEMIC SHOCK PATIENT

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Reperfusion damage is inflammatory injury of tissues which are recirculated with oxygen rich blood after period of ischemia. Reperfusion of ischemic tissues causes producing of oxidative free radicals which damage structural components of cells by breaking down synthesis of lipids and proteins. We are introducing a 68 years old male patient who had elective left upper lobectomy operation for pulmoner malignancy. During the operation due to pulmonary artery injury, the patient had approximately 5000cc. massive bleeding and cardiac arrest. Successfully resuscitated patient was transferred to intensive care unit with deep bradycardia and hypotension despite of high dose dopamine and dobutamine infusions. The patient had hypotension, tachycardia and needed FiO<sub>2</sub> 100% for adequate oxygenation according to blood gas analyses when he was transferred to our institution. Dopamine and dobutamine infusions decreased to 5 mcg/kg/m by adding low dose norepinephrine infusion to patient's treatment who was mechanically ventilated in P-SIMV mode and had no urine output for 2 hours despite of fluid resuscitation (2 U Fresh Frozen Plasma, 6 U Trombocyte suspension, 2 U Erythrocyte suspension, 2000 ml HES%6). At 6.hour of hospitalization at our unit, PaO<sub>2</sub> was 73 mmHg in blood gas analyse and FiO<sub>2</sub> could be decreased 80%, mechanical ventilation mode was changed to ASB mode with PEEP/PS; 5/15 cmH<sub>2</sub>O set. At 7.hour PaO<sub>2</sub> was 148 mmHg and FiO<sub>2</sub> was decreased to 50%. While inotrope-vasoconstrictor levels were lowered due to stabilized blood pressure, at 9.hour PaO<sub>2</sub> was 340 mmHg and FiO<sub>2</sub> was decreased to 30%. At 11.hour PaO<sub>2</sub> was determined as 478 mmHg upon that a newly taken arterial blood was tested with another blood gas analyser and after confirmation of similar result, ventilator parameters were set to FiO<sub>2</sub> 25%, PEEP/PS; 5/12 cmH<sub>2</sub>O. PaO<sub>2</sub> was 402 mmHg so that PEEP/PS was decreased to 5/10 cmH<sub>2</sub>O. Patient, had stabile vital signs with low dose norepinephrine infusion with PaO<sub>2</sub> 290 mmHg, was extubated. At 36.hour, norepinephrine infusion was stopped due to stabile hemodynamic parameters and PaO<sub>2</sub> was 110 mmHg in room air, patient was transferred to ward. In patients, who are exposed to ischemia/reperfusion injury stroke and experience serious hemodynamic instability such as tachycardia and deep hypotension despite of dopamine and/or dobutamine infusions and oxygenation problems in case of contraindication of high PEEP because of hemodynamic instability, low dose norepinephrine infusion in early period is very important to provide organ perfusion and to prevent organ disfunctions. In this case, effects of global reperfusion on mitochondrial level result as PaO<sub>2</sub> values over 400 mmHg with FiO<sub>2</sub> 25%. Providing less exposure to reactive oxygen products by decreasing FiO<sub>2</sub> values rapidly according to blood gas analyses checked in short intervals, seems to be second important point to prevent organ disfunctions due to reactive oxygen products in periods of hemodynamic reperfusion.

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## MYXEDEMA COMA MISDIAGNOSED AS HEPATIC ENCEPHALOPATHY

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**Introduction:** Myxedemacomais a life-threatening, underdiagnosed, rarely seen thyroid emergency resulting from decompensation of severe hypothyroidism because of many precipitating factors, as infection, drugs, trauma, metabolic disturbances, cerebrovascular accidents.

**Case:** A 77 years old woman without known significant past medical history, presented with altered mental status to emergency service on January 4th. She was diagnosed as hepatic encephalopathy by neurologist. Physical findings were hypotension, pretibial nonpitting edema, dry skin, hypothermia. Laboratory findings included hypoglycemia, thrombocytopenia, hypoxia. Increased parameters were liver enzymes, TSH (74,90 µU/ml) , anti-TG, CPK, CRP, creatinine, urea, potassium, MCV, MCH, RDW, percentage of neutrophils. Decreased parameters were calcium, cortisol, red blood cell count, lymphocytes, monocytes, folic acid. APACHE II score was 26. Normal parameters were coagulation profile, troponin I. Radiologic findings were cardiomegaly, increased pulmoner trunk diameter of 4 cm, pleural effusion, consolidations with air bronchograms in bilateral inferior lobes of lungs (in thorax CT), cerebellar and cerebral atrophy, mild periventricular ischemia (in brain CT). Thyroid nodules with calcification ( by USG), minimal pericardial effusion, LVEF 60% (with ECHO) also evaluated. ECG was with low voltage, flattened T waves. Ryle's tube (RT), arterial cannula and central venous catheter were placed. Thrombocyte suspensions were administered. Treatment with T4 (thyroxine) of 200 µg loading dose via RT was began and continued 100 µg/day. Ceftriaxone, dextrose %5, prednol were administered. Warm blankets used for hypothermia. T3:1 pgmL-1, T4: 0.4 ngdL-1, TSH: 26.87 µUml-1 were found on day 3. Dopamine and diuretic infusions were began on day 5. Ventilator support was needed because of decreased level of consciousness on day 6. Imipenem and cilastatin combination was began on day 6. On day 7, thyroid function were as T3:1.05, T4:0.54 and TSH: 16,69. She was died on 13th day in ICU because of heart failure and pulmonary edema.

**Discussion:** Even with intense treatment, we couldn't have prevented mortality. Predictors of poor outcome were increased age, cardiovascular compromise and reduced consciousness in our patient. We've concluded that pneumonia and sepsis were the precipitating causes with our patient, and elevated liver enzymes were due to ischemic hepatitis because of hypoxia and hypotension.

## P-150

### A CASE OF DELIRIUM IN A HIP SURGERY AND POSTOPERATIVE ACUTE CORONARY SYNDROME PATIENT

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Delirium is a clinical syndrome that develops acutely or subacutely, due to physical and organic problems and characterized by variable symptoms of diffuse cerebral dysfunction. Mortality rates might reach up to 15-30% in elder patients. In this report we want to share our experience of a delirium case that developed in an elder patient after orthopedic surgery that was complicated by a myocardial infarction. 75 years old male patient with hypertension and coronary heart disease history has undergone hip prosthesis surgery due to osteoarthritis. He was clinically stable at the end of surgery however developed ventricular tachycardia and atrial fibrillation at postoperative 1 hour. After administration of 50 mg metoprolol and 0.6 cc enoxaparin cardiac rhythm was stabilized. However in following 2 hours patient developed anxiety, agitation, irritability, loss of orientation and consciousness. Patient was diagnosed as delirium according to DSMN-IV criterias. After administration of 1 mg i.v. haloperidol patient was stabilized and became cooperative and oriented. Patient was diagnosed as non-ST elevated myocardial infarction as cardiac enzymes elevated without any ECG change in the following 18 hours (CKMB:36.66 mcg/ml Troponin I:0,258 ng/ml and Myoglobin:4000 ng/ml) and clopidogrel 1x75mg, ASA 1x100 mg were initiated. In follow-up period patient was stabilized and discharged from ICU. Delirium could be the first symptom of myocardial infarction or might develop in follow-up. Main etiologic factors for delirium are as follows; infection, alcohol withdrawal syndrome, trauma, burn, central nervous system pathologies, hypoxia, hypotension, pulmonary embolism, heart failure, anemia, hypo-hyperthyroidism, dehydration, malnutrition, toxins, sleeping disorders, and myocardial infarction. Elder orthopedic surgery patients were reported to be under increased risk (35-60%) of delirium. This risk might increase upto 80% in ICU patients. As a conclusion, here we report a case of delirium that developed in a postoperative elder patient who has been complicated with acute myocardial infarction. Delirium increases mortality and morbidity rates if not treated properly. We recommend that delirium cases should be evaluated for underlying etiology and proper treatment should be started as soon as possible to decrease mortality and morbidity rates.

#### Reference

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## P-151

### LEPTOSPIROSIS CASE IN INTENSIVE CARE UNIT

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Leptospirosis is a common zoonosis in tropical regions and is caused by *Leptospira* infections (1,2). The disease presents itself with flu-like symptoms, and then progresses with serious clinical symptoms, including renal failure, liver failure, and pulmonary hemorrhage. The diversity of its symptoms causes leptospirosis diagnosis to be overlooked (3).

A 44-year old male patient was admitted to the hospital with abdominal pain and headache, during the pilgrimage to Mecca (hajj). The patient was monitored with heatstroke prediagnosis and then intubated following the deterioration of his symptoms. The patient was then put to dialysis with rhabdomyolysis-dependent acute renal failure. The patient was admitted to our intensive care unit while intubated. There were no clinical features in patient's history and family history. The patient was conscious, hypertensive and tachycardic; had a fever of 38.5 °C; had abdominal distention, and there was no urination. There was no pathology in thorax tomography except for pleural effusion. The levels of the blood parameters were as follows: ALT: 448 U/L, AST: 419 U/L, GGT: 100 U/L, LDH:1462 U/L, BUN: 127 mg/dl, creatine: 8.1 mg/dl, creatine kinase: 3823 U/L, P: 6.2 mg/dl, and PCT: 39 ng/ml. The patient was put on hemodialysis treatment. Gruber Widal test and viral hepatitis markers were negative. After piperacillin-tazobactam treatment, moxifloxacin hydrochloride treatment was started. Microagglutination (MAT) test was positive in 1/800 titer. The antibiotic treatment was continued without any change. The daily urination increased, the creatine kinase levels decreased, and the patient was extubated on day 15.

In this report, we would like to emphasize that leptospirosis should be considered in the diagnosis of similar cases with histories involving a trip to tropical regions; fever, renal failure and rhabdomyolysis.

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## P-152

**THYROID STORM CAUSED BY POSTOPERATIVE DELIRIUM:  
CASE REPORT**

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**Introduction:** Delirium is a syndrome of different physical or pathophysiological etiologies characterized by a disturbance of consciousness with accompanying changes in cognition. One of these etiologies is a severe life-threatening thyrotoxicosis, which can progress to stupor, obtundation, and coma.

We present a case of a previously unknown hyperthyroid patient who underwent suspension laryngoscopy under general anesthesia (GA) and was admitted postoperatively to the intensive care unit (ICU) because of negative pressure pulmonary edema, and who then developed severe delirium caused by thyrotoxicosis during the ICU treatment.

**Case Report:** A 50-year-old male without any comorbidity underwent suspension laryngoscopy under GA because of a mass on the vocal cord. With the exception of tachycardia, all other preoperative routine monitorization parameters were normal. After premedication with midazolam, anesthesia was induced with propofol, fentanyl and rocuronium, and maintained 50/50% air/oxygen was maintained with 2% sevoflurane. Surgery was uneventful. Before the extubation, a sinus tachycardia, hypercarbia, acidosis and serohemorrhagic fluid through to the endotracheal tube were observed so he was transported to the ICU with a diagnosis of negative pressure pulmonary edema. The following day in ICU, he was unconscious with intermittent tachycardia and agitation. He was extubated at 7th days, but despite the use of sedative drugs, the delirium could not be controlled. The patient's relatives were questioned for detailed previous medical history and medical records. Very small thyroid nodules were detected in the thyroid gland on the neck CT but the nodules were not significant on examination. Thyroid function tests were performed immediately and the values were consistent with thyroid storm [free T4 > 6 ng/dL (normal range: 0.70-1.48), free T3 > 30 ng/mL (1.71-3.71), TSH:0.000 mIU/mL (0.35-4.94)]. Antithyroid therapy, propranolol and steroid treatment were started. On the 3rd day of treatment, the patient's agitation decreased and he was transferred to the clinic as cooperative and oriented.

**Discussion:** Many conditions can provoke thyrotoxicosis, such as acute infection, operations or post-traumatic stress. The presentation of thyroid storm includes fever, tachycardia, hypertension, anxiety, agitation, and delirium. It usually ends within 24-48 hours with the use of specific therapy.

In conclusion; thyroid function disorders are often nonspecific, but can also be seen such as thyroid storm. It can be diagnosed by a detailed examination of the patient's medical history. It should be kept in mind that undiagnosed hyperthyroid may be one of the underlying reasons for severe agitation and delirium in critical patients.

## P-153

**THE RETROSPECTIVE ANALYSIS OF CHRONIC OBSTRUCTIVE  
PULMONARY DISEASE**

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Chronic obstructive pulmonary disease (COPD) is a disorder that causes considerable morbidity and mortality. COPD exacerbations are associated with increased airway and systemic inflammation and physiological changes, especially the development of hyperinflation. They are triggered mainly by respiratory viruses and bacteria, which infect the lower airway and increase airway inflammation. Management of Mechanical ventilation strategies and intensive care treatment are extremely difficult for patients with COPD. Patients followed up under intensive care unit (ICU) between 2010- 2013 years were evaluated.

**Method and Material:**149 patients with COPD exacerbation treated and followed at ICU were evaluated retrospectively between October 2010-February 2013. Their Age, sex, days stayed at hospital, treatment and mortality values were taken from their files and utilized in the evaluation.

**Findings:** Average age of 149 patients was 71 (min 46 - max 96). Number of geriatric patients (> 65 years) was 70%. Of all the patients.101 patients (67.8%) were male and 48 patients (32.2%) were female. The mean duration of hospitalization in intensive care was 25 days. Invasive mechanical ventilation was applied to only fifty-seven (38.2%) patients as intubated the others were followed noninvasive mechanical ventilation. Percutaneous tracheostomy was applied to 21 patients (23.3%). Total mortality of Patients was found as 36.2%.

**Results:** Progressive airflow limitation and resultant hyperinflation-the respiratory hallmarks of this complex and often under-diagnosed disease-can be treated with pharmacotherapies and technological innovations with mechanical ventilation strategies. Despite of updated guidelines and a better understanding of this condition. Chronic obstructive pulmonary disease (COPD) continues to be associated with increased morbidity and mortality risk.



## P-154

### FIVE-YEAR NOSOCOMIAL INFECTION AGENTS IN OUR INTENSIVE CARE UNIT

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The aims of our study were to evaluate the nosocomial infections in patients who were followed a five-year period, and to identify the problematic areas in our intensive care unit.

**Method and Material:** Intensive care unit patients hospitalized for periods between January 2008 to December 2012 were evaluated. According to the criteria of Centers for Disease Control and Prevention (CDC), nosocomial infections were classified. Evaluations of nosocomial infection were done by considering density rates.

**Findings:** In five-year period, 1494 patients were followed up for 11 339 patient days. Two hundred and sixty-three (263) nosocomial infections were determined. Over a five-year term, the nosocomial infection density rates of general hospital intensive care unit were found to be decreased. While *Acinetobacter* species were the most frequently isolated pathogens (*Acinetobacter* spp) 31.34%, *Candida* and non-*Candida* yeast (*Candida* yeast species and noncandida) were 20.89%, *Staphylococcus* species (*Staphylococcus* spp) were 13.43%, *Escherichia coli* was 13.43%, *Pseudomonas* species (*Pseudomonas* spp) were 11:19%, respectively. Of all, *Acinetobacter baumannii* was the most common infection agent with 29.3%, while *Staphylococcus aureus* was the second (17.2%), and *Pseudomonas aeruginosa* was in the third place (13.8%). Ventilator Associated Pneumonia (VAP) infection factors that increased in recent years were analyzed, and gram negative bacteria were found to be 69%, while gram-positive bacteria were 19%, and *Candida* yeast species were 10.3%. The rate of non-isolated agent was 1.7%. The rate of MRSA in *S. aureus* was 60%, while ESBL rates in *E. coli* and *Klebsiella* species were found to be 92%.

**Results:** Because the majority of our patients were elderly persons hospitalized for a long time, multi-resistant Gram (-) bacteria and methicillin-resistant *Staphylococcus aureus* infection rates were found to be increased. Owing to the fact that taking effective infection control precautions and hand hygiene training activities, the incidence of the blood circulation and the urinary tract infection were significantly decreased. However, we couldn't reached the desired goal in the prevention of VAP infection. Additional precautions need to be taken in this regard.

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## P-155

### A CASE OF WILD HONEY INTOXICATION

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Wild honey intoxication (WHI) is a rare disease that results from consuming honey produced from leaves and flowers of plants from Ericaceae and Sapindaceae families by *Rhododendron* pollen fed bees. It is usually observed in Eastern Black Sea region of Turkey. In this report we aimed to present clinical presentation and treatment of a case of WHI. 21 years old male patient applied to emergency room with complaints of nausea, vomiting, cold sweating, and dizziness. He had history of eating 2 spoons of honey 1 hour ago which he bought from Zonguldak Ereğli, a village in Eastern Black Sea region. 1 mg atropine was delivered due to bradycardia (30/min) that was observed in emergency service. He was also hydrated by 0.9 NaCl and 5% dextrose after he has been accepted to intensive care unit (ICU). Lowest heart rate in ICU was 58 beat/minute for the following 36 hours. He did not need pacemaker and was discharged from ICU after 36 hours follow-up. WHI develops due to grayanotoxin (GT) that it contains. GT binds sodium channels on cellular membrane and increases sodium permeability in excitable membranes which causes extended cellular membrane depolarization and inhibits repolarization. This toxic effect results in sinoatrial node dysfunction and bradycardia which usually responds good to atropin treatment. However in some resistant cases administration of vasopressors or pacemaker might be needed. WHI usually has a benign clinic course however in some cases, especially in elder patients under antiemetic treatment, might have severe and mortal course. Toxic dose could be as low as 1 spoon of honey. As a conclusion WHI is a clinical syndrome that usually occurs in Eastern Black Sea region of our country and by reporting this case we hope to remind the clinicians to question patients for wild honey consumption who admitted emergency room by complaints like hypotension, bradycardia and dizziness.

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### PATIENT WITH BOTULISM POISONING WHOSE 24-WEEK PREGNANCY RESULTED IN ABORTUS: CASE REPORT

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**Background:** Botulism is a rare neuroparalytic disease caused by neurotoxin produced by anaerobic Clostridium botulinum bacteria, which are commonly found in nature. Botulism affects small muscles, such as the extraocular muscles, and can cause diplopia, nystagmus, bulbar and respiratory paralysis, cardiac arrest, and death. In addition to the administration of antitoxin, intensive care support with mechanical ventilation is required for treatment. Although the effects of botulism on other populations are well known, its effects on fetuses are still unclear. In the present report, the case of a 19-year-old patient diagnosed with botulism poisoning whose 24-week pregnancy resulted in abortus is presented.

**Case Report:** Twenty-four hours after consumption of canned food, a 19-year-old pregnant patient experienced weakness, stomach ache, nausea, and vomiting. Initial symptoms were followed by failure to thrive, diplopia, blurred vision, respiratory distress, mydriatic pupils, and nystagmus when looking to the right. The patient was taken to the intensive care unit. Endotracheal intubation was performed, and the patient was connected to a mechanical ventilator (SIMV, FiO<sub>2</sub>: 40%, PEEP: 5, ASB: 15 cmH<sub>2</sub>O). Muscle strength was 4-5/5 for each of the four extremities, deep tendon reflexes were hypoactive, and Babinski sign was negative. The patient's biochemical parameters were within normal limits. The patient's consumption of canned food (homemade canned portulaca) was included in the detailed anamnesis obtained from her family, thus 1000 ml botulism antitoxin in two equal dosages was administered to the patient by slow infusion (Behring Trivalan botulism 500 ml; A 750 IU, B 500 IU, E 50 IU). With her relatives' consent, the patient underwent tracheostomy. EMG was performed on the abductor digiti quinti (ADQ) muscle by stimulating the ulnar nerve. Speed of motor transmission was normal. BKAP amplitude was low. Increased BKAP amplitude was observed with repetitive nerve stimulation using the same stimulation intensity. The patient had a spontaneous abortion on the 16th day of her hospitalization. The mechanical ventilator was removed on the 21st day, and the patient was referred to the neurology clinical. The patient, whose tracheostomy was closed, was discharged from the hospital with full recovery.

**Conclusion:** Botulinum neurotoxin cannot pass through the placental barrier because it forms heavy and light polypeptides with 140-165 kDa molecular weights. Nevertheless, the toxin may affect the fetus in pregnant women at the neuromuscular junction or an active transport mechanism may exist. In a previous case report, two pregnant women with botulism poisoning in the 23rd and 24th weeks gave birth to healthy babies.

Botulism is a rare disease, although, in recent years, the incidence has increased. In both the obstetrics and non-obstetrics populations, cases with suspected botulism should be urgently treated with antitoxin. Furthermore, physicians should consider that respiratory muscles could become stiff, and intensive care support should not be delayed.

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### A (H1N1) INFLUENZA PNEUMONIA FOLLOWED BY ACUTE DISSEMINATED ENCEPHALOMYELITIS (ADEM): A CASE REPORT

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ADEM is a postinfectious or postvaccinial inflammatory disorder that is pathologically characterised by lymphocytic inflammation with confluent demyelination of the central nervous system. Here we present a case who developed ADEM triggered by H1N1 influenza infection, which may be caused by the immunosuppressive therapy applied during an attack of ulcerative colitis.

**Case:** 23 years old female who had been under the treatment for ulcerative colitis for three days (Immuran+prednol) admitted to ICU with fever, convulsions, drowsiness and shortness of breath. Bilateral diffuse infiltrates were seen on X-ray. In the following two days, her neurological situation was deteriorated, invasive mechanical ventilation was applied. Cranial MR findings were non-specific with the signs of bilateral multiple microembolic or demyelinating lesions on the white matter. LP findings were normal. Wide spectrum antibiotics were given. Her infectious findings were improved but her conscious was not clear during the attempts of weaning, so she kept on MV under sedation.

After a week, MRI was repeated. The widespread demyelinating lesions were seen on bilateral deep white matter (ADEM?). Pulse steroid therapy was began. H1N1 type influenza virus nucleic acid reported as positive. Bilateral diffuse infiltrative appearance was persisting on thoracic CT. On the third MRI, the lesions were slightly tapered which was expected in the prognosis of ADEM. The findings were negative on cerebrospinal fluid examined for oligoclonal band and cytology.

On the 25th day of her ICU stay, the lung images were normal. Although the MRI findings were resolved completely, her neurological condition was not significantly improved even after the IVIG therapy. She was not cooperated, following with her eyes, spontaneously breathing through tracheostomy tube when she discharged for the ward.

**Conclusions:** There are a few case reports of ADEM following H1N1 infections in the literature(1,2). As in our case, immunosuppressive therapy may cause H1N1 infection and then leading to such an unlucky course.

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### ACUTE DIABETES INSIPIDUS WITH PITUITARY GLAND INJURY DUE TO CLOSED HEAD INJURY

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**Objective:** Diabetes insipidus (DI) is a well-recognized a syndrome characterized by the excretion of abnormally large volumes of dilute urine and hypernatremia in patients with traumatic brain injury. It is reported that the frequency of early post-traumatic DI is 2.9-26%. In this case, we aimed to present a young male with severe acute hypernatremia (serum sodium level 180 mmol/L) due to closed head injury and his magnetic resonance imaging (MRI) of pituitary gland.

**Case:** 25-year-old male was admitted to the intensive care unit following a car accident resulting in head trauma. Glasgow Coma Score was 8/15 and patient was intubated. The presence of brain edema was determined on computerized tomography (CT) scan. Polyuria, and severe hypernatremia (180 mmol/L) were developed on the third day. It thought that acute posttraumatic DI in the patient and was managed with parenteral fluids and desmopressin acetate, leading to improved plasmatic sodium levels, urine output, and urinary specific gravity. After the status of the patient recovered; magnetic resonance imaging (MRI) demonstrated that increased the size of neurohypophysis and atypical localization.

**Conclusion:** Pituitary gland MRI can useful to rule out direct pituitary injury and early pharmacological treatment for patients with disturbances of plasma sodium concentration and acute posttraumatic DI due to closed head injury.

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### SEQUENTIAL COMPLICATIONS OF WARFARIN THERAPY: SPINAL EPIDURAL HEMATOMA, HEMOTHORAX AND INTRAALVEOLAR HEMORAGIA

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Bleeding is the most serious complication of oral anticoagulant treatment, spinal epidural hematoma, hemothorax and intraalveolar hemoragia are rare complications. In this case, we report rare sequential complications in a patient with a mechanical aortic valve taking warfarin.

**Case:** A 65 years old female who has been taking warfarin sodium 5 mgr orally on daily basis following an aortic valve replacement for three months developed a severe neck pain and paraplegia following numbness and weakness of the legs. MRI scan of the spine showed epidural hematoma at the T3-T7 level. The patient's INR was 24.9. Warfarin therapy was discontinued and 500 mgr prothrombin complex concentrate (Cofact-CLB) was administred intravenously. INR level decreased to 1.8 on the same day. The epidural hematoma was removed via laminectomy. After the operation, she was transfered to the ICU. On physical examination she was conscious and fully orientated. She remained paraplegic. She needed noninvasive mechanical ventilation (NIMV). INR were maintained between 2.5-4.5. Thoracal CT revealed left sided hemothorax on the 3rd day postoperatively. Approximately 1500 mL blood were drained from the thorax via the thorax drain. Respiratory failure developed, she was intubated and mechanically ventilated after the two days of the drainage. Thoracal CT revealed homogeneous infiltration on the right lung, some blood in the aspirated bronchial secretions were also notified (intraalveolar hemorragia?). After a week, infiltrations were resolved, INR was in the normal range, and the patient was extubated.

**Discussion:** Oral anticoagulant therapy has been associated with increased incidence of hemorrhagic complications, which may require surgical management. Although GIS hemorrhage has been reported up to 79.9 % following warfarin overdose(1) , intraspinal hematoma or hemothorax are rare complications in the literature(2,3) The patients receieving warfarin therapy should be monitorized for effective anticoagulation and adverse effects, if neurologic symptoms occurs, spinal epidural hemotoma should be kept in mind in the differential diagnosis.

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### THE ATYPICAL MENINGITIS PURSUED IN INTENSIVE CARE UNIT

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**Introduction:** The aim of the case report below is to introduce a female patient, whose complaint is evaluated as loss of consciousness and diagnosed as meningitis.

**Case Report:** In the physical examination of the 18 year old female patient, whose complaint was evaluated as blackout, it was indicated that her medical status was negative. She had blacked out and had opened her eyes only to the painful stimulus. She had also contractions, agitations, high fever and vomiting. The patient other vital symptoms were indicated as normal, she had been intubated and taken to the intensive care unit. Laboratory tests were as follows: WBC: 25.040 (103/mm<sup>3</sup>) CRP: 203 mg/Lt, K: 2.9 mmol/Lt, Urine PH: 8 Leucocyte in Urine: 10 ASO: 406 todd. Cranial computed tomography findings were normal and her other laboratory results were also obtained to be between normality gaps, as well as the results obtained from contrasted cranial computed tomography. Following treatment was planned for the patient: Seftriakson 2x2gr, Vankomisin 4X500gr, Asiklovir 3x500mg, Metilprednisolon 40mg/daily. No bacteria was isolated from cerebrospinal fluid and urine culture. In the blood culture taken from the patient it has been observed that gram positive coccus grew. Polimorf WBC count in the BOS was 2150 and total protein: 45.3. EEG was normal. On the second day the patient has been extubated and had been given 3Liters/min Oxygen with a face mask and kept under observation. In contrast to the first day in which patients fever had been observed to be 39°C in the other days of the intensive care unit process no high fever was observed. Moreover, on the third day, patients consciousness has opened. In the anamnesis taken, it was obtained that the patient had had several complaints such as high fever, tremor, strong headache, back pain and nausea. After keeping the patient under observation in intensive care unit for exactly 8 days, she was transferred to clinic

**Discussion:** Meningismus may emerge like an upper respiratory infection or a gastroenteritis. Symptoms such as high fever, strong headache, weakness, anorexia, neck stiffness, confusion, somnolence, vomiting may also be observed. All patients that are brought to emergency room with confusion must be approached with suspicion of meningitis. Early diagnosis and treatment may save lives. Therefore, the required clinical laboratories examinations must be carried out.

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### GAPO SYNDROME IN THE ICU

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The GAPO syndrome is a rare but distinct genetic disorder. GAPO is an acronym for the manifestation of growth retardation, alopecia, pseudoanodontia and optic atrophy. The syndrome was first reported in 1947; to date, 24 cases have been reported. We report a case who presented with acute respiratory failure.

**Case:** 37 years old male who was diagnosed GAPO syndrome. He was demonstrated all the typical features of the syndrome, having short stature, dysmorphic craniofacial features, total alopecia and pseudoanodontia. He was fully cooperated. He suffered from respiratory distress. He was intubated and mechanically ventilated. Chest radiography was showed pneumotic infiltration and antibiotherapy was started. After 5 days he was extubated. On the 10th day he was discharged.

GAPO syndrome is a very rare genetic disorder. Growth retardation with delayed bone age, alopecia (acquired after birth), pseudoanodontia (unerupted decidual and permanent teeth) and optic atrophy observed in this syndrome. Facial appearance of patients is strikingly similar and characteristic with high and bossing forehead, hypertelorism, puffy eyelids, midfacial hypoplasia, depressed nasal bridge, anteverted wide nostrils, micrognathia, thick everted lower lip, low-set ears. Other manifestations have often been reported such as, redundant hyperplastic skin conferring gerodermic facial appearance with unusual wrinkless, umbilical hernia, hyperextensible joints, cutaneous lesions, chonal atresia and deafness. No mental retardation has been observed. Patient's life expectancy seems to be reduced; among 5 adult patients, 3 died in their third or fourth decade of life. As these patients general condition is poor, they may confine to bed and may be prone to especially pulmonary infections, as is the case with our patient.

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## P-162

### NON-FATAL SINGLE DOSE INGESTION OF MEPHENOXALON IN A TODDLER

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Unintentional ingestions of many drugs or chemical substances by children under 6 years of age is a common phenomenon. These ingestions may cause serious illnesses or injuries especially in toddlers and even just a single dose of drugs or substances may be fatal in this pediatric population. We present a case of unintentional ingestion of a myorelaxant tablet which contains mephenoxalon and acetaminophen as ingredient. Though a wide variety of clinical knowledge has been known by the clinicians about acetaminophen intoxication we have found only incidental information about the intoxication of mephenoxalon which has centrally active myorelaxant properties. **CASE REPORT:** A 14 month-old, 12 kg female toddler brought to our emergency department by his parents. She had ingested a myorelaxant tablet which had been prescribed for her grandmother about an hour ago. The family had witnessed the ingestion but could not be able to prevent it. The myorelaxant tablet contains 450 mg of acetaminophen and 200 mg of mephenoxalon. The patient was anxious otherwise stable. Her heart rate was 120/bpm, her blood pressure was 75/40 mmHg. We first contacted with Poison Consultation Line which suggests us routine precautions including nasogastric insertion, gastric lavage and charcoal use. Due to lack of knowledge about the effect of centrally acting myorelaxant and mild anxiolytic-sedative effects of mephenoxalon, monitored care in the intensive care unit was advised. After completing these procedures we admit the toddler in our intensive care. After a night long follow up except a mild drowsiness no clinical or laboratory change has been observed. The toddler was discharged next day completely normal condition. The literature contains incidental knowledge about the use of mephenoxalon. In a study, in which newborn rats was used. There was no evidence of toxicity in newborn dogs treated with daily oral doses of mephenoxalone, 200 or 100 mg/kg, for 30-34 days. In our case the total amount of mephenoxalon was 200 mg. Though our case was a well prognosed one, one tablet ingestions of drugs in pediatric population especially in toddlers should not be overlooked and routine precautions should be taken including monitored care in an intensive care unit.

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### AIRWAY PRESSURE RELEASE VENTILATION (APRV) APPLICATION IN PATIENTS WITH ACUTE RESPIRATORY DISTRESS SYNDROME

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**Objectives of Study:** In cases with ARDS, due to heterogenous pathologic changes in lungs, clinicians face up with a challenging state of hypoxemia. It is known that "Airway Pressure Release Ventilation" is one of the ventilation modes used to overcome this problem. APRV prevents collapse of the lungs and improves oxygenation. In the present report 3 cases in which APRV was applied with diagnosis of ARDS are presented.

**Cases:** Three cases at ages of 46, 50 and 70 were admitted to our ICU with diagnosis of ARDS. All 3 patients had severe hypoxemia, metabolic acidosis, tachypnea and were intubated at admission. Lung injury scores of the patients were  $4.5 \pm 2.4$ . PIP were 36-38 cm H<sub>2</sub>O with PEEP of 10-12 cm H<sub>2</sub>O. After deterioration of blood gases with P-SIMV mode, ventilators were switched to APRV mode with P<sub>max</sub>=24-28 cmH<sub>2</sub>O, P<sub>min</sub>= 4-9 cmH<sub>2</sub>O, T<sub>max</sub>= 3,5-5 sec's, T<sub>min</sub>= 1-2 sec's and patients received deep sedation. Blood gases improved in about an hour in all three patients. Patients were followed with APRV mode for, 7, 12, 8 days, respectively. Percutaneous tracheostomy was applied in 2 patients. 2 patients were followed for 45 days and discharged, the other patient had died in the 15th day of follow up.

**Conclusions:** APRV application has two determinants as "high airway pressures and preservation of spontaneous ventilation." In most of the studies, it is reported that with the APRV mode peak airway pressures are decreased, ventilation is increased in dependent areas of the lungs, and oxygenation is improved. As a conclusion APRV mode is safe and improves blood gases and ventilation mechanics in cases with ARDS.



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## ARTERIAL CANNULATION RELATED MASSIVE HEMORRHAGE AND NECROSIS

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**Aim:** Arterial cannulation is frequently performed in the intensive care units for invasive blood pressure monitorization. Long term arterial cannulation may be necessary in some cases due to prolonged invasive blood pressure monitoring. Proper follow-up could not always prevent the occurrence of the catheter related complications. We report a case of massive hemorrhage and necrosis due to prolonged radial artery cannulation in a patient with traumatic head injury.

**Case Report:** Forty five years old male with traumatic head injury was admitted to intensive care unit. He was intubated and mechanical ventilation was initiated. Arterial cannulation was performed for invasive blood pressure monitorization. He was fully monitorized with invasive techniques including radial artery cannulation during the intensive care course. On the 50th day, cyanosis was observed in the patient's index finger of the right hand. Both ulnar and radial artery pulses were palpable and Doppler findings were also normal. The patient was consulted with the vascular surgeon and the treatment was planned as removal of the arterial cannula, pentoxifylline, enoxaparin and dextran 40. Massive bleeding was observed from the equimotic region around the surrounding tissue of the cannula entry side at the 3rd day of the treatment. Exploration of the radial artery revealed a 4-5 cm of injured region of radial artery with no blood flow around the cannula entry point. Doppler examination of the radial artery, distal to the injured region was normal which revealed an intact ulnar artery and palmar arcus blood flow. The distal and proximal blood flow of the radial artery was normal. Therefore, only bleeding was controlled with the suturing the both ends of the artery as a treatment. Also, debridement of the subcutaneous necrotic tissue was performed. The further treatment of the wound was done with daily dressings. At 3th month of the treatment the primer closure of the wound was achieved without further surgical intervention. Also the cyanotic lesion of the index finger improved dramatically.

**Discussion:** Tissue necrosis or even amputation of the fingers is possible complications of radial artery cannulation. Basic principles such as Allen test should always be performed before the procedure. Besides, routine and close examination of the cannulated region should always be performed. Thus, early diagnosis and treatment of complications are possible.

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## METHEMOGLOBINEMIA PRESENTING AFTER MEDIAN NERVE BLOCKADE WITH PRILOCAINE: A CASE REPORT

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**Introduction:** Regional anesthesia is often used for the orthopedic limb surgeries because of short hospital stay and low cost. For this purpose local anesthetics as marcaine and prilocaine are commonly chosen. Prilocaine is a medium-long acting local anesthetic, which is widely preferred because of its low systemic toxicity. However, prilocaine may lead to development of methemoglobinemia due to its o-toluidine metabolite. In our case it was aimed to investigate methemoglobinemia induced by median nerve blockade with prilocaine.

**Case:** Operation was planned for 34 years old, 56 kg, female patient with a mass on the left hand at the middle phalanx of the third finger. The patient was unremarkable in the preoperative examination except having hyperthyroidism, penicillin allergy and myxomatous mitral valve. Approval was obtained from the patient for the application of axillary nerve blockade. After monitorisation and sedation, the median nerve was localized with the help of neurostimulator and 400 mg of 2% prilocaine HCl was given as a 30 ml solution. Determining sensory blockade occurred after 30 minutes, operation was let to start. During the operation, which lasted about 35 minutes, the patient's SpO2 values remained between 94-96%. Other vital parameters were unremarkable. In the postoperative recovery room, the patient's SpO2 values decreased to 80-82%. 100% oxygen support with mask was started. After arterial blood gas analysis revealed a 15.4% of MetHb, the patient was admitted to the ICU. Lipid emulsion 20% 100 ml and after a while 30 minutes infusion of 50 mg 1% methylene blue were given. An increase of SpO2 values to 94% after infusion of lipid emulsion was observed. Repeated arterial blood gas samples revealed that MetHb level was decreased gradually to 1%. The patient was discharged to the ortopedic ward after general condition and vital signs were stable in the ICU follow-up.

**Conclusion:** While local anesthetics are used for regional blockade, especially in patients with low body weight, continuous assessment of peripheral oxygen saturation and care should be taken in terms of methemoglobinemia.

## P-166

**THE TOXICITY OF TURBENTINE OIL IN A 5 YEAR OLD BOY**

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Turbentine oil used chiefly as a solvent, paint thinner and antiseptics. Although its usage is very common and can be found in houses within the reach of children it may cause serious toxicity whether with ingestion or inhalation. In this case report we present a 5 year old children who drank his grandfathers "pain killer liquid" which has turbentine as active ingredient and was prepared for him by a local healer .

**Case Report:** A 5 year-old boy was brought to our emergency department by his grandfather for unintentional drinking of pain killer liquid. In the history taken from his grandfather it is learned that the liquid was prepared by a local healer for his unremitting back pain. This local healer was contacted by phone and it is learned that it contains turbentine a petrochemical product. The boy had drunk the liquid which he thought it was water. After drinking a glass -approximately 60 ml- he had felt a bizarre taste in his mouth and informed his grandfather about that. After realizing that the drink was the drug the boy was urged for vomiting by family members and some part of the substance was outed by vomiting effort. In the examination the boys heart rate was 125 bpm, his blood pressure was 100/50 mmHg. Blood was taken for laboratory analyses and lung graphy was obtained. In the auscultation the boy had wheeze lung sounds. Saturation was 95 % . The boy was given oxygen 3 lt/ min and after peditary consultation was taken to intensive care unit for close monitored care and follow up. The lung graphics revealed infiltration areas in the lung bases and antibiotherapy was initiated. In the 2 days follow up the child made a good progress and only mild elevations in liver function tests were observed. The boy was discharged 48 hours after intensive care follow up without any sequeale. Turbentine ingestions even inhalations may lead to catastrophic results including extensive lung parenchymal damage, formation of multiple abscess cavities, and necrosis treated which requires treating with surgical decortication and segmental resection and in some cases even death. Care must be taken for the patients who ingest these kind of chemical substances and monitored care should be instituted for preventing catastrophic consequences.

## P-167

**OUR CADAVERIC DONOR POOL**

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Our hospital is one of the most frequently brain death detected centers in Istanbul. But still we have not achieved the optimal number of donors compared to our brain death declarations. In this study, we investigated the determining factors in our cadaveric donor pool.

**Method and Material:** All brain death declared patients in our institution between January 2007- January 2013 were included in this retrospective study. Age, gender, cause of death, hospitalization time (in ICU), permission for donation time and serology were recorded.

**Findings:** 107 brain death and 38 (35.51%) multi-organ donor were detected. Age ranged between 2-83 (median 58) years, 59 (55.1%) were male and 48 (44.9%) were female. The leading reason for brain death was intra-cerebral hemorrhage (78.12%), either caused by trauma (42.9%) or aneurysm (33.3%). Distribution of brain death and donor (B/D) frequency in the intensive care units (ICU) was as follows: 35.8/31.4% in the brain surgery ICU, 34.9/37.2% in the general adult ICU, 20.8/25.7% in the postoperative ICU and 8.55/5.7% in the pediatric ICU. Hospitalization time of the donors was Mean±SD 6.92±1.41 days. Brain death was detected only by apnea test in 48 patients, in 5 patients apnea test was unable to do and brain death was detected by transcranial Doppler; in one patient angiography, in 54 patients apnea and transcranial Doppler were used for detection. After suspicion of brain death all tests were performed in Mean±SD 5.86±4.27 h. Permission for donation time varied between 2-30 (5.11±6.87) hours. One patient was anti HCV (+), control was negative.

**Results:** Brain death detection is the responsibility of the health care team and their approach is the most important determining factor for donation. Especially in head injury patients, and also in pediatric patients brain death should be kept in mind. The medical team should act professionally and strive to increase the number of organ donations.

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**ACUTE ABDOMEN- NECROTIZAN FASIITIS AND ANAESTHESIA****GULEC H, KEPEK A, YASAR H, TUTAL Z, BABAYIGIT M, HORASANLI E***Kecioren Training Hospital, Ankara, Turkey*

**Background:** Necrotizan soft tissue infection(NSTI) is occured in cutaneous and subcutaneous area. Clinical feature of NSTI is ranged between superficial erizipel to death.

**Case:** Sixty three years old man who had abdominal pain came to emergency service. Abdominal distension and about 3x5 cm skin ecimosis in upper left knee area are found in examination. In his medical history, he took a blunt trauma to knee area yesterday. Laboratory results are found as WBC: 81200, Hgb:11.6 g/dl, platelet: 81000. Intraabdominal free fluid is determined near the caecum in abdominal CT. An internist who had examined the patient said that this laboratory findings seem leukemia. However, The Surgeon decided to an emergency operation due to intestinal perforation possibility. Unfortunately his general performance was ASA 4. In operation room, orthopedic consultation was taken because of his extended skin ecimosis to along the femur. There is no pathologic fracture of bones on lower extremity. After about 20 cm part of necrotic intestine was resected. Vital sings got worse intraoperative period and some drugs and fluids were given for stabilization. In intensive care unit, crepitation was determined with palpation in ecimotic area. Free air was seen in subcutaneous tissue and muscles on Doppler US. Fasciotomy was performed to left leg by orthopaedist diagnosis of compartment syndrome.

But, his worsened vital sings were not stabilized and he died five hours after operation in intensive care unit.

**Conclusion:** NSTI was occured not only some predisposition factors such as trauma, surgical procedures, systemic diseases, chickenpox, insect bite, immune deficiency conductions, drug abuse but also healthy person.

In this case report, the patient have no previous known disease. However, the internist said that it maybe leukemia. As our knowldge, pinching the leg skin as a joke was reported that is NSTI trigger for the first time. Probably, surgical procedure and possible leukemia were facilitiated NSTI in this patient.

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**EARLY COMPLICATIONS OF PERCUTANEOUS TRACHEOSTOMY USING THE GRIGGS METHOD****ŞAHİN Z, KATIRCIOĞLU K, ÖZKALKANLI MY, SAVACI S***Izmir Katip Çelebi University Atatürk Training And Research Hospital Anesthesiology And Reanimation Departement, Izmir, Turkey**Izmir Training And Research Hospital Anesthesiology And Reanimation Departement, Izmir, Turkey*

Tracheostomy is indicated when airway protection, airway access or mechanical ventilation are required for prolonged periods and in many critical care units the percutaneous tracheostomy has become the technique of choice. This study was decided to determine the incidence of early complications of percutaneous tracheostomy using the Griggs method and to investigate the effect of cricosternal distance and experience on complication ratio in a new ICU.

**Method and Material:**Fifty five patients were prospectively selected for percutaneous tracheostomy (PCT) in a new 15 bed combined medical-surgical intensive care unit. PCT was performed at bedside with the Portex Percutaneous Tracheostomy Kit that uses the Griggs technique. All procedures were performed electively by intensive care unit staff or by residents supervised by the intensive care unit staff. Before the procedure cricosternal distance is measured (< 3 cm or >3 cm). The early complications were recorded.

**Findings:**There were 55 percutaneous dilational tracheostomies performed during the study period. No complications were observed in 45 patients (% 81.8) during the first 24 hours. Complications occurred in 10 patients ( 5 minor bleeding (%8.1), 3 major bleeding (%5.5), 1 thyroid damage (1.8), 1 airway losses (%1.8)). Complication ratio was not related with cricosternal distance or with performer's experience.

**Results:**Our complication ratio was greater than the literature findings. The reason of high complication ratio was lack of experience ( first attemps for PCT) and minority of the case number. But bedside percutaneous tracheostomy can be performed safely as a routine procedure in daily care of intensive care unit patients.

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### THE EVALUATION OF SCORING SYSTEMS, CENTRAL VENOUS AND ARTERIAL BLOOD GAS ANALYSIS AND SERUM PROCALCITONIN LEVELS IN SEPTIC AND NON-SEPTIC PATIENTS

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Sepsis, the result of systemic inflammatory response to infection, still remains among the leading causes of deaths in adult intensive care units. Hence early diagnosis, treatment and follow-up of patients in septic state are important. It is known that infection is not determined always in septic state and clinical symptoms and conventional laboratory parameters are inadequate for diagnosis and follow-up. Today, for the prediction of organ dysfunction and mortality, scoring systems like APACHE (Acute Physiological and Chronic Health Evaluation) and SOFA (Sequential Organ Failure Assessment Score) are used. In our study, prognosis determining scores used follow-up of the septic and non-septic patients like APACHE II and SOFA, blood gas parameters for the follow-up of metabolic and respiratory parameters, and procalcitonin used as infection determinant are aimed to compare.

**Method and Material:** Fifty patients assumed to stay more 24 hours in ICU enrolled to septic and nonseptic study groups. All patients enrolled are evaluated with APACHE II and organ dysfunction evaluating score SOFA at the beginning and 24th, 48th, 72nd and 120th hours. In addition, SO<sub>2</sub>, PO<sub>2</sub>, PCO<sub>2</sub>, PaO<sub>2</sub>/FiO<sub>2</sub> ratio are analyzed in arterial and central venous blood gas samples, and plasma procalcitonin levels are measured. In group and between group changes and correlations are evaluated.

**Findings:** In between group evaluation, APACHE II and SOFA scores were significantly higher in septic group in all evaluation times. There were no significant difference between the PO<sub>2</sub>, PCO<sub>2</sub>, SO<sub>2</sub> values and PaO<sub>2</sub>/FiO<sub>2</sub> ratios of the septic and nonseptic group. Serum procalcitonin levels were also significantly higher in septic group when compared to nonseptic group in all times.

**Results:** Procalcitonin levels are important for diagnosis of sepsis and correlation between scoring systems used for evaluation of septic and nonseptic patients and serum procalcitonin levels. In addition central venous blood gas analysis can be used as an alternative for arterial blood gas analysis.

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### THERAPEUTIC HYPOTHERMIA TO THE BOY PATIENT COMING WITH CARDIAC ARREST AFTER DROWNING

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**Aim:** Drowning in the water is one of the most common causes of accidental deaths in the world. Drowning in the water is common especially in children. The most important problem in the cardiopulmonary resuscitated (CPR) patient is poor neurological outcome.

**Case:** To the cardiopulmonary resuscitated patients, therapeutic hypothermia (TH) is applied to ensure the recovery of neurological state, to improve life expectancy and to improve the quality of life. 2 year old TH applied case was discussed. The 2 year old patient coming with the diagnosis of cardiac arrest after drowning in the fresh water was accepted to our intensive care unit after 2,5 hours performing 20 minute cardiopulmonary resuscitation. Glasgow coma scale was 4, light reflex was -/- and there was widespread rales bilaterally in the lungs. Vital findings were like that pulse rate 200/minute, BP:110/60 mm Hg, SPO<sub>2</sub>:84, body temperature:35 oC. In the arterial blood gas analysis: pH: 7,09, pCO<sub>2</sub>: 64, pO<sub>2</sub>: 36, BE: -14,6, HCO<sub>3</sub>: 11. In CT investigation; in the right lower lobe and in the left lung diffuse parenchymal consolidation and diffuse cerebral edema was seen. The patient was connected to the mechanical ventilation in PCV mode. Dopamine 5 mcg/kg/min, sodium thiopental 5 mg/kg/h and dexamethasone 0,6 mg/kg/d was applied. Therapeutic hypothermia was performed 24 hours at the 28-30 oC. The patient was extubated at the end of the 6 th day, the patient was moving 4 extremities with painful stimuli and was crying.

**Conclusion:** We think that TH can be effective in the cardiopulmonary resuscitated patients by preventing the some chemical reactions mediated with ischemia/reperfusion injury and suppressing the cerebral metabolic activity.

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### PERCUTANEOUS TRACHEOSTOMY: A RETROSPECTIVE ANALYSIS OF 62 PATIENTS

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In the ICU, the most common indication for tracheostomy is a need for prolonged mechanical ventilation. This need may arise from pneumonia refractory to treatment, severe chronic obstructive pulmonary disease, acute respiratory distress syndrome, severe brain injury, or multiple organ system dysfunctions.

Since Ciaglia et al introduced the percutaneous dilatational tracheotomy (PDT) in 1985, percutaneous tracheotomy (PCT) has become increasingly popular and has gained widespread acceptance in many ICU.

In 1990, Griggs and colleagues reported the guide-wire dilating forceps (GWDF) method. below we present our two years experiences in tracheostomy with GWDF in our intensive care unit.

**Method and Material:** In our experience 62 patients who were underwent percutaneous tracheostomy by Griggs method in the intensive care unit between April 2011 - February 2013, were analyzed retrospectively. Demographic data and diagnoses of patients, and percutaneous tracheostomy complications were evaluated.

**Findings:** The average age of 62 patients was 58.3 (Min 16 - Max 86) .41 patients (66.1%) were male, 21 patients (33.9%) were female. Patient's diagnosis was 25 COPD, 6 trauma, 10 ARDS, 11 hypoxic encephalopathy and 10 due to other diseases. During the percutaneous tracheostomy on 19 (30.8%) patients minimal bleeding was occurred with not requiring intervention, wound haemorrhage was occurred in 3 (4.8%) patients and pneumothorax was developed in two patients (3.2%). They were treated by A tube inserted into the pleural space. No mortality complication was developed.

**Results:** Percutaneous tracheostomy has already replaced the surgical route in several intensive care units and it is indeed the procedure of choice in the majority of cases.

We believe that percutaneous tracheostomy with guide wire dilating forceps (GWDF) method, in experienced hands, it is safe, easy and quick, and there is no need to move the patient to the operating room.

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### SYRIAN REFUGEES FOLLOWED UP IN INTENSIVE CARE UNITS' OF SANLIURFA

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The Prime Ministry's Disaster and Emergency Management Directorate (AFAD) has announced that the Turkey is currently hosting 183,540 Syrian refugees who have fled almost two years of conflict in war-torn Syria. Total number of refugee camps in Turkey is 14 and four were in Sanliurfa. In this study we aimed to evaluate the demographic data of the patients from Syria who were followed up in intensive care units of Sanliurfa, Turkey in last 10 months.

**Method and Material:**Demographic data of Syrian refugees were analyzed retrospectively. The number of admission, number of transferred patients and number of patients followed in intensive care units were analyzed. Morbidity and mortality rate were obtained.

**Findings:**There were 83283 Syrian refugees in Sanliurfa in last 10 month of 2012. There were 186.728 polyclinic admission and 34.813 of these transferred to hospitals in Sanliurfa. 711 patients of these followed in hospitals and 362 of them followed up in intensive care units. Mean age of patients in ICU was 32±13 years. 102 patients were injured with firearm and 105 patients were died.

**Results:**As the crisis in Syria continues to intensify, the humanitarian needs both in Syria and in surrounding countries are increasing significantly. Although Turkish authorities are still seemed to cover all the medical necessities of the Syrian refugees the problem is growing especially in intensive care units faster and dramatically than expected.



## P-174

### PHRENIC NERVE PALSY AFTER SURGERY FOR CONGENITAL HEART DISEASES: CASE REPORT

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**Objective:** Paralysis of diaphragm on one or, exceptionally, both sides is a common cause of delayed recovery and excessive morbidity following pediatric cardiac surgery. Early diaphragm plication vs. conservative therapy has been a debatable issue. Here, we have reported a case of left phrenic nerve paralysis occurred after the surgery for congenital heart disease.

**Case report:** A five months aged female patient was admitted to our hospital for the operation of congenital heart disease, VSD. After the successful operation, she was admitted to our intensive care unit (ICU) for postoperative management. After the second day of ICU staying she was extubated when her spontaneous breathing was adequate. At the end of fifth day of ICU staying because of paradoxical abdominal movement with respiration, tachypnea, dyspnea and respiratory acidosis she was reintubated. After detecting left diaphragm paralysis on the chest X-ray, echocardiography, and on fluoroscopy, diaphragmatic plication was planned to perform to decrease lung compression, stabilize the thoracic cage and mediastinum, and strengthen the respiratory action of intercostal and abdominal muscles. The patient was extubated when his spontaneous breathing was adequate 48 hours later after the second operation. She was discharged from hospital at the end of the follow-up period, day 12.

**Discussion:** Paralysis of diaphragm on one or, exceptionally, both sides is a common cause of delayed recovery and excessive morbidity following pediatric cardiac surgery. Paralysis of the diaphragm may produce severe respiratory difficulties due to the paradoxical motion of the affected diaphragm and a similar shift of the mobile mediastinum. Tachypnoea, atelectasis, pneumonia, and continued respiratory distress and CO<sub>2</sub> retention may develop after extubation. Diaphragmatic dysfunction can result in inability of the patient to be weaned from mechanical ventilation after surgery.

**Results:** Diaphragmatic plication offers a significant benefit to children with diaphragmatic paralysis and should be performed early to facilitate weaning from mechanical ventilation.

## P-175

### REFRACTORY STATUS EPILEPTICUS IN THE INTENSIVE CARE UNIT: A CASE OF LAFORA'S DISEASE

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**Introduction:** Lafora disease; constitutes approximately 10% of patients with progressive myoclonic epilepsy, is oftenly occurred between the ages of 10-18, and inherited as an autosomal recessive disease that affects both sexes equally(1). The disease is resistant to antiepileptic therapy, and has poor prognosis. Generalized status epilepticus in Lafora disease may not be controlled with antiepileptic drugs (AEDs), in these situations general anesthesia is preferred as a last step in the treatment(2).

**Case:** A 17-years-old male patient was diagnosed as "Lafora Disease" before 9 months ago, came to emergency department with complaint of generalized tonic-clonic convulsion continuous for 2 hours. Although diazepam infusion was given to the patient, his seizures continued then levetiracetam was applied intravenously. Because the patient did not respond to treatment, he was admitted in the intensive care unit (ICU) with the diagnosis of "Status Epilepticus"(SE). In intensive care unit he was intubated under anesthesia of Thiopental sodium and he was undertaken on the control of mechanical ventilation as Synchronized Intermittent Mandatory Ventilation mode. Thiopental Sodium infusion was given 4 mg/kg/h and epileptic activity was terminated. Triple therapy with intravenous levetiracetam, oral valproic acid and clonazepam was applied. Initial Cranial Computer Tomography (CT) scan was normal. Thiopental sodium dose was reduced progressively at third day of hospitalization. However, convulsive activity was noticed again under observation "lamotrigine" as fourth AEDs was added to the treatment. Second Cranial CT was reported as "peripheral area of cerebrospinal fluid width increased and sulcus of cortex get deeper" and mannitol treatment was started. Because the dosage of sodium thiopental could not be decreased, the patient had to be followed under mechanical ventilation so tracheostomy was needed for airway rehabilitation of the patient. "ventilator associated pneumonia" developed which finally resulted in septic shock. Followed by 67 days in the ICU, cardiopulmonary arrest developed and the patient was accepted died.

**Discussion:** A case with refractory SE disease which do not respond to antiepileptic treatment must be followed in the ICU to have GA. Thiopental sodium provides highly effective reduction of cerebral blood flow, slowing down the electrical activity of EEG so it causes electrical silence and terminating convulsion, because of all these purposes, it is a preferred agent in the case of SE (2). In our case, due to the continuation of refractory SE, infusion dose of thiopental sodium could not be reduced. Although multiple antiepileptic drugs with effective dosage and even GA was administered to the patient, seizure could not be controlled. We think that, the failure of controlling the epileptic activity is due to a progressive character of Lafora disease. As a result, cases such as Lafora's disease is characterized by refractory SE should be followed-up with neurologists and control of epileptic activity in the ICU should be taken with GA.

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**OCHROBACTRUM ANTHROPI: A SEPTISEMIA CASE****MUTLU NM, AKÇAY M, MTİTİZ AP, ZENGİN M, AKINCI E, DİKMEN B***Department of Anaesthesiology and Reanimation, Ankara Numune Research And Education Hospital, Ankara, Turkey**Department of Infectious Diseases and Clinical Microbiology, Ankara Numune Research and Education Hospital, Ankara, Turkey**Department Of Neurology, Ankara Numune Research and Education Hospital, Istanbul, Turkey*

**Objective:** Ochrobactrum anthropi is an emerging opportunist pathogen in immunocompromised patients<sup>1</sup>. We report a case of septicemia due to O. anthropi in an elderly female patient in Intensive Care Unit (ICU).

**Case** A 83 years old woman, a known case of hypertension, diabetes, asthma, atrial fibrillation, coronary artery disease was in an other hospital for two weeks because of nausea and vomiting. During the examinations she had gastrointestinal bleeding following the right MCA infarctus. After that she was admitted in our ICU. The patient was unconscious at the time of admission and physical examination findings were as following; blood pressure (BP);134/75mmHg, respiratory rate (RR):18/min, heart rate (HR):78/min. On admission laboratory findings were ürea: 107mg/dl, creatinin:1.46mg/dl, GFR:36mL/dk/1.73, Hb:11.2gr/dl, WBC:15600µl, PLT:114000µl, INR:0.89, blood gas values; pH:7.37, pO<sub>2</sub>:76.5mmHg, pCO<sub>2</sub>:36.1, HCO<sub>3</sub>:22.1, BE:-2.2, SO<sub>2</sub>:95.7%. On admission piperasilin-tazobaktam (Tazocin) 4x2.25mg administering was approved by the Infection Diseases Control Group. On the 7th day of admission still WBC: 15300µl and physical signs were worse (BP:90/50mmHg, RR:24/min, HR:108/min). She was entubated and followed with mechanical ventilator. On the 8th day of admission meronem sensitive Ochrobactrum anthropi from blood culture that was sampled at admission were identified. Meronem 2x1gr were added. On the 11th day of admission laboratory findings were those; ürea: 139mg/dl, creatinin:2.74mg/dl, GFR:17mL/dk/1.73, Hb:8.4gr/dl, WBC:25380µl, PLT:192000µl, INR:6.23. In spite of intensive treatment, the condition of patient continued to deteriorate and he died with sepsis signs on the 11th day.

**Discussion:** O. anthropi appears to be an emerging opportunistic pathogen associated with the implantation of intravenous catheters or other foreign bodies in patients of debilitating illness. Although the organism seems to be of relatively low virulence, it can produce clinically significant, fatal infections in immunocompromised patients.

**Conclusion:** It is very important to implement effective methods of sterilization and infection control guidelines to prevent infection.

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**MUSHROOM POISONING AND HEMOPERFUSION TREATMENT IN ICU****SEVDI MS, ERKALP K, TEMEL ME, ALAGÖL A***Istanbul Bagcilar Educational and Training Hospital, Department of Anesthesia and Reanimation, Istanbul, Turkey*

**Introduction:** This article reports a case developing liver injury after eating wild mushrooms and aims to emphasize the importance of extracorporeal hemoperfusion included into the treatment in an early stage.

**Case report:** After eating mushrooms, a 33-year old male patient was brought to the emergency service of our hospital with complaints of nausea and vomiting. In the examination, he was conscious and the findings of physical examination were normal. The result of the laboratory investigation of blood is urea: 70.6 mg/dl, creatinine: 2.36 mg/dl, AST: 59 U/L and ALT: 60 U/L. The patient with stable hemodynamic status and vital findings was admitted to the internal medicine service of the hospital for follow-up purposes. During the follow-up in the hospital, it was observed that liver transaminases rapidly increased in blood biochemistry control (AST:1137 U/L-2039 U/L, ALT:1405 U/L-2341 U/L). While INR was 4.46 and platelet count was 24.000/103mm<sup>3</sup>, other laboratory findings of the patient were detected as normal. With these findings, the patient was sent from the internal medicine service of our hospital to an external facility for charcoal hemoperfusion treatment.

Since the encephalopathy, high level of liver transaminases and thrombocytopenia continued, the patient was admitted to our intensive care unit on the second day of the treatment in the internal medicine service. 2-3 hours of daily hemoperfusion treatment was added to the conventional treatment comprising a high dose of penicillin-G, N-acetylcysteine, cimetidine, vitamin K and ascorbic acid. During the ICU treatment, the patient received charcoal hemoperfusion for 6 times in total; and the liver function tests demonstrated a recovery (AST:79 U/L, ALT:596 U/L, INR:1.4, platelet count:109.000/103mm<sup>3</sup>). During the 7 days of treatment in the ICU, 8 units of fresh frozen plasma (FFP) and 16 units of random donor platelet were given to the patient. On the 7th day of his admission to the ICU, the patient's physical examination was normal and vital findings were stable; therefore the patient was transferred to the internal medicine service. On the 11th day of his admission to the hospital, he was discharged with values as AST: 43 U/L, ALT: 233 U/L, INR:1.2, platelet count: 152000/103mm<sup>3</sup>.

**Discussion:** There is no standard treatment strategy or antidote suggestion for cases diagnosed with mushroom poisoning. In conventional treatment, together with fluid electrolyte support, gastric lavage is applied and activated charcoal is given in order to prevent absorption of toxic substances on gastrointestinal system in an early stage. Since the amotoxins in the plasma are discharged by kidneys, urine flow must be increased. Other treatment agents are silibinin, penicillin-G, Vitamin C, corticosteroids, thioctic acid and N-acetylcysteine. Besides, plasmapheresis, hemoperfusion and hemodialysis are other invasive treatment options. In case of a severe liver insufficiency, the only treatment method is liver transplantation.

Hemoperfusion is a process where blood is passed through a filter containing carbon or active charcoal. Through hemoperfusion, agents substantially binding to protein and soluble in fat can more easily be removed from the circulation. The beneficial effect of hemoperfusion is not only removing alpha-amanitin from plasma but also removing neurotoxic agents such as methionine, tryptophan, and phenylalanine. Through hemoperfusion, hepatic encephalopathy in 75% of the patients also heals. It is emphasized in the literature that early hemoperfusion plays an essential role in A. Phalloides poisoning.

Mushroom poisoning constitutes a typical public health problem in low-income societies. Therefore, early application of extracorporeal methods apart from symptomatic support treatment in mushroom poisoning will increase the effectiveness of treatment and decrease organ insufficiency and mortality risks.

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### ACUTE RENAL FAILURE DUE TO ETHYLEN GLYCOL INTOXICATION

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**Objective:** Ethylene Glycol (EG-antifreeze) is an odorless, colorless, sweet-tasting substance. Minimal lethal dose of EG for an adult is 1.0 to 1.5 mL/kg or 100 ml. After 24- 36 h post ingestion, renal failure may develop due to combination of oxalate crystal deposition and cardiovascular instability. We herein report the treatment of a patient with fomepizole and hemodialysis who had an increased serum osmolal gap-metabolic acidosis and acute renal failure after antifreeze ingestion.

**Case report:** A 79-yr-old female was admitted to emergency service with continuous vomiting started 30 minutes after ingestion of 300 ml of antifreeze. In emergency service, her general condition was good and she had a heart rate of 88 beats/min, a blood pressure of 140/90 mmHg, a respiratory rate of 20/min, a Glasgow Coma Scale score of 15, isochoric pupils, bilateral positive light reflexes and normal fundus examination. Arterial blood gas values drawn on room air were: pH: 7.39, HCO<sub>3</sub>: 16.4 mmol/L, BE: -8.5 mmol/L, lactate: 0,28 mmol/L, BUN: 15 mg/dL, Cr: 0.6 mg/dL, Ca: 8.7 mg/dL, Na: 140 mmol/L, K: 3.8 mmol/L, Cl: 106 mmol/L, Anion Gap: 21.4 mEq/L. It is reported that the oxalate crystals in the urine were not assessed because of the hematuric urine. Control arterial blood gas values were: pH: 7,24, HCO<sub>3</sub>: 6,9 mmol/, BE: -17,7 mmol/L, lactate: 0,04 mmol/L ve Anion Gap: 28 mEq/L. Patient was admitted to our intensive care unit with this condition. Calculated serum osmolality was: 288.5 mOsm/kg; measured serum osmolality was: 319 mOsm /kg; osmolar gap was: 30.5 mOsm. Patient received 100 ml bolus and 30 ml/h infusion of 43% ethyl alcohol via a nasogastric tube until fomepizole was provided. The patient underwent four hours of hemodialysis. Blood parameters improved after hemodialysis. Patient received 15 mg/kg of fomepizole infusion in 30 minutes and followed by 10 mg/kg of fomepizole boluses in every 12 hours for 3 days. On the 32. hour, hypocalcemia beside renal failure was observed. The patient was treated with 4 seance hemodialysis and other treatments and was discharged to her home on the 10. day after admission. In Ethylene Glycol intoxication, although the treatments with ethyl alcohol and fomepizole can decrease the formation of toxic metabolites, there are difficulties in ethyl alcohol serum level measurement and fomepizole procurement. It should be kept in mind that hemodialysis performed in the early period can decrease the morbidity and mortality.

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### A CASE REPORT: AN ACUTE FATTY LIVER OF PREGNANCY

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**Introduction:** Acute fatty liver of pregnancy (AFLP) is an uncommon, fatal metabolic disorder seen in the third trimester or early postpartum period. Early diagnosis and prompt termination of pregnancy is necessary for better maternal and fetal outcomes. We present a case report of 20 years old woman who was diagnosed with acute fatty liver of pregnancy at postpartum period.

**Case:** A 20-year-old woman was admitted to our hospital at 36 weeks of gestation. Considering the patient's increasing pain and breech presentations ,it was decided to perform an emergency caesarean section . All parameters except liver transaminase levels (ALT:180 AST:239) were normal in third trimester . Before surgery; platelet count: 124,000/cumm, aspartate aminotransferase: 91U/l, alanine aminotransferase: 158 U/l. Coagulogram revealed a prothrombin time of 26 seconds with international normalized ratio (INR) of 2.3, activated protrombine time 53. Urine analysis showed mild proteinuria. Anaesthesia was induced with propofol 2mg/kg, rocuronium bromur 0.5 mg/kg and maintained with sevoflurane 1-1.5% oxygen-air 50-50% and. A female fetus suffered from spina bifida and clitoromegaly was delivered. Three units of fresh frozen plasma were infused during the surgery, the urine output was 350 mL, the estimated blood loss was 500 mL. The patient was awakened and extubated after she followed commands. She was admitted to the recovery room and transferred to the obgin service. The patient was admitted to ICU 6 hours later from the operation with low hemoglobin and hematocrit levels and dispnea. Acute fatty liver of pregnancy was considered in the patient who had trombocytopenia, anemia, high transaminase and bilirubin levels and hypoglisemia attacks. USG showed fatty changes. Supportive treatment was applied to the patient. Transaminase levels were decreased gradually. Bilirubin values reached to normal levels later. At the end of the fifth day, the patient discharged from the ICU.

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## CLINICAL MANIFESTATIONS OF VON HIPPEL-LINDAU SYNDROME , REPORT OF A CASE

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**Introduction:** Von Hippel-Lindau (VHL) syndrome is an autosomal dominant neoplastic disorder, characterized with hemangioblastomas localized at central nervous system and retina, pancreatic cysts and tumors and renal cell carcinoma.

**Case:** Twenty six years old, female patient presented with syncope, was referred to the emergency department of our hospital. The patient was intubated right after the respiratory depression was arisen and admitted to our intensive care unit (ICU). Computerised tomography (CT) revealed hydrocephalus at 3 th, 4 th, lateral ventricle and cystic lesion localized at posterior fossa. Within the same day patient was operated for hydrocephalus and medication was started with dexamethasone, fentanyl and mannitol (GCS= 9 APACHE II= 13). Two days after the initial surgery, patient was reoperated and the cystic lesion was excised, thus the compression on the base of 4 th ventricle was relieved. Patient was not extubated after surgery and connected to the mechanical ventilation on SIMV mode. Enteral nutrition was started at 3 th day in ICU. After 8 days in ICU, tracheostomy was achieved. Enteral nutrition was replaced with parenteral after the patient was suffered from diarrhea. At 15 th day in ICU, ALT and AST values were elevated, therefore parenteral nutrition was abandoned. Abdominal ultrasonography was made with an initial diagnosis of toxic hepatitis and multiple cystic lesions of pancreas and kidney was observed and hepatic paranchymal disease was predicted. Both cranial CT and ultrasonographic imaging was supported the diagnosis of VHL syndrome. At 18 th day in ICU, antibiotic medication was started due to high body temperature. Patient was died according to sepsis and multiple organ failure at 21 th day in ICU

**Discussion and Conclusion:** Hemangioblastomas are the most common lesions associated with VHL disease. Patients with hemangioblastomas usually present a long history of minor neurological symptoms followed by a sudden exacerbation. Therefore, most of the time the diagnosis of VHL syndrome is delayed likewise in our patient. Pancreatic tumors commonly present with renal lesions. Pancreatic lesions are mostly neuroendocrine tumors and asymptomatic. In conclusion, initial neurological manifestations in our patient was eventuate with multiple organ failure. Therefore realising the mortality and variety of clinical manifestations in VHL syndrome is necessary.

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## MULTIPLE DRUG INTOXICATION

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### Multiple Drug Intoxication

**Introduction:** Bupropion is a monocyclic antidepressant and has a similar structure to amphetamine. It is inhibitor of dopamine, noradrenaline and serotonin re-uptake. It also regulates the anticholinergic activity. Besides using in the treatment of depression, it is also effective in reducing withdrawal symptoms due to smoking cessation (1).

**Case:** A 28-year-old female patient with a history of depression was admitted to emergency department (ED) an hour after ingestion of 5.4 gr bupropion, 250 mg quetiapine, and 1.4 mg levotroxin. Gastric lavage was performed and activated charcoal was administered in the ED.

When accepting to the ICU, she was awake, alert, disoriented and agitated, GCS 13/15, normal blood pressure (116/79 mmHg ), tachycardia (120 beats per minute ), normal body temperature (36 ° C), normal blood glucose (104 mg/dl ). Blood gases report was pH: 7.35 , PCO2: 13.8 mmHg, PO2: 144 mmHg, and HCO3: 7.7 mEq/l. NaHCO3 infusion was started. After 2 hours, the patient had a generalised tonic-clonic seizure and 2 mg midazolom was administered.

Shallow breathing, hypotension (83/44 mmHg) and bradycardia were detected in patient. Then she was intubated with 75 mg ketamine and 6 mg vecuronium. For hypotension 500 ml colloid and 10 mcg/kg/min dopamine infusion were started .The patient was consulted to internal medicine doctor because of levotroxin. The doctor proposed to start of prednisolone and propranolol, because TSH was below 0.1 mIU/l.

9 hours later with haemodynamic improvement, the patients mental status improved and she self-extubated. She was discharged home after psychiatry examination.

**Discussion:** Our patient had ingested 250 mg of quetiapine. This dose was below the toxic dose of this drug (4.5 g). But the side effects of quetiapine such as hypotension, respiratory depression, and convulsions were seen. We thought that these are common side effects of bupropion and quetiapine. The fundamental of treatment for bupropion, quetiapine, and levotroxin overdose is supportive care.

We want to emphasize the importance of early gastric lavage and administration of activated charcoal.

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## P-182

### CONSECUTIVE COMPLICATIONS AFTER RESECTION OF SECRETORY MENINGIOMA: PERITUMORAL EDEMA, SINKING FLAP, FOCAL EDEMA AND MIDLINE SHIFT

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Secretory meningiomas with histologically benign characteristics tend to cause peritumoral edema, frequently leading to severe medical and neurological complications in postoperative management. Here we present a case with unusual life-threatening complications. C

**Case:** Left sided multiple meningioma diagnosed in 56 years old female. She underwent total removal of convexity and frontotemporal junction meningiomas (GCS 15). Pathological examination revealed secretory meningioma. 4 days after the operation, she developed left sided peritumoral brain edema and midline shift with deterioration of the neurological status. Left craniectomy was performed followed by revision of the flap after two days. One day later, her GCS was deteriorated again. CT scan showed left sided focal edema, this time away from the peritumoral region causing focal midline shift towards right and concomitantly, sinking flap syndrome again on the left site. This looked unusual as the depression of the flap was on the edematous site of the brain. She is sedated and intubated. Antiedematous therapy, right sided head down position, vasoconstrictive agents to elevate the systolic blood pressure above 100mmHg, and erythrocyte suspension to keep hemoglobin level about 8 gr/ml were all applied with the patient under mechanical ventilation. After a week, regression of the brain edema on CT scan was seen, sedation was decreased. She is extubated and discharged from the ICU after a week.

**Discussion:** Secretory meningiomas differ from overall group of meningiomas in that they contain cells expressing carcinoembryonic antigen and cytokeratin, which may cause cytotoxic edema. According to the literature, one third of the cases with developed brain edema may need ICU management. Our case showed a different characteristics with non-peritumoral focal edema which might probably be due to compromised or thrombosed veins and sinking of the craniectomy side against the edema on the same site, as well as peritumoral edema occurred earlier on. The management of such cases may consist of antiedematous therapy, preserving sufficient perfusion and complex thinking of pressure balances.

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## P-183

### DEXKETOPROFEN TROMETAMOL OVERDOSE: A CASE REPORT

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Nonsteroidal anti-inflammatory drugs (NSAIDs) have been widely used for pain relief in patients. Due to their easy acquirability, NSAIDs presents a major part of drugs that used for suicide attempts in our country. Dexametopfen trometamol is a relatively new NSAID in the clinical usage and the clinical experience with their overdoses is limited. In this case report we would like to share our experience of a patient who took 32 tablets of 25 mg dexametopfen trometamol for suicide attempt.

**Case report:** A 40 year-old female who took 32 tablets of dexametopfen trometamol 25 mg (total amount of 800 mg) for suicide attempt was admitted to our hospital's emergency department. She had taken the tablets 2 hours ago. She was alert but agitated. She was brought to hospital by her neighbours. The initial examination of her vital signs were stable. A nasogastric tube was inserted and gastric lavage with tap water was done as initial intervention. The particles of the tablets were observed during gastric lavage. She had given 60 mg of activated liquid charcoal (1 mg per kg body weight). Her blood samples were taken for chemical analyses and coagulation parameters. She was then given 40 mg of intravenous pantoprazole for gastrointestinal protection. She was then taken to intensive care unit for monitored care for the next 48 hours. The electrolytes, complete blood count, liver functions tests, coagulation parameters (PT, aPTT, INR,) blood urea nitrogen, creatinine and glucose were all in normal limits. Only mild elevations in liver function tests were detected in consecutive analyses but they were all in normal limits after 24 hour follow up. Stool tests for occult blood were also negative. We could not have done the drug analyses due to lack of our hospital's laboratory capacity. The patient were discharged with the referral to a psychiatry clinic. The over dose of NSAID may present versatile clinical situations but in our case routine approach to our intoxication cases and primary back up revealed a favourable outcome. Nevertheless we suggest that whether new or not in the market all overdose cases with NSAIDs should be followed in the ICUs.



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### AN UNUSUAL TOURNIQUET COMPLICATION: RHABDOMYOLYSIS

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**Introduction:** Tourniquet is being used in lower orthopedics extremity surgeries. Although it maintains a bloodless area, it can cause complications like ischemia, neurological deficit, myonecrosis, vascular endotelial and skin injuries.

In this case, we aimed to present an unusual tourniquet complication after proximal tibial osteotomy surgery.

**Case:** A 55 year old woman admitted to orthopaedia clinic with the symptoms of medial knee arthrosis. A proximal tibial osteotomy was planned for her left knee and bone grefting from iliac crest. She had no history of any comorbidities and any drug allergy, she was assigned in ASA I physical status. General anaesthesia was induced by sodium tiopenthal, vecuronium bromide and maintained by sevoflurane 1-2 % in O<sub>2</sub>-Air 50-50% and remifentanyl infusion. A pneumatic thigh tourniquet was applied intraoperatively. The inflation pressure was 330 mm Hg. The operation lasted about 240 minutes and tourniquet was deflated for 150 minutes in two 75 minute halves with a 15 minute break. Tramadol 100mg and paracetamol 1 gr were administered for pain management.

Oliguria occurred on postoperative day 1. The serum biochemistry profile revealed a increased urea and creatinine levels. Serum creatine kinase was very high (CK:3030) and in urine analysis myoglobinuria was detected. In MR imaging, it was estimated as acute renal failure secondary to rhabdomyolysis. She was managed with intravenous fluids, high-dose loop diuretics and. On postoperative day 2, renal function deteriorated and haemodiafiltration was applied for three days. At the end of the seventh day, clinical and laboratory tests revealed normal renal function and she was discharged on day nineteen.

**Conclusion:** The shortest time, lowest pressure and effective hydration must be targeted for pneumatic tourniquet applications to prevent rhabdomyolysis. If these interventions are not successful, haemodialysis, peritoneal dialysis or haemodiafiltration can be used.

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### A CASE OF H1N1 INFECTION IN A PATIENT WITH FAMILIAL MEDITERRANEAN ANEMIA AND UNDERGONE SURGERY FOR STABBING

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Influenza virus is a RNA virus and a member of orthomyxovirus family. There are 3 types of influenza viruses classified as A, B and C types. Influenza A might cause epidemics and pandemics due to mutations in hemagglutinin and neuroaminidase antigens. Most common clinical features are fever, cough, sore throat, myalgia, diarrhea. Severe clinical features might develop due to secondary pneumonia which is the most common etiology for death in Influenza A infections. In this case report we want to present a H1N1 infection which developed in a case with knife stabbing and Familial Mediterranean Anemia (FMA). 29 years old female patient was stabbed from right thigh and has been consulted before surgery. She had history of FMA and allergic to paracetamol and metimazole. After surgical hematoma drainage she developed hemoptysis in postoperative day 1 and levofloxacin and oseltamivir were added to her treatment empirically. Due to severe respiratory distress she was accepted to intensive care unit (ICU) and has been intubated in postoperative day 2. In thoracic computerized tomography diffuse pneumonic consolidations in both lungs were observed. H1N1 PCR was found to be positive in nasal and sputum samples. Patient developed severe septic shock and did not response any therapeutic approach. She developed a cardiopulmonary arrest in postoperative day 10 and was lost despite of all interventions. H1N1 infection usually causes a nonsevere clinical presentation that is similar to common cold and does not require hospitalization. However in patients with chronic disease history, children, and young adults it might develop severe pneumonia, interstitial pneumonia and diffuse alveolar hemorrhagia. In this case patient had a history of FMA, severe anemia, erythrocyte transfusion, stabbing and surgery. We think that these accompanying problems caused immunosuppression and disposed patient for severe H1N1 pneumonia and mortality risk. As a conclusion by reporting this case we hope to attract attention of clinicians that H1N1 infection might cause severe pneumonia and mortality in patients that are not normally in risk group but have history of chronic and/or acute diseases.

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## P-186

## DO WE REALLY NEED TO PANIC IN ALL ACUTE VISION LOSS IN ICU ? ACUTE ANGLE-CLOSURE GLAUCOMA

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**Introduction:** Visual loss in critical care patients is a point of concern which warrants a thorough assessment and also expensive investigations to rule out a serious reason. We report a progressive visual loss case due to acute angle-closure glaucoma (AACG) in a 59 year old patient who was followed in ICU due to massive pulmonary embolism.

**Case:** A 59 year old female patient was admitted to our ICU with the diagnosis of massive pulmonary embolism. Dopamine and noradrenaline infusions was started for hemodynamic support. After 36th hour the patient begun the complaint of a right and left eye visual loss together with a bilateral frontal headache. A right and left eye acute angle closure glaucoma was diagnosed and treated with oral acetazolamide and timolol, pilocarpine, eyedrops. Two days after this acute attack, the right and left eye intraocular pressure remained normal, and visual acuity had completely recovered. A right and left eye laser iridotomy was performed, 3 week later after ICU discharge.

**Discussion:** Ophthalmologic complications are frequently encountered in intensive care unit (ICU) patients. Uncommon eye disorders reported in ICU include metastatic endogenous endophthalmitis, ischemic optic neuropathy, pupil abnormalities, vascular occlusions, and rhino-orbital cerebral mucormycosis and acute angle closure glaucoma. Intensivist using multi drug regimens should be aware of their potential to cause acute angle closure. Any patient presenting with signs or symptoms of AACG should be referred immediately to an ophthalmologist. Early diagnosis and effective treatment will help to prevent visual loss.

## P-187

## INITIALLY MISDIAGNOSED SUBARACHNOID HEMORRHAGE IN A PREGNANT PATIENT WITH BEHÇET'S DISEASE

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**Objectives of study:** Behçet's Disease (BD) is a chronic, relapsing and multisystemic inflammatory process described in 1937 by the Turkish dermatologist Hulusi Behçet. The etiology is unknown, though the most likely an autoimmune reaction and mucocutaneous lesions, ocular, vascular, articular, urogenital, pulmonary and neurological involvement are the main clinical features (1). Pregnancy, however, is a physiologic condition that causes many alterations on whole body system so symptoms related with Behçet's Disease may easily be confused with the clinical findings induced by pregnancy.

**Case:** A 30- year- old, gravida 4 para 3 pregnant woman at 35 weeks gestation was admitted to hospital with acute onset of severe headache and projectile vomiting. She was previously diagnosed as Behçet's Disease and treated with colchicine over 5 years. The patient had no similar complaints in the previous pregnancies. Laboratory results were unremarkable so the cause of projectile vomiting was unexplained. Cranial computed tomography (CT) revealed a suspicious image considered as subarachnoid haemorrhage in right frontotemporal sulcus. The parturient was scheduled to undergo Caesarean section under general anesthesia. A healthy infant was delivered weighing 2370 gr with 1. and 5. min Apgar scores of 8 and 9. Intra operative period was uneventful and she was transferred to intensive care unit (ICU) for further follow-up. Following extubation, she was awake, fully conscious but she has still complaint of headache. Magnetic resonance (MR) angiography and venography did not support the radiological findings previously reported on CT. The mother and the baby were discharged home on the 5 th day of hospital admission.

**Conclusions:** Headache is a frequent symptom in BD including those with no clinical evidence for neurological involvement. Magnetic resonance imaging (MRI) is more sensitive than computed tomography revealing mass-like lesions, isolated brain stem and basal ganglia lesions, multiple small white matter lesions, or lesions in the spinal cord (2). MRI studies of patients with BD have shown that in patients with headache as the sole neurological symptoms, around half had normal MRI scans and the remainder showed small white-matter lesions within the hemispheres (3). Pregnancy is a triggering factor for headache in 80% of the patients (4) It must be considered that, in some conditions symptoms triggered by pregnancy may be confused with the symptoms related with the underlying disease and the differential diagnosis may be a troublesome.

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### “HEMOLYTIC-UREMIC SYNDROME” CASE TREATED BY APPLYING PLASMAPHERESIS WITH FRESH PLASMA

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**Objectives of study:** Thrombotic micro-angiopathies (TMAs) are rare microvascular diseases characterized by occlusive systemic microvascular thrombi, thrombocytopenia, and microangiopathic haemolytic anaemia. TMAs include thrombotic thrombocytopenic purpura (TTP), with predominant neurological manifestations and adult hemolytic and uremic syndrome (HUS), with predominant renal failure (1).

**Case:** The 39-years-old female patient had applied to our emergency department with complaints of bloody diarrhea, asthenia and somnolence in consciousness. The patient diagnosed with Hemolytic-Uremic Syndrome (HUS) was hospitalized in our internal medicine department. As her conscious got somnolent in her follow-up, the patient was transferred to our Intensive Care Unit to apply NIMV intermittently. As the patient had decreasing PaO<sub>2</sub> in arterial blood gas analyses, deteriorating breathing pattern, and convulsions; the patient was intubated and instuted to the mechanic ventilation (MV). Propofol infusion, levetiracetam, phenytoin, steroid, meropenem, rifampicin, amlodipine and doxazosin started to be given to the patient after hospitalization. The patient was entubated in 2nd and 7th days of her hospitalization and re-instuted to the MV as her convulsion could not be treated with midazolam. The patient underwent to hemodialysis 5 times and she started to urinate on 11th day of her hospitalization. She was treated plasmapheresis twice a day beginning from the 4th day of her hospitalization. She was started a high dosage of thiopental infusion adequate to treat the convulsion. The patient who had a better breathing pattern and no convulsion when her sedation ceased and was extubated on the 4th and 12th days of her hospitalization. Since there was no improvement observed in the laboratory data and clinic of the patient in these 12 days, she was treated plasmapheresis with fresh plasma twice a day. She was given fresh erythrocyte suspension four times in this process. As the laboratory control values observed at the end of the 13th day started to improve. The patient who was applied plasmapheresis 39 times in total and whose convulsions were ceased and whose laboratory values were normalized was discharged to her room and to her home on 48th day.

**Conclusions:** It was observed that clinics of patients - who had not responded to treatment of plasmapheresis [2] used for a long time as well as the routine treatment applied in Thrombotic Microangiopathy - improved significantly after the plasmapheresis treatment applied with fresh plasma used without being frozen.

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### PULMONARY EMBOLISM AFTER CESAREAN SECTION IN A PATIENT WITH HETEROZYGOTE FV LEIDEN MUTATION: CASE REPORT

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**Introduction:** Pulmonary thromboembolism (PTE) is the leading cause of maternal death with a rate of 1 in 1500 deliveries. The risk of recurrent thrombosis has been estimated to increase up to 20 % without any prophylactic treatment in women with a history of thrombosis or hereditary thrombophilia. The clinical diagnosis of PE is more difficult in pregnancy compared with the general population as some of the clinical symptoms of PE can be normal and expected symptoms of pregnancy. In this case report, we aimed to discuss the clinical management of a pulmonary thromboembolic case with FV Leiden mutation after caesarean section.

**Case:** A 30-year-old, 80 kg weight pregnant women at 38 week of gestation was referred to our hospital for caesarean section. She was heterozygous for factor V Leiden and she had been using Enoxaparin Sodium (Clexane) 4000IU/day during her pregnancy. She had a history of caesarean section about five years ago. She had contrast media allergy. Enoxaparin Sodium was stopped 36 hours before surgery. She refused regional anesthesia. For this reason general anesthesia was performed.

In the operating room, routine monitors (ECG, pulse oxymeter) were attached. A 15° wedge was given for left uterine displacement. She was pre-oxygenated with 100% O<sub>2</sub> for 3 min. Anesthesia induction was performed with thiopentone 6 mg/kg and rocuronium 0.6mg/kg IV. She had difficulty during intubation and was intubated with a 7.5 mm-sized oral cuffed endotracheal tube at the third attempt and ventilated on volume control mode with a tidal volume of 10 mL/kg. Anesthesia was maintained with oxygen/air mixture at 50:50, sevoflurane in concentrations of 1-1.5%. After delivery of the baby, syntocinon 10 units in infusion was started. Fentanyl 1 µg/kg body weight IV was given and she was reversed with atropine 0.01 mg/kg IV and neostigmine 0.05 mg/kg IV. She was extubated successfully. Respiratory distress and hypoxemia of the patient was started in the service at the end of postoperative first hour. The patient was admitted to intensive care unit. In her examination her blood pressure was 110/72 mmHg, heart rate 118 beats per minute, oxygen saturation 90 % on room air. Chest examination revealed diminished vesicular breathing in both of the lungs. Electrocardiography showed sinus tachycardia. Chest radiography showed infiltratic changes at the upper right lung. Arterial blood pH was 7.46, pCO<sub>2</sub>: 31.5 and pO<sub>2</sub>:55 mmHg with oxygen saturation of 89%. Pulmonary embolism is suspected and a serum D-dimer level is obtained; it is 6439 ng/mL (reference range<500). The administration of heparin 10.000 IU/day was started CPAP treatment was performed. Computed tomography of the chest without contrast media showed parenchymal abnormalities of the upper right lung including consolidation, atelectasis and focal patchy increases attenuation. Mediastinal vascular structures were not evaluated effectively.

Furthermore the respiratory state improved at postoperative second day. The dose of heparin was decreased 5000IU/day 6 days after the onset of PE. Arterial blood pH was 7.46, pCO<sub>2</sub>: 33.7 and pO<sub>2</sub>:105.1 mmHg with oxygen saturation of 97.7. Two days after, control CT showed regression of the parenchymal changes. The patient was transferred to the obstetric clinic on the third postoperative day.

**Conclusion:** The factor V Leiden mutation causes a mild hypercoagulable state. Delays in the therapy of pulmonary embolism is the main cause of high mortality rates. Anticoagulation therapy should be immediately started before the diagnosis is confirmed, if there is a suspect.

## P-190

### IMPORTANCE OF FAMILY TRAINING IN CARE OF THE PATIENT UNDERGOING MECHANICAL VENTILATION AT HOME

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**Introduction:** Home mechanical ventilator(HMV) therapy is a method that increases the life quality of the patient with the selection of appropriate equipment and patient, with the education of patients' relatives (1, 2). A patient who showed clinical improvement with HMV therapy was discussed in this case report.

**Case:** 75 years old female patient that was connected to mechanical ventilator (MV), was admitted to our intensive care unit (ICU) with the diagnosis of hypoxic-ischemic encephalopathy after one week of follow-up the open heart surgery performed in an external center. In the first examination in our unit she was non-oriented and non-cooperative and GKP: 5. Acute respiratory distress syndrome, acute kidney failure, mediastinitis developed during follow-up period of 6 months in our unit while she was connected to MV from tracheostomy, was treated. General conditions and vital findings recovered in the 3rd month of hospitalization. When attempts to remove her from MV were unsuccessful, we planned to follow up the patient on MV at home and patients' relatives were trained with regular programs on patient care. Physical Treatment and Rehabilitation program were applied. With the moderation of specialist concerned, requirements of the room in which HMV would be used, were fulfilled and necessary medical materials were provided. The patient who was oriented and partially cooperative in follow ups, was transferred to our service when she was clinically stable, in pressure assisted spontaneous mode with home type MV, with Percutaneous Endoscopic Gastrostomy feeding and enteral drug treatment. The patient was discharged after one month of follow-up period in our service. The patient was evaluated weekly by personnel of home care unit. When spontaneous respiration of the patient was sufficient, she was weaned from MV. Ten months later we plan to close tracheostomy of the patient who is oriented, cooperative, mobilized in the bed, and breathing spontaneously in room air with silver cannula from tracheotomy and starts oral intake.

**Discussion:** HMV use is gradually increasing in recent years (3). Intensive care specialists play an important role in HMV application; in choosing the appropriate patient, ventilator and mode, and in providing the necessary equipment, physical conditions for the patient and in the training of patients' relatives (4). Main problems encountered in HMV therapy are airway problems related to insufficient aspiration, not noticing the findings during acute attacks, physical and psychological burdens to patient and family members (5). In our case clinical recovery of the patient was secured with correct selection of patient, by preparing the environment in which HMV will be used, with trainings given to family members and with regular home visits. In conclusions, we consider that correct patient selection, supply of necessary medical devices, use of appropriate MV and mode, and physical and psychosocial rehabilitation applied and training provided to patient and patients' relatives and regular doctor visits will increase the success of HMV therapy and patient's life quality.

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## P-191

### SPHINGOMONAS PAUCIMOBILIS

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**Objective:** *Sphingomonas paucimobilis* (formerly *Pseudomonas paucimobilis*) is a yellow-pigmented, nonfermenting, gram-negative bacillus that has a single polar flagellum with slow motility. This organism is widely distributed in the natural environment (especially water and soil) and has been implicated in a variety of community-acquired and nosocomial infections, including bacteremia, catheter-related sepsis, meningitis, peritonitis, cutaneous infections, visceral abscesses, urinary tract infections, adenitis, and diarrheal disease. It's also reported that can be colonised in water systems of hospitals and cause infection in immunosuppressive patients. In the present study we noted the clinical features of a case of *S. Paucimobilis* infection<sup>1,2</sup>.

**Case:** A 80-year-old female with ischemic cerebrovascular disease for 4 years, was a care patient in her house. After admitting to intensive care unit (ICU) with hyponatremia (Na: 104 mmol/L) and aspiration pneumonia, ventilated with respirator. On admission her temperature was 38.50C, blood pressure 110/70 mmHg and heart rate 92/ beats/minute. Blood results were as follows: hemoglobin 12.7 g/dL, hematocrit 34.6%, WBC count 6110/mm<sup>3</sup>, erythrocyte sedimentation rate 65 mm/hour, and C-reactive protein (CRP) 7.50 mg/dL (normal: <0.5 mg/dL). While having treatment of hyponatremia, she was also given empirical piperasilin sodyum, tazobaktam sodyum for aspiration pneumonia. *S. paucimobilis* was isolated from admission day of blood cultures (both peripheric and central blood samples) but antibiotic sensitivity was unpredictable. Because there was no clinical sign of infection, antibiotic therapy wasn't changed. For control, blood culture sampling was repeated. Tenth day of admission no bacteria was isolated from the control blood cultures.

**Discussion:** *S. paucimobilis* is responsible for two types of infection in humans: sporadic or community-acquired infections, probably of endogenous or environmental origin (bacteremia, meningitis, urinary tract infection, and wound infection); and nosocomial infections associated with the contamination of sterile fluids employed in hospitals<sup>1,2</sup>. In our case we thought that it was sporadic or community-acquired infection, and empirical antibiotic choice was well-directed.

**Conclusion:** *S. Paucimobilis* should be suggested as rare infection agent for care patients and also antibiotic therapy should be organised due to antibiotic sensitivity, if possible.

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### TOXIC EPIDERMAL NECROLYSIS DURING TREATMENT OF VALPROATE AND CEFTRIAXONE

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Toxic epidermal necrolysis (TEN) is a severe episodic mucocutaneous reaction due largely to ingested drugs and/or occasionally to infections. TEN presents as sheets of erythema, necrosis and bullous detachment of the epidermis, with a mortality rate of 30–35%. The most commonly implicated drugs are sulphonamides, chlormezanone, non-steroidal anti-inflammatory drugs, imidazole antifungals, cephalosporins, anticonvulsants, and allopurinol. We describe here one patient who developed TEN while using valproic acid for epilepsy prophylaxis and ceftriaxone for upper airway infection.

A 70-year-old man with head injury three months ago was taking valproic acid 1 g daily for three months. Because of upper airway infection, ceftriaxone was added. On the 7th day of the anti-infectious treatment, he experienced fever and pain with maculopapular eruption in the whole body. The skin lesions became vesicular and bullous, involving mucosa and conjunctiva. Physical examination revealed widespread lesions with large areas of skin denudation and a positive Nikolsky sign. There were hemorrhage and erosions on lips, gums, buccal and oral mucosa. When the diagnosis was established, all the previously used drugs were discontinued and the patient was admitted intensive care unit. The standard symptomatic management included pain control with opioid analgesics, wound management, prevention of stress ulcers, nutrition and fluid support. Corticosteroid and cyclosporine treatments were started. Plasmapheresis and IVIg were therefore begun. On the 4th day of admission he was intubated due to respiratory failure. After 3 sessions of plasmapheresis and IVIg treatment, extensive reepithelialization rapidly occurred. The patient's condition had almost healed at the end of 45 days.

Due to previous head injury intensive care duration was prolonged. He was discharged to the rehabilitation at the end of the 45 days. TEN is an acute, life-threatening, exfoliative disorder with a high mortality rate. High clinical suspicion, prompt recognition, and initiation of treatment in the intensive care unit is mandatory.

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### NEUROLOGICAL AND CARDIOVASCULAR TOXICITY WITH BUPROPION OVERDOSE

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**Aim:** Treatment of an overdose of an antidepressant agent also used for cigarette aid treatment named bupropion proceeded with cardiovascular and neurological complications is reviewed.

**Case:** 35 years old female patient who has taken 12 g bupropion and 2 g lamotrigine for suicide attempt presented with symptoms such as blurred consciousness, agitation, tachycardia, acidosis and nausea-vomiting. Despite symptomatic treatments and repeated doses midazolam, the case progressed with recurrent convulsions, hypotension and desaturation. The supportive therapy; intubation, midazolam and inotropic agent infusions and antiepileptic treatments are added. The heart rate was increased and ventricular fibrillation developed. She was defibrillated for a normal sinus rhythm. Four hours after the presentation to the ICU, hemodiafiltration was started because of the resistant cardiovascular and neurological effects. On the 5th day of admission to the ICU, sedation and hemodiafiltration was stopped. On the 7th day, the patient was extubated. On the 9th day the patient was discharged from the ICU.

**Conclusion:** It is concluded that hemodiafiltration is an urgent therapy for symptomatic treatment of cardiac and neurological effects of bupropion.

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### FULMINANT SKIN BURNS DUE TO HIGH-DOSE METHOTREXATE TREATMENT IN THE PATIENTS WITH T-CELL LYMPHOMA: A CASE REPORT

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**Introduction:** Methotrexate (Mtx) is used as a chemotherapeutic agent in the treatment of various malignant diseases. Even low-dose treatment, serious side effects such as bone marrow suppression, skin erythema, vasculitis, mucous membranes with necrotic changes and inflammation, renal function disorders can be seen. In this article, the case due to T-cell lymphoblastic lymphoma with high-dose methotrexate used for chemotherapy and is seen common skin burns, renal failure, sepsis, and pancytopenia is presented.

**Case:** 16-year-old male patient, about 2 months ago PHASE IV diagnosed with T-cell lymphoblastic lymphoma. 1.63 m<sup>2</sup> of body surface area, the patient was given 8 g mtx. After one week, he was included in the intensive care unit because of the deterioration of the general condition, pancytopenia, renal failure, deterioration of cardiac function, generalized mucositis, burn-like skin lesions in the body, skin integrity due to distortion and confusion. On physical examination, confused consciousness, lung sounds become vulgar (SpO<sub>2</sub>: 88) of a case, 25/dk respiratory rate, heart rate: 115/dk, arterial blood pressure: 70/30 mmHg was measured. The patient who has second degree common skin burns on his trunk, back, upper and lower extremity, oral and gastrointestinal mucositis, the gradual deterioration of renal function was intubated and connected mechanical ventilator. Unfortunately, the case who do not respond to the treatment, has pancytopenia, common necrotic skin lesions progressively was worsened and the patient who was accepted to intensive care unit was considered as died on the fourth day of stay in the intensive care unit.

**Discussion:** Severe renal toxicity should be expected because of 70-90% of mtx excreted through the kidneys without metabolized when its level reaches high serum methotrexate concentration of 5x10<sup>-5</sup> M usually along to 24 hours. Hydration, Alkalinization and L-Asparaginase can be applied for to avoid. In our case, despite the implementation of all of them was applied, renal toxicity developed. Giving mtx can toxic effects like pancytopenia due to bone marrow suppression, oral ulcers, loss of appetite, skin erythema, pruritus, photo-sensitivity, depigmentation, ecchymosis, telangiectasia, acne, furuncle and respiratory and neurological symptoms. In this case, the pancytopenia, diffuse mucositis, approximately 60% of his body common skin lesions like second degree skin burns were seen.



## P-195

### A RARE CAUSE OF EPILEPTIC SEIZURES AFTER CESAREAN SECTION DELIVERY UNDER EPIDURAL ANAESTHESIA: CASE REPORT

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Cranial arteriovenous malformations are cases that may potentially result in fatality. The symptoms may show up in a wide range from nausea, vomiting, headache, diplopia, papillae edema, neurologic deficit to epileptic seizure and coma. Especially for young women with neurologic symptoms in early puerperium, making possible diagnoses (particularly as cerebral venous thrombosis) in early period is essential.

We present the 29 year-old patient admitted into emergency with generalized tonic clonic seizures over 120 min. period on 20th day postpartum whose symptoms started with absence and persistent headache two days prior. There was not history of pregnancy-related hypertension. As a remarkable history she had a cesarean section delivery under epidural anesthesia before 20 days ago and one day before the symptoms she went a dentist for extraction of maxillary first molar tooth without prophylactic antibiotics.

She transferred to intensive care unit for examination of diferantial diagnosis, monitoring and treatment of seizures. The seizures were controlled with iv. midazolam infusion and a loading dose of phenytoin. After a stabile condition cranial computed tomography scan performed but did not show characteristic evidence.

We performed CT angiography, MRI and MR venography considering cerebral venous thrombosis in the differential diagnosis. MRI revealed heterogenous hyperintence lesion in right cingulate gyrus and CT angiography revealed right frontal linear vascularized lesion connected with the pericallosal branche of left anterior cerebral artery (ACA-A3) considering arteriovenous fistula.

After fourth days of admittance in ICU her general condition improved and she transferred to neurosurgery for transarterial embolization .

Spinal, epidural or CSE block procedures are contraindicated with intracranial mass or cerebrovascular events caused increased ICP. In this case postpartum neurologic symptoms may be relevant to epidural anesthesia. Using advanced imaging techniques for diagnosis maybe prevented fatal conclusions. We could image lesions that can not be seen with CT with MRI and CT angiography. Advanced imaging techniques are valuable for diferantial diagnosis.

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## P-196

### TETANUS IN OUR INTENSIVE CARE UNIT: ASSESSMENT OF TREATMENTS, COMPLICATIONS AND MORTALITY IN SIX PATIENTS BETWEEN 2010-2013

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Tetanus is an acute and sometimes fatal disease. Exotoxins produced by *Clostridium tetani* play an important role in the pathogenesis of the disease. This disease is caused by a high mortality rate in patients over 60 years of age. Respiratory involvement is the most serious problem encountered in generalized tetanus (1).

**Method and Material:**The purpose of this study, patients with tetanus treated in the intensive care unit were retrospectively assessed. In this study, in all patients in terms of frequency of tetanus, circumstances of infection, immunization status, clinical findings, treatments modalities, mechanic ventilation period, complications, duration of stay in intensive care unit and mortality ratios were evaluated.

**Findings:** Between 2010 and 2013, a total of 6 patients with tetanus were followed in our intensive care unit. The average age of the patients was  $65.33 \pm 13.45$  years (between 41-79 years). Five of these patients were male (83.3%), and one patient was female (16.7%). Half of the patients were injured by gunshot from the lower extremity, while the other half were injured in the head and neck region in the same way. The average time between gunshot injury and to apply to the emergency room with symptoms of tetanus was  $17.66 \pm 8.33$  days (9-30 days). The time of the latest vaccination was unknown none of the patients. While two-thirds of all patients suffering from trismus and difficulty breathing, one-third of the patients had contractions of the lower extremities. The mean duration of mechanical ventilation of the patients was  $16 \pm 4.09$  days (average: 9-20 days). Average duration of the patients' stay in intensive care unit was  $20.83 \pm 9.82$  days (9-35 days). The most frequently observed complication was the ventilator-related pneumonia. Our mortality rate was determined as %66.6.

**Results:**There has been a dramatic decline in the number of reported cases of tetanus in western countries but this disease is still a major health problem for our country. This clinical problem is still a fatal disease despite intensive care facilities. For this reason, vaccination and public awareness is of utmost importance.

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### IN THE CASE OF HIGH MORTALITY RATES PEDIATRIC BURN SILVER INTOXICATION

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**Introduction:** Silver-containing products are widely used for many years in the treatment of topical application of burn wound infections. Silver intoxication causes occurs liver& kidney dysfunction, leukopenia and neurotoxicity(1). 46% of TBSA burned, two-year-old male was hospitalized due to 2 ° -3 ° scald burns, after usage of topical silver sulfadiazine (Acticoat) touch base silver intoxication and neurological dysfunction developed pediatric cases are discussed with medical literature data.

**Case:** The patient was followed at another hospital because of scalding burns for 14 days and topical silver nanocrystalline (nano crystalline) was used at the health institution. The patient was hospitalized at our intensive care unit of our hospital.The patients burned areas were wrapped. GKS: 14, according to PRISM Score expected mortality was 92.7%. HR: 139/min, RR: 43/min, hypothermic, SpO2: 94%, Respiratuar: bilateral, equal and rough. Laboratory findings within normal limits but PLT; 24000/mm<sup>3</sup>, aPTT: 47.1sn, PT:77.6sn, activity: 9%, INR: 6.78. The increase in tachypnea (> 45/dk) on the first day of hospitalization, the patient was intubated. Burned areas were applied Acticoat. On the second day of hospitalization WBC: 6400/mm<sup>3</sup>, AST: 523, ALT: 171 was measured. 12th day of BICU all Acticoat products removed from surface. Cranial MR was taken, the result was normal. Blood silver level: 12mcg / L (N:0.2-1mcg / L) and urine nanocrystalline: 45.2mcg / L (N: 0.1 mcg / L). 22th day of BICU blood nanocrystalline: 0.48mcg / L, urine nanocrystalline: 0.40mcg / L were found. On the 32th day of hospitalisation he left MV support; on 34th day debridement and grafting was performed. The patient was discharged from the hospital on 59th day.

**Discussion:&Conclusion:** It should be kept in mind that Long-term applications of nanocrystalline may cause silver intoxication.

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### DAPTOMISIN

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Infections due to gram-positive bacteria are increasing all over the world. With the emergence of methicillin-resistant staphylococcus aureus, vancomycin intermediate or vancomycin-resistant s. aureus bacteria and with the spread of vancomycin-resistant enterococci, safe and effective methods in the treatment of these infections become difficult to find. Daptomycin is the first member of cyclic lipopeptides with a broad-spectrum effect against gram-positive pathogens including the resistant bacteria.

In our case 78-year-old female patient was followed in intensive care unit after the excision of left atrial myxoma operation. In the intensive care unit, MRSA-related skin and soft tissue infections were seen; starting from the tenth day and healed in the twenty-fifth day. The patient does not have any other known medical conditions. We discussed the use of daptomycin in the skin and soft tissue infections caused by the vancomycin-resistant MRSA in this case report in company with the literature.

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### ATYPIC AND COMPLICATED HERBICIDE (PICLOROM) INTOXICATION; A CASE REPORT

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We present a case of herbicide intoxication which was admitted to hospital atypically with sore throat, difficulty with swallowing and breathing, complicated as respiratory arrest, tracheal rupture, lung edema, severe neurologic condition(GCS3) and discharged from hospital with complete recovery. A36-years-old male with difficulty with breathing, having severe edema on upper airway, was undergone to emergency tracheotomy but with sudden respiratuar arrest'blue code' was given,so acute blind oratrakel intubation was done with number5ETT. He was unconscious, pupils were3mm/3mmIR-/-,KR-/-,GKS3,subcutaneous emphysema was around the neck and face,HRwas34beat/min.,BPwas56/31mmHg,SpO2 0,airway pressure was too high.Anti-edema therapy, inotropic, parenteral fluids were administered.Tracheal rupture was corrected in the operating room. Symptomatic, supportive therapy was continued. Required replacements, respiratuar parameters adjusted according to multiple ABGanalysis.ChestX-ray was similar withARDS.After10hours, patient was cooperative withGKS15, antibiotherapy started,ARDSprotocol was go on with sedation and muscle relaxation.Onthe2.day, bilateral chest-tube drainage was done due to bilateral pnemothorax and enteral feeding was started.Onthe3.day temperature was39degrees santigrad. Onthe7thday sedation was stopped, onthe11.day bilateral chest-tube drainage and tracheostomy cannula removed, onthe14.day the patient was discharged from intensive care unit on spontaneous respiration with stable hemodynamic parameters and transferred toENTclinic,3 days later he was completely discharged from hospital with complete recovery. This case; which was at the beginning treated symptomatically due to acute respiratuar arrest, but get severe and severe with emergency tracheotomy complications andARDS; was diagnosed as 'late,atypic herbicid(containing piclorom)intoxication' after learned that the patient was gardener and he used the herbicid(containing piclorom)2days before. There is no documented history of human intoxication by picloram(1), if taking with inhalation,there is larynx edema, pulmonary edema or condition like ARDS within first27hours of exposure,have no antidote,indicates symptomatic therapy(2), also in this case the patient improved steadily with symptomatic therapy. In conclusion detailed medical history is so important in the case of severe respiratuar difficulty, from a simple infection to severe intoxication must be in mind in spite of atypic symptoms.

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## P-200

### RETROSPECTIVE EVALUATION OF POISONINGS IN PREGNANCY IN SOUTHEAST OF TURKEY

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The aim of this study is to investigate and analyse the acute poisonings in pregnancy who were followed up in our intensive care unit.

**Method and Material:**All cases were collected between 10.01.2009 and 10.01.2013. Mean age, gestational week, whether the poisoning was deliberate or accidental, causative agent or reason, hospital and intensive care length of stay, number of cases per month and mortality outcome were collected and analyzed, retrospectively.

**Findings:**Fifty two pregnant women admitted with acute poisoning and followed in intensive care unit. Poisoning was accidental in %36,4 of the cases, while %63,6 were suicidal intoxications. Accidental intoxications were due to carbon monoxide, scorpions sting and shock. %64.2 of the suicidal poisonings were caused by medical drugs, especially with non-steroidal anti-inflammatory, psychiatric drugs and antibiotics. %81.8 of patients were in the 21-34 age group. In terms of gestational week, %40,9 of suicidal poisonings were within the second trimester. Cases were seen particularly in summer and winter. In this study, only one patient poisoned with organophosphate was dead.

**Results:**Suicides and poisonings in pregnancy are a problem for clinicians because of the untoward effects of the toxic agent and the antidote therapy on the unborn. In this study, most cases of acute poisonings during pregnancy were suicidal and within the second trimester of gestation and also most common agents used for suicidal attempt were found to be medical drugs.

## P-201

### POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME IN A PATIENT WITH ULCERATIVE COLLITIS

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20 year old woman was admitted to the our hospital for a severe abdominal pain,before hospitalization,she described this pain since one month ago.Abdominal radiography showed air-fluid levels and surgeons decided to operation.After operation surgeons evolution was inflammation bowel disease: ulcerative colitis.She was admitted to ICU postoperatively and had a severe sepsis for 15 days. The 20th of ICU day, she discharged to ward. During hospitalization in ward ,suddenly she complicated with unconsciousness,visual loss and epileptic seizures and she was transformed to our I.C.U again. CT scan showed hypodense areas in the pariatel occipital cortex.According to control MR supported the same result: focal reversible vasogenic edema.We reported the case as posterior reversible encephalopathy syndrome (PRES). We added our therapy,steroid and antiepileptic drugs .The second day of treatment ,seizures began to stop and the third day noticed that she began to see better.The fifth day she started to contact us and her family.

PRES presents with headache ,alertness,seizures and cortical blindness,damage typically involves pariatal-occipital lobes.PRES is associated with number of different causes most commonly in our case ulcerative colitis.

## P-202

### THE EFFECTS OF HUMAN ALBUMIN REPLACEMENT ON ARTERIAL BLOOD GASES

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The aim of this study was to evaluate the effects of human albumin replacement on arterial blood gases in patients with low serum albumin levels.

**Method and Material:**This retrospective database study included patients admitted between April 2008 and September 2011 to a 15-bed medical/surgical ICU in a university hospital. We analyzed data from 52 patients who received Human Albumin (% 20) infusion because of their low plasma albumin level (< 2 gr/dl) . Human albumin administration continued 3 days, twice a day and as an infusion lasted 1 hour. We evaluated the arterial blood gas analysis (pH, pCO<sub>2</sub>, pO<sub>2</sub>, HCO<sub>3</sub>) of these patients before, between and after human albumin infusion each day.

**Findings:**There were significant differences in patient's pH and pO<sub>2</sub> levels during albumin replacement in the first tree days ( first day before albumin infusion pH: 7.42 after albumin infusion pH: 7.39 (p=0.003), second day before albumin infusion pH: 7.41 after albumin infusion pH: 7.39 (p=0.031), third day before albumin infusion pH: 7.42 between albumin infusion pH: 7.40 (p=0.006), second day before albumin infusion pO<sub>2</sub>: 103 after albumin infusion pO<sub>2</sub>:116 (p=0.006), third day before albumin infusion pO<sub>2</sub>:103 after albumin infusion pO<sub>2</sub>:114 (p=0.031). But the differences in HCO<sub>3</sub> and pCO<sub>2</sub> levels were not significant at the same time. There were any differences between all parameters since 4. day.

**Results:**Albumin replacement therapy may improve oxigenation in patients with low albumin levels during the replacement period but this effect is tranicent.

## P-203

**SWELLING TONGUE; ANGIOEDEMA OR TRAUMA?**

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**Introduction:** Tongue swelling is a life-threatening condition that cause airway obstruction. The common reason of acute tongue swelling is angioedema. Angioedema is a potentially reason that might be secondary to angiotensin converting enzym (ACE) inhibitor and penicillin use.

**Case:** A 43 years old man with a history of hypertension, controlled with 2 mg trandolapril combination with 180 mg verapamil and indapamide 1.5 mg once a day for five years presented to the emergency department with a swollen tongue. Also he was taken amoxicillin clavulanate 1000 mg and naproxen sodium 550 mg twice a day for two days in order to treat pneumonia. There was not any recent insect bites, illicit drug and alcohol use, herbal medications and drug allergies in his history. Angioedema was diagnosed and his antihypertensive and antibiotic medication were stopped. Than angioedema treatment was started with corticosterid, antihistaminic and adrenaline at the emergency department before admission to the intensive care unit (ICU). On admission to ICU he was complaining of difficulty breathing and tongue swallowing but vital signs of the patient were stable. After one hour he had a tonic-clonic seizure and required entubation. Endotracheal entubation was performed successfully and followed on synchronized mandatory ventilation mode. Tonic clonic seizure stopped after the administration of pentothal sodium. White blood cell count was 18.400 and other laboratory findings were normal. Medication of pentothal sodium infusion was started and continued for 2 days. Weaning was planned and extubation was performed successfully after 5 days on admission to ICU. The patient was discharged from ICU.

**Discussion and Conclusion:** Based on patient's medical history and serious consequences, angioedema was on the first line diagnosis of lingual swelling. It is known that, angioedema is often associated with the use of ACE inhibitors and penicillin. However, soon after, we have found that lingual swelling was secondary to self-bite during tonic clonic seizure. A small laceration on the lateral side of the tongue was found as an evidence for traumatic oedema.

According to our experience and literature search, this case is a curious example that meticulous physical examination is vital before proceeding on many clinical emergencies including angioedema.

## P-204

**SHALL WE APPLY CENTRAL VENOUS CATHETERIZATION TO THE PATIENT WITH INR VALUE OF 5 TO WHOM NOT BE ABLE TO FOUND INTRAVENOUS LINE?**

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**Aim:** Central venous catheterization is an application which has an important position and wide range. For haemodialysis, parenteral nutrition, haemodynamic monitoring and prior to major surgery, central venous catheterization is applied. Subclavian and internal jugular veins are usually preferred sites for central venous catheterization. We have presented successful and without complications jugular central venous catheterization case performed to a 5,5 months old patient with INR value of 4,54 suffering from severe dehydration, hyponatremia, acute renal failure, sepsis, pneumonia, gastroenteritis for a month and later measles diagnosis has been made. It has not been having enteral or parenteral treatment, and haven't been able to found any intravenous lines for three days.

**Case:** 5,5 month old male patient with diarrhoea and vomitus for a month who is apathic, severe dehydrated, mucouse membranes dry, fontanelles sunken, with tachycardia and tachypnea, hyponatremic, acute renal failure, septic and lack of nutrition for three days because of not having been able to found intravenous lines. The blood values were like these; WBC: 2,18, Hb: 8.2, Htc: 23, K: 2.8, Sodyum: 115meq/l, kalsiyum 6.9, INR: 4.54, PT: 57.9. Results: Nowadays, it is known central venous line placement applications having lots of usages have some complications. These complications can sometimes reach severe levels. One of these complications is fear of haemorrhage because of the deficits in coagulation profile especially INR value highness. However, in life threatening situations such as with no other lines to treat the patient, INR value highness shouldn't prevent us to apply central venous catheterization. Otherwise the loss of patient will be inevitable.

**Conclusions:** We think that complication fear shouldn't prevent us to reach the result if it is necessary, considering the profits and losses.

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