

Pelvic Floor Digest

This section presents a small sample of the Pelvic Floor Digest, an online publication (www.pelvicfloordigest.org) that reproduces titles and abstracts from over 200 journals. The goal is to increase interest in all the compartments of the pelvic floor and to develop an interdisciplinary culture in the reader.

FORUM

Meta-analysis: Its strengths and limitations. Walker E, Hernandez AV, Kattan MW. *Cleve Clin J Med.* 2008;75:431. A well-designed meta-analysis can provide valuable information for researchers, policymakers and clinicians, however there are many critical caveats in performing and interpreting them, and thus many ways in which meta-analyses can yield misleading information.

Scientific impact of women in academic surgery. Housri N, Cheung MC, Koniaris LG, Zimmers TA. *J Surg Res.* 2008;148:13. Although women comprise a small proportion of principal investigators on abstracts presented at the 2002-2004 conferences of the Association for Academic Surgery and Society of University Surgeons, the quality of their presented work is equal to or better than those of their male counterparts.

Regenerative biology and medicine. Ferretti P. *Regen Med.* 2008;3:477. Bioengineering and bionic intervention aim at achieving in mammals the functional repair that occurs spontaneously in lower vertebrates. Recent developments have hyped the prospects for regenerating tissues and organs, but the hurdles to be overcome are still considerable. An overview is given of both basic biological phenomena underlying repair and regeneration and of how this understanding could be used. In some instances it is already used.

Stem cell innovation in the USA: the benefits of the minimal state. Salter B, Harvey O. *Regen Med.* 2008;3:597. USA, UK, China, India, Australia and Singapore are developing strategies to enhance their competitive edge within the stem cell science and economy. Stem cell is an emerging global industry in which nation states compete fiercely for market advantage.

Advancing tissue engineering by using electrospun nanofibers. Ashammakhi N, Ndreu A, Nikkola L et al. *Regen Med.* 2008;3:547. Electro-spinning is a versatile technique that enables the development of nanofiber-based scaffolds from a variety of polymers that may have drug-release properties. Combining fiber diameter, alignment and chemicals, offers new ways to control tissue engineering. There are already products based on electrospun nanofibers with drug-release properties for wound dressing in a Phase III clinical trial.

Informed consent and the law - an english legal perspective. Hassan M. *Dig Dis.* 2008;26:23. The 'patient-based' and the 'doctor-based' true informed consent approaches in relation to disclosure of risk are compared.

Payment by results and the surgeon: implications for current and future practice. Jameson SS, Reed MR. *Surgeon.* 2008;6:133.

1 – THE PELVIC FLOOR

Effects of pregnancy on pelvic floor dysfunction and body image; a prospective study. Pauls RN, Occhino JA, Dryfhout V, Karram MM. *Int Urogynecol J Pelvic Floor Dysfunct.* 2008 Jun 20; epub. Impact of pregnancy on pelvic symptom-related quality of life and body image was documented by Body Exposure During Sexual Activities Questionnaire, Urogenital Distress Inventory, Incontinence Impact Questionnaire and Fecal Incontinence Quality of Life Scale: poorest body image was noted in the postpartum period. Urinary symptoms worsen during pregnancy with recovery postpartum, while body image suffers most following pregnancy. Quality of life impact of fecal incontinence is stable.

2 – FUNCTIONAL ANATOMY

Histo-topographic study of the longitudinal anal muscle. Macchi V, Porzionato A, Stecco C et al. *Clin Anat.* 2008;21:447. The longitudinal anal muscle (LAM) is a vertical layer of muscular tissue interposed between the circular layers of the internal (IAS) and external (EAS) anal sphincters. From the anorectal junction it extends along the anal canal, receives fibers from the innermost part of the puborectalis and the puboanal muscles, and terminates with seven to nine fibro-elastic septa, which traverse the subcutaneous part of the external anal sphincter, reaching the perianal dermis. It consists of predominantly outer striated muscle fibers and smaller numbers of inner smooth muscle fibers, respectively coming from the levator ani muscle and from the longitudinal muscular layer of the rectum. The helical course of striated and smooth muscle fibers between the EAS and IAS contribute not only to the narrowing but also to some shortening of the anal canal during sphincter contraction.

Purinergic and nitric junction potential in the human colon. Gallego D, Gil V, Aleu J et al. *Am J Physiol Gastrointest Liver Physiol.* 2008 Jul 3; epub. Single pulses elicit ATP release from enteric motor neurons that cause a fast inhibitory junction potential and a transient relaxation that is difficult to maintain over time. Nitric oxide is released at higher frequencies causing a sustained hyperpolarization and relaxation. These differences might be responsible for complementary mechanisms of relaxation being phasic (ATP) and tonic (NO).

Over expression of progesterone receptor b increases the sensitivity of human colon muscle cells to progesterone. Cheng L, Pricolo VE, Biancani P, Behar J. *Am J Physiol Gastrointest Liver Physiol.* 2008 Jul 3; epub. Colon muscle strips and cells from female patients with slow transit constipation (STC) exhibit impaired motility. Overexpression of progesterone receptors-B contributes to the motility and signal transduction abnormalities observed in female patients with STC with normal serum levels of progesterone.

3 – DIAGNOSTICS

Determining the cause of vulvovaginal symptoms. Farage MA, Miller KW, Ledger WJ. *Obstet Gynecol Surv.* 2008;63:445. Patients and clinicians may diagnose incorrectly vulvovaginitis symptoms and patients often self-treat with over-the-counter antifungals or home remedies, although they are unable to distinguish among the possible causes of their symptoms: infectious vulvovaginitis, allergic contact dermatitis, systemic dermatoses, rare autoimmune diseases, neuropathic vulvar pain syndromes.

Electronic pelvic floor symptoms assessment: tests of data quality of ePAQ-PF. Jones GL, Radley SC, Lumb J, Jha S. *Int Urogynecol J Pelvic Floor Dysfunct.* 2008 Jun 14; epub.

Three-dimensional endoanal ultrasound assessment of the anal sphincters during rest and squeeze. Olsen IP, Augensen K, Wilsgaard T, Kiserud T. *Acta Obstet Gynecol Scand.* 2008;87:669. After vaginal delivery the anal canal is shorter and the external sphincter smaller than 0-gravida. Active squeeze has no effect on the dimensions of the sphincter apart from a reduction of the internal sphincter in those who had undergone a complicated delivery, possibly due to a dislodging upwards during squeeze.

Three-dimensional endoanal ultrasound assessment of the anal sphincters: reproducibility. Olsen IP, Augensen K, Wilsgaard T, Kiserud T. *Acta Obstet Gynecol Scand.* 2008;87:675. 3D endoanal ultrasound is a technique for assessing the volume of the anal sphincters, but the reproducibility of the method is scarce, probably due to uncertainty in landmark identification.

4 – PROLAPSES

Feasibility and functional outcome of laparoscopic sacrocolpopexy for combined vaginal and rectal prolapse. Sagar PM, Thekkinkattil DK, Heath RM et al. *Dis Colon Rectum.* 2008 Jul 3; *epub.* A laparoscopic procedure is described (10 patients) using a mesh fixation of the mid-compartment prolapsed vagina, with or without rectocele, to the sacrum with additional rectopexy to correct both the anatomical deformities and the dysfunction of the posterior compartment. The procedure corrects associated rectoceles and descent of the perineum on straining.

COL1A1 Sp1-binding site polymorphism as a risk factor for genital prolapse. Rodrigues AM, Gira MJ, da Silva ID et al. *Int Urogynecol J Pelvic Floor Dysfunct.* 2008 Jun 13; *epub.* The objective of this study was to verify the possible association between the Sp1-binding site polymorphism and genital prolapse, but there was not significant association.

Doppler-guided haemorrhoidal artery ligation: long-term outcome and patient satisfaction. Wilkerson P, Strbac M, Reece-Smith H, Midleton S. *Colorectal Dis.* 2008 Jun 20; *epub.* Doppler-Guided Haemorrhoidal Artery Ligation is a procedure relatively painless (6% of the 113 patients required analgesia), safe and effective (further surgery in 9%) for symptomatic stage I-III haemorrhoids, for which we have demonstrated long-term (30 months) durability and acceptability. Its role lies between office based procedures and more invasive operative interventions.

Life threatening sepsis and mortality following stapled hemorrhoidopexy. Cirocco WC. *Surgery.* 2008;143:824. Stapled hemorrhoidopexy has resulted in potential serious morbidity (perforation, sepsis, obstruction, Fournier's gangrene, rectovaginal fistula, intra-abdominal hemorrhage) and even mortality in the immediate postoperative period. These complications are often heralded by abdominal pain, urinary retention, and fever. Surgeons should be aware of all of the potential complications and associated warning signs and symptoms.

5 – RETENTIONS

Is Botulinum Neurotoxin Type A (BoNT-A) a novel therapy for lower urinary tract symptoms due to benign prostatic enlargement? A review of the literature. Oeconomou A, Madersbacher H, Kiss G et al. *Eur Urol.* 2008 Jun 13; *epub.* Intraprostatic injection of botulinum neurotoxin type A (BoNT-A) provides improvement in patients with lower urinary tract symptoms due to benign prostatic enlargement refractory to medical treatment. So far the therapy is still experimental.

Dorsal buccal mucosal graft urethroplasty for anterior urethral stricture by Asopa technique. Pisapati VL, Paturi S, Bethu S et al. *Eur Urol.* 2008 Jun 9; *epub.* Buccal mucosal graft substitution urethroplasty has become popular in the management of intractable anterior urethral strictures with good long-term results. Excellent results have been reported by both dorsal and ventral onlay techniques. The ventral sagittal urethrotomy approach is easier to perform than the dorsal urethrotomy approach, and is useful in long anterior urethral strictures.

Connective tissue disorder. A new subgroup of boys with slow transit constipation? Reilly DJ, Chase JW, Hutson JM et al. *J Pediatr Surg.* 2008;43:1111. Generalized joint hypermobility is higher in slow transit constipation children, particularly males, suggesting that a disorder of connective tissue synthesis plays a role in the etiology of constipation.

Clinical presentation and patterns of slow transit constipation do not predict coexistent upper gut dysmotility. Zarate N, Knowles CH, Yazaki E et al. *Dig Dis Sci.* 2008 Jul 4; *epub.* Slow transit constipation is associated with esophageal and small bowel motor abnormalities in a subset of patients and this could influence the clinical approach, particularly in those rare cases where surgical management is considered, but prediction of the upper gastrointestinal tract dysmotility on the basis of clinical history and characteristics of colonic transit is problematic.

Aggressiveness and hostility in the family environment and chronic constipation in children. Lisboa VC, Felizola MC, Martins LA et al. *Dig Dis Sci.* 2008 Jul 1; *epub.* In children with constipation a higher prevalence of some emotional aspects was observed.

Successful physical therapy for constipation related to puborectalis dyssynergia improves symptom severity and quality of life. Lewicky-Gaupp C, Morgan DM, Chey WD et al. *Dis Colon Rectum.* 2008 Jun 27; *epub.* Physical therapy for patients with "anismus" is associated with improvements in constipation-related symptoms and in quality of life.

Clinical and morphologic correlation after stapled transanal rectal resection for obstructed defecation syndrome. Dindo D, Weishaupt D, Lehmann K et al. *Dis Colon Rectum.* 2008 Jun 25; *epub.* The clinical improvement of obstructed defecation syndrome after stapled transanal rectal resection (STARR performed in 22 women) seems to correlate with morphologic correction of the rectal redundancy and intussusception.

Mediastinal and retro-/intraperitoneal emphysema after stapled transanal rectal resection (STARR-operation) using the Contour Transtar(R) stapler in obstructive defecation syndrome. Schulte T, Bokelmann F, Jongen J et al. *Int J Colorectal Dis.* 2008 Jul 2; *epub.*

Neurogenic chronic intestinal pseudo-obstruction: antineuronal antibody-mediated activation of autophagy via fas. De Giorgio R, Volta U, Stanghellini V et al. *Gastroenterology.* 2008 May 15; *epub.* In 6/25 patients with established neurogenic chronic intestinal pseudoobstruction CIP (20 women, 5 men) circulating antineuronal antibodies to enteric neurons were found. Novel evidence was provided that such antibodies may contribute to neuronal dysfunction.

6 – INCONTINENCES

Anal sphincter defects and anal incontinence symptoms after repair of obstetric anal sphincter lacerations in primiparous women. Vaccaro C, Clemons JL. *Int Urogynecol J Pelvic Floor Dysfunct.* 2008 Jun 12; *epub.* After anal sphincter laceration repair, anal incontinence symptoms occur in 43% of women and remain chronic in 11%. Incontinence is associated with increasing internal anal sphincter defect size (>=45 degrees).

The effects of antimuscarinic treatments in overactive bladder: an update of a systematic review and meta-analysis. Chapple CR, Khullar V, Gabriel Z et al. *Eur Urol.* 2008 Jun 20; *epub.* Antimuscarinic agents are currently the first-line pharmacotherapy for overactive bladder. They are efficacious, safe, and well-tolerated treatments that improve health-related quality of life. Dry mouth (mild, moderate, severe) was the most commonly reported adverse event (29.6% on treatment vs 7.9% on placebo), followed by pruritus (15.4% on treatment vs 5.2% on placebo). Profiles of each drug and dosage differ and should be considered in making treatment choices.

Tolterodine extended release with or without tamsulosin in men with lower urinary tract symptoms including overactive bladder symptoms: effects of prostate size. Roehrborn CG, Kaplan SA, Jones JS et al. *Eur Urol.* 2008 Jun 17; *epub.* Men with smaller prostates and moderate-to-severe LUTS including overactive bladder symptoms benefited from tolterodine extended release (ER). Therapy with tolterodine ER+tamsulosin was effective regardless of prostate size. Tolterodine ER, with or without tamsulosin, was well tolerated and not associated with increased incidence of acute urinary retention.

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Temperature-controlled radio frequency energy delivery (Secca(R) procedure) for the treatment of fecal incontinence: results of a prospective study. Lefebvre B, Tuech JJ, Bridoux V et al. *Int J Colorectal Dis.* 2008 Jul 2; *epub.* Secca procedures were performed in 15 patients. The mean Wexner score improved from 14.07 (+/-4.5) at baseline to 12.33 (+/-4.6) at 1 year ($p = 0.02$). There were no changes in endoanal ultrasound and anorectal manometry. Although we demonstrated a significant improvement in the score, most patients remained in the moderate incontinences category as defined by the scoring system and did not improve their quality of life excepted in the depression subscore.

Clinical and cost effectiveness of sacral nerve stimulation for faecal incontinence. Munoz-Duyos A, Navarro-Luna A, Brosa M et al. *Br J Surg.* 2008 Jun 23; *epub.* In 47 patients 57 percutaneous nerve evaluations for SNS were performed between 1999 and 2006; 29 patients underwent permanent implantation. After a median follow-up of 34.7 (range 2.3-81.2) months, 25 had a significant reduction in incontinence episodes; 14 patients were in complete remission. At 3-year follow-up, the mean reduction in incontinence episodes was 89 per cent. No change was observed in anal manometric values. Patients reported a significant improvement in quality of life.

7 – PAIN

Chronic pelvic pain in women. Ortiz DD. *Am Fam Physician.* 2008 1;77:1535. Some common diagnoses include endometriosis, adhesions, irritable bowel syndrome, interstitial cystitis, but a specific etiology is usually not found. A limited laboratory and ultrasound evaluation can rule out serious disease and reassure the patient. Few treatment modalities have demonstrated benefit. The evidence supports the use of oral medroxyprogesterone, goserelin, adhesiolysis for severe adhesions, and a multidisciplinary treatment approach for patients without a specific diagnosis, less supporting evidence for oral analgesics, combined oral contraceptive pills, gonadotropin-releasing hormone agonists, intramuscular medroxyprogesterone, trigger point and botulinum A toxin injections, neuromodulative therapies, and hysterectomy.

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Resiniferatoxin in the treatment of interstitial cystitis: a systematic review. Mourtzoukou EG, Iavazzo C, Falagas ME. *Int Urogynecol J Pelvic Floor Dysfunct.* 2008 Jun 19; *epub.* Six studies provided contradictory results regarding the effectiveness of resiniferatoxin treatment (based on the physiopathological concept of the involvement of C fibers and transient receptor potential vanilloid 1 in the transmission of pain), so its value in the treatment of this condition remains unknown.

A mixture of Escherichia coli (DSM 17252) and Enterococcus faecalis (DSM 16440) for treatment of the irritable bowel syndrome - A randomized controlled trial with primary care physicians. Enck P, Zimmermann K, Menke G et al. *Neurogastroenterol Motil.* 2008 Jun 17; *epub.* Therapy trials with bacterial compounds in irritable bowel syndrome (IBS) have produced conflicting results. This study, performed in 1989 on 297 patients, was re-analysed according to current IBS standards. Responders had at least a 50% decrease in global symptom score and in abdominal pain score reports. The responder rate was 68.5% in comparison to placebo 37.8% ($P < 0.001$).

8 – FISTULAE

Gracilis muscle interposition for the treatment of rectourethral, rectovaginal, and pouch-vaginal fistulas: results in 53 patients. Wexner SD, Ruiz DE, Genua J et al. *Ann Surg.* 2008;248:39. The gracilis muscle transposition is a safe and effective method of treating complex perianal fistulas. It was performed in 53 patients, 17 women with 19 interpositions for 15 rectovaginal and 2 pouch-vaginal fistulas; 8 experienced at least one postoperative complication, 2 required a second interposition. Thirty-three percent of the Crohn's disease-associated fistulas successfully healed; 75% without Crohn's successfully healed. The interposition was done in 36 males for rectourethral fistulas, mainly due to prostate cancer treatment, 17 with postoperative complications and an initial success rate of 78%. After successful second procedures in 8 patients the overall clinical healing rate was 97%.

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Transanal repair of rectourethral and rectovaginal fistulas. Razi A, Yahyazadeh SR, Gilani MA, Kazemeyni SM. *Urol J. 2008 Spring;5:111.* Rectourethral, rectovaginal and vesicovaginal fistulas (5 females and 3 male patients) following prostatectomy, urethral stricture repair, colonic resection and radiotherapy due to rectosigmoid cancer, were treated by Latzko technique. The fistula orifice was exposed and a fusiform incision was made with the orifice in its center. The mucosa lying between the incision and the orifice was excised in the direction of the incision to the orifice, leaving the fistula edges to meet. Then, the edges were closed, followed by closure of the muscular layers above it. Finally, the edges of the rectal mucosa were closed. Median follow-up was 44 months.

Cutting seton for complex anal fistulas. Chuang-Wei C, Chang-Chieh W, Cheng-Wen H et al. *Surgeon. 2008;6:185.* Using the elastic band from a surgical glove as a seton with repeated tightening at weekly intervals (mean number of seton ties 3-3 times) is claimed to be safe and effective in the treatment of trans-sphincteric, suprasphincteric fistulas and extrasphincteric fistulas (112 patients, 98 male and 14 female, median follow-up 38.6 months). The mean time of the wound healing was 9.3 weeks. Recurrence was observed in 1 patient, while 24% of the patients resulted with continence disorders (gas in 18% and liquid stool in 5%).

9 – BEHAVIOUR, PSYCHOLOGY, SEXOLOGY

Relationship of specific vaginal bacteria and bacterial vaginosis treatment failure in women who have sex with women. Marrazzo JM, Thomas KK, Fiedler TL et al. *Ann Intern Med. 2008;149:20.* Bacterial vaginosis frequently persists after treatment. To define risks for bacterial vaginosis persistence, including pretreatment detection of specific vaginal bacteria, among 335 women (16 to 29 years) reporting sex with women, an observational cohort study was done. Bacterial vaginosis was treated with intravaginal metronidazole gel (0.75%), 37.5 mg nightly for 5 nights. Among the 24% of the women who also reported sex with men within 3 months before enrollment, 39% had bacterial vaginosis. In the 120 (92%) women who returned for follow-up, the incidence of persistent bacterial vaginosis was 26% being associated with several bacteria in the Clostridiales order, Megasphaera phylotype 2, and P. lacrimalis, suggesting that vaginal microbiology at diagnosis may determine risk for antibiotic failure.

10 – MISCELLANEOUS

Natural orifice hysterectomy. Moen MD, Noone MB, Elser DM. *Int Urogynecol J Pelvic Floor Dysfunct. 2008 Jun 11; epub.* Vaginal hysterectomy exists since over a century as a minimally invasive surgery (MIS). Natural orifice surgery is perceived as a relatively recent development partly because many MIS techniques utilize new technology and devices. Despite the evidence and availability of several MIS options for hysterectomy, the majority of hysterectomies continue to be performed via laparotomy.