Turk J Anaesthesiol Reanim 2017; 45: 239-41 DOI: 10.5152/TJAR.2017.43078

Comment on: Comparison of Intraabdominal and Trocar Site Local Anaesthetic Infiltration Efficacy on Postoperative Analgesia After Laparoscopic Cholecystectomy

İntraabdominal ve Trokar Bölgesine Lokal Anestezik İnfiltrasyonunun Laparskopik Kolesistektomi Sonrası Postoperatif Ağnaljeziye Etkisinin Karşılaştırılması Üzerine Yorumlar

Raghuraman M.S.
Shri Sathya Sai Medical College and Research Institute, Ammapettai,Kancheepuram Dt., Chennai-603108. S.B.V.University, India

Cite this article as: Raghuraman M.S. Comment on: Comparison of Intraabdominal and Trocar Site Local Anaesthetic Infiltration on Postoperative Analgesia After Laparoscopic Cholecystectomy. Turk J Anaesthesiol Reanim 2017; 45: 239-41.

Dear Editor,

I read a very informative and interesting article that was published in TJAR in the December 2016 issue, in which the effects of the trocar site vs. the intraperitoneal local infiltration were compared with a control group, in patients who underwent laparoscopic cholecystectomy (1).

I have some queries/comments regarding the above-mentioned article (1).

In the results section, the p values are mentioned as '>' or '<' in some places instead of '='. For example, the p value of $EtCO_2$ between the two groups is mentioned as p>0.0125; however, I believe that it should be p=0.125 (insignificant), which is also applicable to the p values of visual analogue score (VAS) and total morphine consumption. The p value mentioned in the first sentence of the results section of the abstract, i.e. 'There were no statistical significant differences between the clinical and demographic properties among the three groups (p≥0.005)', is also incorrect; it should have been as p>0.05. It is a normal practice to mention the p-values as such (p=xxxx), from which, it can be interpreted as significant, if the value is <0.05, and insignificant, if the value is >0.05, provided 0.05 is considered as the cutoff value, based on the level of significance. I believe it is more precise to use the term 'comparable' if the p value is >0.05 for demographic and baseline parameters, although the term 'insignificant' is also commonly used. These are only typographical errors, which can occur with anybody and can be considered "insignificant".

However, the main point of contention in the abovementioned article is the interpretation of the results of one parameter, i.e. 'shoulder pain'.

Shoulder pain was least in the intra-peritoneal group (six), followed by the trocar infiltration group (eight) and then the control group (seventeen); please refer to Table 1 of the article. However, the authors have incorrectly interpreted these results in the fourth paragraph of the discussion section, although the other two parameters, namely VAS scores and morphine consumption, were correctly interpreted.

Because of this misinterpretation, the subsequent sentence, i.e. "The higher incidence of shoulder pain in the group in which we intraperitoneally administered a local anaesthesia can be explained by the fact that the local anaesthesia was diluted and that a drain was used to observe potential bile leakages" is factually and logically incorrect. The incidence of shoulder pain was lowest in the "intra-peritoneal" group, among all the three groups. In addition, although there is an effect of dilution in the intra-peritoneal group, the amount of local anaesthetic in the subdiaphragmatic region would be still higher than that in the trocar infiltration group. Initially, I thought that there would not be the possibility of any amount of local anaesthetic in the subdiaphragmatic region in the trocar infiltration group. This line of thinking helped me to unearth the fact that the incidence of shoulder pain was "lowest" in the "intra-peritoneal" group. However, I realised later that there would be possibility of some amount of local anaesthetic in the subdiaphragmatic region in trocar infiltration group, [albeit, lesser than intra-peritoneal group] which could explain the fact

Address for Correspondence/Yazışma Adresi: Raghuraman M.S. E-mail: drraghuram70@gmail.com

Received / Geliş Tarihi : 09.03.2017
Accepted / Kabul Tarihi : 22.03.2017

that the incidence of shoulder pain was significantly lesser in the trocar group also when compared to the control group. There could be some spillage of local anaesthetic in the trocar group, which can explain this fact.

In the results section of the article (1), the sentence 'group III [control] had more frequent shoulder pain than groups I and II ($p<0.05$)' is correct (17 vs. 8 and 6, respectively). Nevertheless, if we compare groups I and II, shoulder pain is slightly lower in the group II (intra-peritoneal) than in the group I (trocar infiltration), i.e. (6 vs. 8). Although this may not be statistically significant, it explains my assessment.

I hope that the authors, reviewers, and editor will agree with my line of thinking.

Kandil et al. (2) observed that the referred pain was significant if the duration of surgery was >45 min. Here, the duration of surgeries among all three groups was 'comparable', with $p=0.557$ and the same average of 45 min in all three groups (1). Hence, duration of the surgery cannot be considered as a contributing factor in this study.

References

1. Altuntaş G, Akkaya ÖT, Özkan D, Sayın MM, Balas Ş, Özlü E. Comparison of Intraabdominal and Trocar Site Local Anaesthetic Infiltration on Postoperative Analgesia After Laparoscopic Cholecystectomy. Turk J Anaesthesiol Reanim 2016; 44: 306-11. [CrossRef]
2. Kandil TS, El Hefnawy E. Shoulder pain following laparoscopic cholecystectomy: factors affecting the incidence and severity. J Laparoendosc Adv Surg Tech A 2010; 20: 677-82. [CrossRef]

Author's Reply

Re: Comment on: Comparison of Intraabdominal and Trocar Site Local Anaesthetic Infiltration on Postoperative Analgesia After Laparoscopic Cholecystectomy

Dear Editor,

We curiously read Dr. Raghuraman's comments and positive critiques (1) on our paper entitled "Comparison of Intraabdominal and Trocar Site Local Anaesthetic Infiltration on Postoperative Analgesia After Laparoscopic Cholecystectomy".

While presenting the results in the article, it is a general practice to give p values as "$p<0.05$" or "$p=...$". However, our statisticians insisted on presenting the p values such as "$p<0.0071$", which are values calculated by Bonferroni correction. Likewise, it is possible to come across with many articles in the literature using Bonferroni correction and presenting p values other than conventional presentation of p values (2-4). While using non-parametric tests, in the condition if the distribution of the cases are not even, there could be p values are calculated other than conventional p values, to reject the null hypothesis, which can ve presented a "$p<0.00...$". Therefore, instead of using conventional significance levels to reject the null hypothesis, new significance values are calculated. As, non-parametric Bonferroni correction test has been used in this case, the significance values are peresented as unconventional way. However, the point should be to make minds clear. Whatever the nomenclature is, it is important to show the values are statistically significant.

The results of the article on shoulder pain demonstrates that number of patients with pain in the group I and group II are statistically lower than group III. So, we can clearly claim that both interventions are effective when compared with control group. However, it has been misinterpreted that the use of intraperitoneal local anaesthetic was less effective in terms of shoulder pain. It is impossible to claim one of the methods is better than the other, but further studies must be provided to clarify the difference between local anaesthetic infiltration or intraperitoneal local anaesthetic infiltration.

It is a truth to claim that shoulder pain is proportional with the duration of laparoscopic surgery. However, shoulder pain can be observed in cases with relatively shorter duration of surgery. In a study by Donmez et al. (5) shoulder pain is observed in 60% of the cases where mean duration of surgery was 35 minutes. Likewise, in the study of Hajong et al. (6), 50% shoulder pain was observed, where the mean duration of laparoscopic surgery was 44 minutes. In our study, mean duration of surgery was 45 minutes and there was shoulder pain in the 60% of the patients which was comperable with the literature.

Gülsüm Altuntaş[1], Ömer Taylan Akkaya[1], Derya Özkan[1], Mehmet Murat Sayın[1], Şener Balas[2], Elif Özlü[3]

[1]Clinic of Anaesthesiology and Reanimation, Ministry of Health Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey

[2]Clinic of General Surgery, Ministry of Health Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey

[3]Department of Anaesthesiology and Reanimation, İstanbul University İstanbul School of Medicine, İstanbul, Turkey

Cite this article as: Altuntaş G, Akkaya ÖT, Özkan D, Sayın MM, Balas Ş, Özlü E. Re: Comment on: Comparison of Intraabdominal and Trocar Site Local Anaesthetic Infiltration on Postoperative Analgesia After Laparoscopic Cholecystectomy. Turk J Anaesthesiol Reanim 2017; 45: 240-1.

References

1. Raghuraman M.S. Comment on:Comparison of Intraabdominal and Trocar Site Local Anaesthetic Infiltration on