

Title: Dexmedetomidine in pediatric unilateral internal inguinal ring ligation

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Response to Reviewers' comments

Dear Editor,

We thank you for your careful consideration of our manuscript. We appreciate your response and overall positive initial feedback and made modifications to improve the manuscript. After carefully reviewing the comments made by the Reviewers, we have modified the manuscript to improve the presentation of our results and their discussion, therefore providing a complete context for the research that may be of interest to your readers.

One-by-one answers to all comments and suggestions are added below. We hope that you will find the revised paper suitable for publication, and we look forward to contributing to your journal. Please do not hesitate to contact us with other questions or concerns regarding the manuscript.

Best regards,

Reviewer #1:

Specific Comments to Authors: Overall, this manuscript is written appropriately, and the conclusions are consistent with the results, without any apparent attempt by the authors to inappropriately stress some aspects. Actually, the authors should better emphasize what is the main point of using D rather than S (or DS) considering the comparable analgesic effect.

*Moreover, the authors should provide information about the complete post-surgery management, in addition to the operative anesthesia. Did the study population receive additional drugs (e.g. NSAIDs) during the 48 hours after the operation, which is the time window analyzed in this study? Indeed, NSAIDs (and, probably, ibuprofen and paracetamol) are largely used in this pediatric surgery setting for pain management (as extensively and recently reviewed in: *Pediatr Emerg Care*. 2019 Jun;35(6):448-453. doi: 10.1097/PEC.0000000000001505). Indeed, some previous article reported the use of ibuprofen in this specific (inguinal ring ligation) setting, too. For instance, recent studies about pediatric hernial surgery (including also the use of D) reported that (*J Anaesthesiol Clin Pharmacol*. Jul-Sep 2021;37(3):389-394. doi: 10.4103/joacp.JOACP_175_19; *Anesth Analg*. 2021 Jul 1;133(1):168-175. doi: 10.1213/ANE.0000000000005284). Therefore, I would recommend the authors to consider in their analysis (results) this point and include ibuprofen and its impact in their clinical experience in the discussion. Tables are clear enough. The references have to be updated and completed based on the additional analysis and discussion, as reported above.*

Response: We thank the Reviewer for the comments and suggestions. Discussion section has been amended in order to approach above points and make our position clearer. First, we believe that in addition of comparable analgesic effect, D is more selective, has a shorter half-life, and thus shorter action time which is preferable in the context of avoiding side effects in pediatric patients (page 14, last paragraph). Second, (re: additional drugs) the study was completed 48 h after the surgery; during the study period, no other drug was administrated (page 9, 2nd paragraph). After the data were collected, for the children in D group or S group with the FLACC pain score ≥ 7 points, another analgesic drug was added to combination for alleviating the pain, however this data has not been analyzed in the current manuscript. Although our study excluded the use the NSAIDs or any other medication during 48h period after surgery, searching for suitable combinations or alternatively proving the superiority of monotherapy is one of the potential directions for the future research (page 15, first paragraph). The references list has been updated and completed based on the additional analysis and discussion.

Reviewer #2:

I suggest to improve language quality. I find some errors in the grammar and syntax. I have no further observations.

Response: We thank the Reviewer for the comment. The manuscript was polished by a native speaker, and we have carefully checked the manuscript again in order to improve the language.