Reviewer’s report

Title: Postoperative pain relief using intermittent intrapleural analgesia following thoracoscopic anterior correction for progressive adolescent idiopathic scoliosis

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Reviewer: Tomasz Kotwicki

Reviewer’s report:

This paper presents one centre experience in postoperative pain management with peri-spinal bupivacaine after anterior thoracoscopic scoliosis correction. The issue is clinically important and the paper provides interesting data. The anterior scoliosis correction is performed nowadays less often comparing to the posterior one, so an experience of a specialized centre is worth to share. The results of anterior scoliosis surgery have been reported to be very positive when indications and anterior thoracoscopic surgery rules are strictly followed. The centre presenting the paper to be reviewed seems to have large experience in TASF.

The data presentation is correct even if 32 patients only out of 205 could be analyzed. The method of pain management endorsed by the centre revealed effective however, it required solid education of the nurse staff. Table 1 provides the nurse protocol and is a valuable completion of the paper. This reviewer’s opinion is that closing and opening chest catheter together with administration of local anesthetic may be considered demanding in non-trained teams. Also, the VAS pain monitoring every hour is optimistic and justified even if not always realistic. The method of pain management described in the paper is certainly possible to be endorsed in a specialized hospital but not sure if it can be recommended in cases when anterior spinal surgery is done occasionally only. The reported mean duration of postoperative catheter analgesia of 2.5 days is in line with this reviewer’s experience concerning pain intensity following scoliosis surgery. This reviewer clearly supports the use of VAS in pain monitoring. The protocol developed in the centre is of great value for other teams seeking to introduce the method.

Minor revisions:

The presentation of the Figure 4 is confusing, at least for this reviewer. Why the percentages of frequency do not sum up to 100% but they exceed 100% ? Isn’t it rather the number of boluses than the frequency (percentage of patients) on your Y axis ?

There is no analysis of the chest tube removal on pain and analgesia. Don’t the authors consider the chest tube itself being an important pain factor in adolescents mobilized for respiratory exercises in post-op period? Could the authors comment on it?
**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.