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Letter to the Editor

Laparoscopic-guided regional blocks for pain management in pediatric laparoscopy☆,☆☆

Dear Editor:

We read with great interest the article titled "No pain is gain: A prospective evaluation of strict non-opioid pain control after pediatric appendectomy" by Gee and colleagues [1]. We congratulate them. The authors employed an educational intervention to reduce opioid use in children undergoing laparoscopic appendicectomy for non-perforated acute appendicitis. This involved parent education, use of non-opioid medications for postoperative pain, and monitoring of postoperative pain control using a RedCap survey. In addition, local infiltration analgesia (LIA) was used during the procedure. Although pain scores on postoperative day 1 were above the level for adequate pain control (i.e., FACES score <4), the intervention resulted in adequate pain relief in most patients during day 2 to 5 after surgery.

Multimodal analgesia with systemic nonsteroidal anti-inflammatory drugs, opioids, and LIA is commonly accepted as the reference standard for postoperative pain management in pediatric laparoscopy. Despite being safe in children [2,3], the use of regional analgesia, notably, transversus abdominis plane (TAP) and rectus sheath (RS) blocks is however less appreciated. These opioid-sparing regional blocks were shown to significantly improve pain control and reduce opioid requirements in the immediate postoperative period, and they are superior to LIA [3]. Both types of regional blocks are often performed using a blind loss-of-resistance technique or under ultrasound guidance. Recently, laparoscopic-guided TAP and RS blocks have been described, which involve deposition of local anesthetic in the TAP and posterior rectus sheath plane, respectively, under direct vision of the laparoscope. These techniques are pragmatic, surgeon-friendly, allow more accurate injection of local anesthetic compared to blind techniques, and obviate the need for ultrasound skills. While laparoscopic-guided RS block is more appropriate for laparoendoscopic single-site surgery, laparoscopic-guided TAP block can be used for both upper and lower abdominal procedures, including conventional laparoscopic appendicectomy. Performing RS block under laparoscopic-guidance in children was shown to be as reliable as ultrasound-guided technique, and is associated with reduced operative time [4]. Similarly, we recently demonstrated that laparoscopic-guided TAP block is equivalent to the commonly used ultrasound-guided method in adult patients undergoing minimally invasive surgery, and provides superior early pain control, lower opioid consumption, and better patient satisfaction compared to LIA [5]. To our knowledge, this method has not been employed in children.

We believe that integration of laparoscopic-guided regional blocks as effective components of the educational intervention in the study by Gee et al. would have helped optimizing early postoperative pain control and would have further reduced the requirements for over-the-counter medications. We therefore encourage the authors to do a similar study following incorporation of regional blocks into their practice.

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