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LATERAL QUADRATUS LUMBORUM BLOCKS FOR UNILATERAL ORCHIDOPEXY SURGERY: A BETTER ALTERNATIVE TO CAUDAL EPIDURAL BLOCKADE?

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Introduction:

Lateral quadratus lumborum blocks (LQLB) successfully provide analgesia for patients undergoing lower abdominal surgery (1). They offer analgesic coverage of intra-abdominal viscera through extension of local anaesthetic to the paravertebral space and avoid serious complications associated with neuraxial blockade (2,3). Despite this, caudal epidural blockade (CEB) remains a mainstay technique in paediatric patients undergoing urological and lower abdominal surgeries. However, as patients grow, CEB becomes technically challenging (4). Alternatives include truncal blocks such as ilio-inguinal and ilio-hypogastric nerve blocks (II-IHNB) and transversus abdominis plane blocks (TAPB) which are purely somatic and lack visceral coverage.

Aims:

This review aims to assess if LQLBs are a suitable alternative to CEB, II-IHNBs and TAPBs for paediatric patients undergoing unilateral day-case orchidopexy surgery.

Methods:

A retrospective case notes review was performed of all patients who had undergone an elective unilateral day-case orchidopexy surgery between April and December 2021 at the authors' institution. Analysis of peri-operative records and prescription records was performed. Data collection and statistical analysis was performed using Excel (Microsoft Corporation).

Results:

Ninety-four patients underwent unilateral orchidopexy surgery over the 261-day study period. Seven patients met the exclusion criteria yielding a sample of 87 patients. Sample ages ranged from 9 months to 16 years with an average of 5.8 years; 23% (20), 14% (12), 24% (21) and 17% (15) received CEB, LQLB, II-IHNB and TAPBs respectively. Of these, 15% (3) and 8% (1) of CEB and LQLB experienced a complication respectively (e.g., failed procedure, vascular puncture, multiple attempts, and femoral block). A total of 5% (1), 8% (1), 19% (4) and 20% (3) of patients receiving CEB, LQLB, II-IHNB and TAPB respectively required opiate analgesia in first-stage recovery and a further 5% (2), 17% (2), 10% (2) and 20% (3) required opiate analgesia in second-stage recovery. The average length of stay (ALOS) for CEB, LQLB, II-IH and TAPB was 02:01 hours, 02:45 hours, 02:32 hours and 02:35 hours respectively. Following administration of post-operative opiates, ALOS increased to 03:23 hours. One patient who underwent CEB was admitted overnight whereas there were no inpatient admissions for those undergoing LQLB, II-IHNB or TAPB.

Discussion and Conclusion:

This pragmatic review has analysed our institution's practice and outcomes for one commonly performed surgical procedure. Our results suggest that LQLB provides similar post-operative analgesia compared to CEB with fewer complications. Our results also suggest that LQLB is superior to II-IHNB and TAPB as fewer patients required rescue analgesia. Furthermore, given the increased ALOS when post-operative opiates were used, we suggest an opiate free approach with LQLB. To conclude, the authors posit that LQLB is a non-inferior alternative to CEB for unilateral day-case orchidopexy surgery that avoids the complications of central neuraxial blockage.

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