

The possibilities and challenges in pain management of a child with 26 fingers posted for polydactyly excisions of all 4 limbs!

Dear Editor,

Untreated acute pain inflicts unprecedented suffering in children, with long-term effects on the nervous system.^[1]

More over amputation of digits have a unique impact due to the possibility of phantom pains.^[2] Prior research has substantiated the benefits of regional blocks in pain relief^[3] but in multiple blocks, the dosage could be an issue in kids. Ultrasonography (USG) gives added advantage to administer blocks with minimum dosage of LA.^[4]

With this in mind, we present a 10 year old boy, 23 kgs, of ASA 1 category, posted, for excision with osteotomies of toes and fingers. He had a total of 26 fingers; 7 fingers on both feet and 6 fingers on both hands [Figure 1]. After informed parental consent, mask induction with Sevoflurane was accomplished,



Figure 1: Polydactyly Anomaly Hands and Feet with X-Rays

left external jugular vein [Figure 2] cannulation, as the surgery required preparation of all limbs. LMA No 2.5 was inserted after IV Propofol 2 mg/kg and 1 mg/kg of Ketamine. Anaesthesia was maintained with Sevoflurane 2 vol% in 50% oxygen/air. Fentanyl 2 mcg/kg was reserved for block failures.

The gist was to use USG^[5] for all blocks to limit volume without reducing efficacy. Single shot axillary block for the left arm procedure was chosen since surgery involved only soft tissues. Infraclavicular block was given on the right side for bony osteotomy of digits along with tourniquet. USG helped to make sure of the drug deposition in caudal block because in grown up children it usually gets difficult.^[6] A volume of 25 ml with 20 ml of 0.25% of Bupivacaine and 5 ml of 2% Lignocaine adrenaline, with 20 mcg of Clonidine was used. 10 ml, 7.5 ml and 7.5 ml respectively were used for caudal block and each upper extremity block respectively. Intraoperatively no rescue analgesia was required. The surgeries were performed one after another under tourniquet lasting 4 hours. At the end of the surgery, left cubital vein was secured and EJV cannula was removed. Post-operatively oral Ibuprofen 200 mg twice a day and Paracetamol 20 mg/kg loading dose (46 ml) and 15 mg/kg three times a day (35 ml) thereafter was given. Tablet Ultracet (Tramadol 37.5 mg + Paracetamol 325 mg) was kept as a rescue. VAS score was recorded every 2 hours till discharge. The overall analgesic time was 16 hours, including the intraoperative period.

He specifically mentioned of pain in the amputated digits, once, 16 hours post-surgery and received tablet Tramadol. Post this, he had satisfactory pain score for 48 hours and was discharged and was comfortable with tablet Paracetamol and Ibuprofen when followed up at home.

One drawback was to forego the continuous block for the bilateral lower extremity surgery. The reasons being,



Figure 2: EJV Cannula for Surgery, Pulse Oximetry Probe on Earlobe and Patient Position with Monitors

Clonidine was added to enhance duration and early discharge was planned. While it would have been a better alternative, we achieved reasonably good post-operative pain relief. It would have perhaps prevented that lone episode of severe pain. But there would be a consideration for placement of a urinary catheter and increase in the duration of hospital stay.

In conclusion, this case advances the idea that simultaneous four extremity blocks can be given in kids safely.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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