
Local anaesthetic systemic toxicity in paediatric patient: Tips to prevent

To,

The Editor

We read the correspondence “Pediatric eye block and local anesthetic systemic toxicity” written by Dr. Ana C. Mavarez *et al.* with great interest.^[1] This article highlighted the local anaesthesia systemic toxicity (LAST), a preventable

complication and its timely management in the paediatric patient.

We want to highlight few other points to prevent LAST in a child. The local anaesthetic (LA) dosing guidelines based on weight does not predict serum level of LA reliably and hence toxicity can occur lower than anticipated dose.^[2] As the concentration of LA is one of the very important determinant factors to reduce LAST.

We are concern about the concentration of LA drugs used for this patient, i.e., 0.75% bupivacaine and 4% lignocaine (total 3 ml) at the start and end of the surgery.

As paediatric patients cannot cooperate, general anaesthesia is required along with local anaesthesia. The concentration of LA should be lower as it is required for analgesia not for anaesthesia in paediatric patient. Bupivacaine 0.25% and lidocaine 1% is safe for analgesia along with general anaesthesia. In the present case, author has used a higher concentration of LA leading to a higher dose of both the drugs and LAST.

Jean *et al.* also suggested weight-based submaximal dosing of LA in paediatric patients.^[3] American society of regional anaesthesia guideline for neuraxial block advocates the use of the lowest concentration of local anaesthetics to prevent LAST. This principle can be applied to other peripheral nerve blocks.^[4]

It is difficult to understand weight of 2-month-old child weighing 12 kg. It is not evident in the article whether subtenon or peribulbar block was administered before and after the surgery. The anatomy of the orbit gets distorted after enucleation; hence, it may increase incidence of complications.^[5]

We suggest use a lower concentration of LA and try to avoid repeat block within 3–4 h of first block in paediatric patient to prevent LAST.^[5]

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Conflicts of interest
There are no conflicts of interest.

RENU SINHA, NISHANT PATEL, KANIL R. KUMAR
Department of Anaesthesiology, Pain Medicine and Critical Care, All India Institute of Medical Sciences, New Delhi, India

Address for correspondence:


Dr. Nishant Patel,
Room Number 5013, 5th Floor, Teaching Block, Department of Anaesthesia, Pain Medicine and Critical Care, All India Institute of Medical Sciences, New Delhi - 110 029, India.
E-mail: pateldrnishant@gmail.com

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References

1. Mavarez AC, Palte HD, Rodriguez LI. Pediatric eye block and local anesthetic systemic toxicity. *Saudi J Anaesth* 2020;14:287-8.
2. Dickerson DM, Apfelbaum JL. Local anesthetic systemic toxicity. *Aesthet Surg J* 2014;34:1111-9.
3. Jean Y, Kam D, Gayer S, Palte H, Stein A. Regional anesthesia for pediatric ophthalmic surgery: A review of the literature. *Anesth Analg* 2019;1. doi: 10.1213/ANE.0000000000004012.
4. Neal JM, Bernards CM, Butterworth JF 4th, Di Gregorio G, Drasner K, Hejtmanek MR, *et al.* ASRA practice advisory on local anesthetic systemic toxicity. *Reg Anesth Pain Med* 2010;35:152-61.
5. NYSORA. Local And Regional Anesthesia For Ophthalmic Surgery. NYSORA; 2020.

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