

EP173

LOCAL ANESTHETIC SYSTEMIC TOXICITY AND THE ASSESSMENT OF THE MAXIMUM ALLOWABLE DOSE OF LOCAL ANESTHETICS: RESULTS OF AN INTERNATIONAL SURVEY

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10.1136/rapm-2023-ESRA.234

Background and Aims Calculating local anesthetic (LA) dosing is essential to decrease the risk of Local Anesthetic Systemic Toxicity (LAST). Determining the maximum allowable dose in individual patients is challenging, particularly when nerve blocks are used in combination with intraoperative local infiltration anesthesia (LIA) by surgeons. We polled anesthesia practitioners on their methods to estimate the maximum allowable LA dose and how they factor-in the administration of LA by the surgeon in addition to regional anesthesia.

Methods A survey on the methods to determine the maximum allowable LA dose was sent to 82.820 NYSORA newsletter subscribers. The survey comprised questions on the methods of LA dose calculation, questions on LA mixtures, and questions on ultrasound guidance (Appendix 1).

Abstract EP173 Table 1 Appendix 1

Question number	Question
1	In your practice, do you consider the combination of local anesthetics delivered to adult patients from both anesthesiology and the surgeon? For example, you do an adductor canal block and the surgeon does local infiltration anesthesia?
2	Do you think these combinations can lead to a higher total dose of local anesthetic than is safe?
3	Have you or your colleagues ever observed local anesthetic toxicity in adults?
4	Do you typically use the same dose of local anesthetic in every adult patient?
5	Before administration, do you calculate the total allowable dose of local anesthetic for every adult patient?
6	If and when calculating the total allowable dose of local anesthetic, do you include the dose that will be additionally administered by the surgeon?
7	Do surgeons in your facility typically ask you for the total dose of local anesthetic they can safely administer? For example in plastic surgery.
8	What reference/source do you consult to determine the total allowable dose of local anesthetic?
9	Do you sometimes mix local anesthetics?
10	What is the most common mixture you use?
11	Do you use additives in your local/regional anesthesia solutions?
12	What additives do you use?
13	Do you routinely perform peripheral nerve blocks under ultrasound guidance?
14	What is the reason for not using ultrasound guidance?
15	Have you reduced the anesthetic dose when using ultrasound guidance compared to landmark techniques?
16	If no, why not?

Results Of the 82.820 survey recipients, 461 (0.6%) replied. Over half of the responders (52%) witnessed LAST at least once in their practice. Nevertheless, 26.5% indicated that they do not routinely factor-in additional doses of LIA by surgeons. Forty percent reported that there is insufficient communication with surgeons to estimate the maximum allowable dose of LA, with 71% of responders expressing concern that this may increase the risk of LAST.

Conclusions Over half of the respondents observed LAST at least once, suggesting that the risk of LAST continues to threaten patient safety. Not routinely calculating the maximum dose, including the additional intraoperative LIA by surgeons, may increase the risk for LAST. Developing a tool to determine the maximum allowable dose for multiple LA administrations (i.e., regeneration rate) in individual patients may be beneficial to patient safety.

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SERRATUS ANTERIOR PLANE CATHETER VS LIPOSOMAL BUPIVACAINE FOR POST-OPERATIVE ANALGESIA: PATIENT SATISFACTION AND QUALITY OF RECOVERY

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10.1136/rapm-2023-ESRA.235

Application for ESRA Abstract Prizes: I apply as an Anesthesiologist (Aged 35 years old or less)

Background and Aims Oncological breast surgery is associated with significant postoperative pain. PROSPECT guidelines recommend regional anaesthesia for postoperative pain management following mastectomy [1]. Single shot blocks with standard local anaesthetics are limited in duration. We aimed to compare two regional techniques that are currently used at our trust to prolong the duration of post operative analgesia.

Methods We prospectively reviewed 37 mastectomies (September 2021 – March 2023). The patients either received serratus anterior plane catheters through which local anaesthetic was delivered for up to 72 hours postoperatively or preoperative serratus anterior plane blocks using Liposomal Bupivacaine. We compared patient satisfaction and quality of recovery scores in the two groups.

Results There was no clinically significant difference in use of rescue oral opioids in PACU or at home up to post operative day 2 between the groups. Post operative sleep quality was also similar apart from day 2 when Liposomal patients reported better sleep quality. Both patient groups reported high satisfaction scores with analgesia and recovery.

Conclusions 1. High patient satisfaction with both groups 2. Patients highly recommend both techniques. 3. Marginally better sleep quality in the group that received Liposomal Bupivacaine. 4. Both are valid techniques, providing similar pain relief and quality of recovery.

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