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CORRESPONDENCE

Is 60 mg a suitable dosage for same-day spinal prilocaine?

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To the Editor,

We read with interest the recent article published by Aguirre *et al*. regarding the comparison between intrathecal hyperbaric 2% prilocaine and plain ropivacaine for same-day arthroscopic knee surgery.[1] The authors evaluated the primary endpoint as the time from spinal anesthesia to complete motor block resolution, considering a reduction of 30 min using 2% prilocaine as clinically significant. Aguirre *et al*. concluded that the median discharge time (330 min in the prilocaine group *vs* 335 min in the ropivacaine group) was almost the same, although there was a faster motor recovery with prilocaine than with ropivacaine.

In our opinion, the main limitation of this study is the selection of the dose of hyperbaric prilocaine. The authors justified the choice of 60 mg of prilocaine according to a previously published study by Camponovo *et al*. in 2010.[2] Camponovo *et al*. tested the efficacy and safety of 60 mg of 2% hyperbaric prilocaine against a lower dose of 40 mg. Although 13% of patients treated with 40 mg of hyperbaric prilocaine in that study required supplementary analgesics prior to the end of surgery, the vast majority of the patients treated with this dosage (all patients except one) showed a T10-level sensory block after spinal administration. Moreover, 40 mg of 2% hyperbaric prilocaine allowed a complete recovery from motor block, otherwise defined as mean time to unassisted ambulation, in 92 min with a discharge time of 208 min.[2] In comparison, 2% hyperbaric prilocaine 60 mg and 2% plain prilocaine 60 mg allowed complete recovery in 118 min and 157 min, respectively. In agreement with these previous findings by Camponovo *et al*., an article published in the *Journal* in 2014[3] showed that the effective dose $(ED)_{90}$ of intrathecal hyperbaric 2% prilocaine in ambulatory knee arthroscopy is 40 mg. This study also showed that discharge criteria were achieved after 205 min, when all patients recovered sensory function and could spontaneously urinate.

Although we view the dosage of 2% hyperbaric prilocaine administered by Aguirre *et al*. as higher than required for the clinical context evaluated, we consider the ropivacaine dose (12 mg) as an appropriate choice. Recently, Xu *et al*.[4] verified that the ED_{50} for plain ropivacaine was 9.7 mg. Previous studies[5] attested that a 12-mg ropivacaine dose is adequate for same-day surgery and equivalent to 8 mg of plain bupivacaine.

Furthermore, Aguirre *et al*. reported a significant difference between first spontaneous voiding and patients' discharge time. It is not immediately clear why there was a noteworthy time interval between these two variables. We would expect that the recovery of spontaneous micturition would be the last step immediately before patients' discharge,[6] and therefore, we would encourage the authors to provide an explanation for this interval between spontaneous voiding and discharge home.

In conclusion, it is our view that the results of Aguirre *et al*.'s study were mainly influenced by the high selected

This letter is accompanied by a reply. Please see Can J Anesth 2016; 63: this issue.

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dose of 2% hyperbaric prilocaine. Although the equivalent volume of the two solutions ensured the double-blinded design of the study, in our opinion, the two selected doses were not equipotent for intrathecal use.

Conflicts of interest None declared.

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