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Invited Commentary on Postinterventional Patient Comfort After Uterine Artery Embolization and Superior Hypogastric Nerve Block

Pasteur Rasuli[1]

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Introduction

The effectiveness of the superior hypogastric nerve block (SHNB) in reducing pain after uterine artery embolization (UAE) has been validated in several publications since it was first described in 2004 [1]. However, the duration of the pain control effect rendered by the SHNB in the context of UAE has not been previously reported.

The retrospective study of 53 patients undergoing UAE with SHNB by Steffen et al. [2] in this issue of CVIR is the first such report assessing the duration of pain relief following SHNB in the setting of UAE. The authors of this study have shown that SHNB with the use of 20 ml Ropivacaine 0.75% mixed with 75 mg of Clonidine provides pain relief of approximately 9 h, based on visual analog scale (VAS).

The importance of knowing this figure is that one can pre-empt the outbreak of pain, particularly in the outpatient setting by administering oral pain medication before pain appears.

Adjunct use of clonidine to boost the effectiveness of local anesthetics has been advocated for use in epidural anesthesia, but not so much for regional nerve blocks. The reasoning is that Clonidine is a vasodilator and is believed to reduce pain by the stimulation of alpha-2-receptors in the dorsal horn of the cord. For regional blocks, some have suggested using mixture of epinephrine 1:200,000 ratio with the Ropivacaine or Bupivacaine. Although this may not improve the duration of block, the addition of epinephrine has proven to be a useful indicator of inadvertent intravasation of anesthetic, which will cause a rapid rise in the pulse rate, alerting the operator to the occurrence of such intravasation.

A second modification which could potentially increase the duration of the anesthetic is replacing Ropivacaine with Bupivacaine, which is a stronger local anesthetic, or a third modification would be to increase the injected dose. Although in the original publication [1], 20 ml of Bupivacaine 0.25% was recommended, we have since raised this volume to 30 ml with no ill effect, in the hopes of increasing the duration of the nerve block.

The Steffen et al.'s study also opens the doors for future studies comparing the duration of pain-free state using different local anesthetics, different doses, or combination of anesthetics with other medications like Clonidine. Such comparisons with the use of VAS, or by using IMed pump and marking patients' first use of it as a point of pain return, or a combination of the two methods could establish the best formula for increasing the duration of the nerve block in patients undergoing UAE.

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Declarations

Conflict ot interest The author has no conflict of interest to declare.

Ethical Standards This commentary is in compliance with the ethical standards.

✉ Pasteur Rasuli
prasuli@rogers.com

[1] The University of Ottawa and The Ottawa Hospital, 7 Bracken Court, Ottawa, ON K1J8N5, Canada

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