

Situations Where Intravenous Lidocaine Should Not Be Used as an Analgesic Adjunct?

To the Editor:

In their excellent review, Dunn and Durieux¹ examine the use of perioperative intravenous lidocaine as an analgesic adjunct. There are situations where additional local anesthetics may be used, thereby raising the concern of local anesthetic toxicity. Such situations include patients receiving either a transverse abdominis plane block, another regional nerve block, infiltration of the wound, or instillation into a joint. It may be possible if infiltration, instillation, a transverse abdominis plane block, or other regional nerve block is administered at the end of the case that intravenous lidocaine can be used during the case, hopefully accruing some benefit, and then turned off at the time of the block. It might be that the waning of the lidocaine infusion blood levels will be roughly matched by the rising blood levels from the block and toxicity would be unlikely. Are there any data to guide the decision to use intravenous lidocaine in these situations and to verify the safety of this approach? It would seem that if the blocks are administered at the beginning of the case, there may be a higher risk of local anesthetic toxicity, but with a working block, the lidocaine infusion would not be as helpful.

I would be hesitant to use intravenous lidocaine for large liposuction cases, because there can be large doses of local anesthetic administered in the tumescent solution that can potentially cause the blood level to rise to toxic levels. It would seem safe to use intravenous lidocaine during spinal, but not epidural, anesthesia, because the amount of local anesthetic administered in a spinal is small. If the epidural infusion is maintained postoperatively, intravenous lidocaine would not be as helpful. Are there any data that addresses these situations?

Competing Interests

The author declares no competing interests.

Jonathan V. Roth, M.D., Albert Einstein Medical Center, Philadelphia, Pennsylvania. rothj@einstein.edu

References

1. Dunn LK, Durieux ME: Perioperative use of intravenous lidocaine. *ANESTHESIOLOGY* 2017; 126:729–37

(Accepted for publication September 8, 2017.)

In Reply:

We thank Dr. Roth for his response to our Clinical Concepts and Commentary article.¹ Although the risk of local anesthetic toxicity in patients receiving intravenous lidocaine in combination with local anesthetic for wound infiltration or peripheral nerve block is an appropriate concern, to our knowledge no published data exist on this topic. Therefore, it is not possible to

formulate recommendations. Intravenous lidocaine is a component of many enhanced recovery protocols and is an alternative to epidural analgesia in patients for whom placement is difficult or contraindicated.^{2,3} Patients undergoing major abdominal procedures at our institution receive an infusion of intravenous lidocaine intraoperatively and for the first 24 h after surgery as part of a multimodal analgesic regimen. Usual doses of local anesthetic are used for skin infiltration in these cases, and we have not observed toxicity. Similarly, we routinely use intravenous lidocaine as a component of total intravenous anesthesia, with additional local anesthetic used for skin infiltration prior to incision. We avoid use of intravenous lidocaine in procedures where liposomal bupivacaine is used due to concerns for toxicity.

Competing Interests

The authors declare no competing interests.

Lauren K. Dunn, M.D., Ph.D., Marcel E. Durieux, M.D., Ph.D. University of Virginia, Charlottesville, Virginia (L.K.D.). lak3r@virginia.edu

References

1. Dunn LK, Durieux ME: Perioperative use of intravenous lidocaine. *ANESTHESIOLOGY* 2017; 126:729–37
2. Swenson BR, Gottschalk A, Wells LT, Rowlingson JC, Thompson PW, Barclay M, Sawyer RG, Friel CM, Foley E, Durieux ME: Intravenous lidocaine is as effective as epidural bupivacaine in reducing ileus duration, hospital stay, and pain after open colon resection: A randomized clinical trial. *Reg Anesth Pain Med* 2010; 35:370–6
3. Terkawi AS, Tsang S, Kazemi A, Morton S, Luo R, Sanders DT, Regali LA, Columbano H, Kurtzeborn NY, Durieux ME: A clinical comparison of intravenous and epidural local anesthetic for major abdominal surgery. *Reg Anesth Pain Med* 2016; 41:28–36

(Accepted for publication September 8, 2017.)

Pain as a Predictor of Disability in Elderly Population

To the Editor:

We would like to congratulate Kaiho *et al.* for their study published in the April 2017 issue. The study results showed that moderate-to-severe pain is significantly associated with a future risk of functional disability in patients with joint pain and/or fractures. The authors administered a cogent questionnaire to a significant sample size of the elderly population and then compared their findings to data from the Long-term Care Insurance database.¹

In this study, it is interesting to note that pain severity was positively associated with disability due to joint pain and/or fractures, yet there was a negative association with disability due to dementia and no significant association with stroke. The authors administered a questionnaire to assess pain in all study participants; however, pain in conditions such as dementia and stroke often is underestimated and undertreated owing to the