



Rhomboid intercostal and PECS blocks for breast surgery

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To the Editor:

We appreciate the insightful comments of Sethuraman RM, et al. [1] and welcome the opportunity to clarify key points regarding our recent article on “Investigation of the analgesic effects of rhomboid intercostal and pectoral nerve blocks in breast surgery” [2]. We believe the critique contributes to a deeper understanding of the topic and would like to address the concerns raised.

Regarding the first point, we are aware that there is some confusion about the description of pectoral nerve (PECS) blocks. An international study on this subject was published in 2021. In this study, which also included members of the American Society of Regional Anesthesia and Pain Medicine (ASRA) and the European Society of Regional Anaesthesia and Pain Therapy (ESRA), the authors did not recommend the terms “interpectoral and pectoserratus plane blocks” for PECS blocks. The PECS II block was recommended for local anesthetic application to these two planes together [3]. However, it was noted that no clear information was provided about the number of needle entries in the study. We also evaluated these suggestions but did not want to cause confusion for readers; thus we simply referred to it as ‘PECS block’. In the “Materials and methods—Block interventions” section of our article, we explained in detail on which planes we applied the local anesthetic.

PECS block applications have been recommended in the Procedure Specific Pain Management (PROSPECT) guideline for breast cancer surgeries, demonstrating proven safety and efficacy [4]. However, due to the proximity of

the injection site to the surgical area, concerns have been raised among the surgeons in our clinic. These concerns have also been reported by other authors, who noted the potential risk of injury to the long thoracic nerve [5]. Given these disadvantages, it is reasonable to explore alternative plane blocks that could provide effective analgesia after modified radical mastectomy (MRM) surgery, such as erector spinae plane block, paravertebral blocks, rhomboid intercostal block (RIB), and serratus plane blocks. Studies on RIB suggest that they may not provide analgesia as effective as that achieved with the PECS II block in the axillary area. However, it has also been reported that the use of RIB blocks does not increase the need for additional analgesics [6]. Additionally, due to anatomical reasons, paravertebral blocks and PECS blocks may not provide adequate analgesia in the axillary region [4, 7]. Considering the sensory innervation of the breast region, it seems more reasonable to view pectoral blocks and lateral or posterior interfascial blocks as components of multimodal analgesia protocols, rather than expecting them to be sufficient on their own [8].

Our study was not designed to compare the superiority of the PECS and the RIB blocks. It is clearly stated that the sample size in our study may not be sufficient to generalize the analgesic equivalence of the RIB and PECS blocks after MRM surgery [2]. In a study involving axillary dissection for breast cancer surgery, Çiftçi and colleagues found that postoperative fentanyl consumption and the use of rescue analgesia were significantly lower in patients who received RIB and PECS II blocks compared to the control group. However, they showed no statistically significant differences between the RIB group and the PECS II group ($P > 0.05$; total fentanyl consumption was 29.33 μg and 30 μg , respectively) [9]. Similarly, in our study, we did not find a significant difference between the two groups. There are very few randomized controlled trials comparing PECS and RIB blocks. Consequently, claims of superiority are largely based

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on anatomical inferences. We believe that larger scale studies could yield more reliable clinical outcomes.

We completely agree with the authors' assertion that "breast surgeries are a 'multidimensional entity,' and thus any regional anesthesia technique(s) should be chosen carefully based on the sensory coverage and the type of surgery." We are pleased to inform you that we will take our existing data and new recommendations into account in future studies.

Data availability The data supporting the findings of this study are available within the paper and its Supplementary Information. <https://doi.org/10.1007/s00540-024-03351-3>.

Declarations

Conflict of interest All authors declare that they have no conflicts of interest.

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