



Editorial

What should we do to ameliorate the quality of interfascial plane blocks? Is dual block the answer sought or a waste of effort?

Serkan Tulgar^{a,*} , Ali Ahiskalioglu^b 

^a Department of Anesthesiology and Reanimation, Samsun University Faculty of Medicine, Samsun Training and Research Hospital, Samsun, Türkiye (Deputy Editor of CJPM)

^b Department of Anesthesiology and Reanimation, Development and Design Application and Research Center, Atatürk University School of Medicine, Erzurum, Türkiye (Editor-in-Chief of CJPM)

The use of ultrasound-guided interfascial plane blocks in pain medicine is becoming more common, and it is included in the perioperative analgesia practice of many centers. In the last decade, many new interfascial blocks such as erector spinae plane block (ESPB), serratus anterior block (SAB), rhomboid intercostal block (RIB) have been described, and they have taken their place among the most frequently applied analgesia techniques from thoracic region analgesia. Since paravertebral block is an advanced regional anesthesia technique and its possible complications are unsettling, clinicians prefer interfascial plane blocks. Since these new techniques are not as satisfactory as the PVB they are intended to replace, it is seen that new updates are frequently tried.

First of all, what is dual block, and what do we mean by dual block in this article? The term USG guided dual block was first used in the application of TAP blocks from four different points by Borglum et al. [1]. But in this article we; We will use the term dual block for an entirely different purpose, as it has been used in recent years.

Dual block is the application of local anesthetic (LA) to two different anatomical targets with a single needle insertion, which was aimed to increase the effect of an interfascial plane block introduced for sensory blocking of any anatomical area and to improve the anesthetic quality. We would like to clarify the anatomical targets in these blocks and the expected purpose by giving examples.

- To block the spared cutaneous branches of nerves targeted in a fascial plane block in a more superficial or deeper fascial plane.
- Blocking other nerves involved in the innervation of the area where the fascial plane block is targeted for the sensory block.
- Facilitate LA spread beyond the injection point with a fascial plane block.

- In the event of anatomical variations in the route of a nerve thought to travel in a plane or potential space, ensuring to block both variations.

In some dual block applications, several of these scenarios can be targeted, such as the study by Zengin et al. [2], where superficial and deep serratus blocks were combined. In this combination, the authors' aim was to block the lateral cutaneous branches of the superficial intercostal nerves proximal to the deep injection point, and the thoracodorsal, long thoracic and intercostobrachial branches (or vice versa). However, when examined anatomically, it will be seen that the thoracodorsal nerve and the long thoracic nerves are pure motor nerves. The intercostobrachial nerve is the lateral cutaneous branch of the second intercostal nerve and is involved in the sensory innervation of the axillary region. It is seen that additional blocking of these three nerves will not provide additional benefit in biportal VATS application. If so, we should consider the mechanism presented in scenario 1. By applying high volume LA to the facial plane deep in the serratus muscle -increasing transverse and craniocaudal spread- a wider cutaneous analgesia/anesthesia area is achieved, or by dual injection?

In a case report using block combination (Deep and superficial serratus) in the literature, Maranto et al. [3] reported their successful application to a patient with postmastectomy pain syndrome. When this article is examined, it is seen that the patient also has severe pain in the axillary region, in which case this combination may be considered rational since intercostobrachial nerve blockade is also required in the patient. In another case series dealing with SAP block in postmastectomy pain syndrome [4], they reported that deep SAP block was more effective than superficial. However, it should not be forgotten that the blockage area required to cope with

* Corresponding author. Tel.: +90-362-311-1500 ; E-mail address: serkantulgar.md@gmail.com (S. Tulgar)

acute or chronic pain after breast surgery and the requirements after biportal VATS will be quite different.

Dual injections will perhaps be indispensable in regional anesthesia applications in the near future. However, in the determination of dual injection, the area where the sensory blockade is intended, the nerves innervating that area and the possible routes of these nerves and possible variations in these routes should be taken into account. Dual injections without these considerations will be wasted time rather than being the key to the success of fascial plane blocks.

In this paper, we focused on the thoracic region. Of course, the type of surgery and port entry sites will differ according to the location of the tumor, and the appropriate regional anesthesia technique should be used in the appropriate patient. Here, we have brought to the attention of the readers some anatomical clues that we want to guide in the planning phase of studies where different combinations will be applied in the future. In our upcoming issues, we will continue to discuss dual blocks created by fascial plane blocks in the abdominal region and other regions. Sometimes the key may be high volume to the anatomically rational plane.

Acknowledgements

None declared.

Funding

The authors received no financial support for the research, authorship, and/or publication of this manuscript.

Conflict of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this manuscript.

Author Contributions

All of the authors made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; were involved in drafting the manuscript or revising it critically for important intellectual content; and gave final approval of the version to be published.

Data Availability

The datasets created and/or analyzed during the current study are not publicly available, but are available from the corresponding author upon reasonable request.

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