



Letter to Editor

Block combinations: The answer sought or a waste of effort?

Basak Altiparmak^{a,*} , Ali İhsan Uysal^b 

^a Department of Anesthesiology and Reanimation, Muğla Sıtkı Koçman University, Muğla, Türkiye

^b Department of Anesthesiology and Reanimation, Muğla Sıtkı Koçman University Training and Research Hospital, Muğla, Türkiye

Dear Editors,

We read your editorial [1] entitled “Is dual block the answer sought or a waste of effort?” with great interest and wanted to extend the concept of “dual blocks” to “block combinations”. The term “block combination” is typically used to describe the simultaneous use of at least two different regional analgesia techniques. For example, an interfascial plane block can be combined with a peripheral nerve block, or multiple interfascial plane blocks can be performed during the same session [2]. Clinicians may opt for block combinations for various reasons: to provide broader coverage for postoperative analgesia [3], or to reduce perioperative opioid consumption [4], or even to ensure complete anesthesia in cases where both general and neuraxial anesthesia approaches are contraindicated [2,5]. While the current literature includes numerous successful case presentations demonstrating the effective anesthetic management of particularly fragile patients using block combinations, there is a notable scarcity of reports on failed cases. Are these block combinations as clinically effective as the literature suggests? Is the success of these reported combinations potentially overhyped? Do clinicians openly report instances where block combinations fail? Herein, we aim to share our risky experience with anesthetic management involving a block combination that nearly failed due to an unexpected factor.”

A 72 years old, 96 kg woman (with body mass index 37) was scheduled for a lung biopsy. Classified as American Society of Anesthesiologists (ASA) status IV due to obesity, heart failure, and chronic obstructive pulmonary disease, she presented with dyspnea and an inability to lie horizontally on the operating table. Additionally, she was undergoing anticoagulation treatment with clopidogrel and aspirin. Hence, we opted for an interfascial block combination as the sole anesthetic management. Under intravenous (IV) dexmedetomidine sedation, we performed an ultrasound-guided serratus anterior plane block (SAPB) with 20 ml of 0.25% bupivacaine at the T4 level for port entrance, and an erector spinae

plane block (ESPB) with 20 ml of 0.25% bupivacaine at the T4-5 level to potentially alleviate visceral pain. We also placed an ESPB catheter at the same level for post-operative analgesia. Block success was confirmed with a pinprick test, and the patient was transferred to the operating room after 20 minutes. All block procedures and the entire operation were performed with the patient in the sitting position. Before the port entrance, IV 100 mcg of fentanyl was administered, and the patient reported her pain as 3/10 on the Numeric Rating Scale (NRS) during the port placement. Initially, during the first 20 minutes of the surgery, the patient remained calm. However, the pleura was thicker than expected, leading to difficulties in performing the biopsy. By the 30th minute of the surgery, the patient began experiencing pain and discomfort. Despite receiving a dexmedetomidine infusion, she started to move in response to each surgical maneuver. Consequently, IV propofol 20 mg was administered. As the duration of the surgical intervention prolonged, bolus doses of ketamine-propofol (ketofol) were administered as needed. During the one-hour operation, the patient intermittently experienced pain rated over 3/10 due to unplanned surgical approaches and challenging maneuvers. She received several ketofol boluses and, as a result, required ventilatory assistance at one point due to respiratory failure. At the conclusion of the operation, she was transferred to the post-anesthesia care unit for complete recovery.

In critical cases, clinicians nowadays often resort to interfascial blocks or combinations thereof to ensure patient safety. However, does relying solely on fascial blocks truly guarantee patient safety? Recently, Coppens et al. [6] addressed similar questions during the 2023 European Society of Regional Anesthesia (ESRA) annual congress. The authors argued that the majority of fascial blocks lack coverage for visceral pain, and there remains uncertainty regarding the efficacy of erector spinae plane block (ESPB) in blocking visceral pain. Furthermore, our understanding of the nature of fascia and the precise mechanisms of action of fascial plane blocks re-

* Corresponding author. E-mail address: basak_ugurlu@yahoo.com (B. Altiparmak)
ISSN: 2980-292X / DOI: <https://doi.org/10.20528/cjpm.2024.02.006>

mains limited [7]. It is now recognized that the distribution of local anesthetics varies across different fascial layers. Due to variations in thickness and the presence of lines and fusions within fasciae, the movement and spread of local anesthetics can be inconsistent [7]. Additionally, it's crucial to acknowledge that local anesthetic systemic toxicity is a potential risk, particularly when performing block combinations in critically ill patients with low serum protein levels.

In conclusion, while we can appreciate the enthusiasm of clinicians for employing block combinations in challenging cases, it's important to recognize that relying solely on these combined regional techniques may compromise patient safety.

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.

REFERENCES

1. Tulgar S, Ahiskalioglu A. What should we do to ameliorate the quality of interfascial plane blocks? Is dual block the answer sought or a waste of effort? *Chall J Perioper Med* **2024**;2:1–2.
2. Tulgar S, Kefeli Celik H, Karatekin YS, Altınayak H, Ahiskalioglu A, Süren M. Is surgical anesthesia possible with three plane blocks in femoral neck fractures? The novel Samsun combination. *Minerva Anesthesiol* **2023**;89:834–835.
3. Wang L, Jiang L, Jiang B, Xin L, He M, Yang W, et al. Effects of pecto-intercostal fascial block combined with rectus sheath block for postoperative pain management after cardiac surgery: a randomized controlled trial. *BMC Anesthesiol* **2023**;23(1):90.
4. Marrone F, Fusco P, Tulgar S, Paventi S, Tomei M, Fabbri F, et al. Combination of pericapsular nerve group (PENG) and sacral erector spinae plane (S-ESP) blocks for hip fracture pain and surgery: A case series. *Cureus* **2024**;16.
5. Altıparmak B, Korkmaz Toker M, Uysal Aİ, Kılınç CY. Supine coronal approach to quadratus lumborum block in combination with anterior approach Sciatic block for sole anesthesia of hip fracture surgery. *J Clin Anesth* **2021**;72.
6. Coppens S, Dreelinck R, Brullot L, Van Loon P, Hoogma, DF. PRO-CON – fascial plane blocks: are they effective? *Reg Anesth Pain Med* **2023**;48(Suppl 1):A1–A398.
7. Black ND, Stecco C, Chan VWS. Fascial plane blocks: More questions than answers? *Anesth Analg* **2021**;132:899–905.



This is an open access article distributed under the CC BY licence.

© 2024 by the Authors.
