



## LETTER TO THE EDITOR

## A novel combination technique (ultrasound-guided subomohyoid suprascapular+posterior axillary nerve block) provides opioid-free perioperative analgesia in shoulder arthroplasty

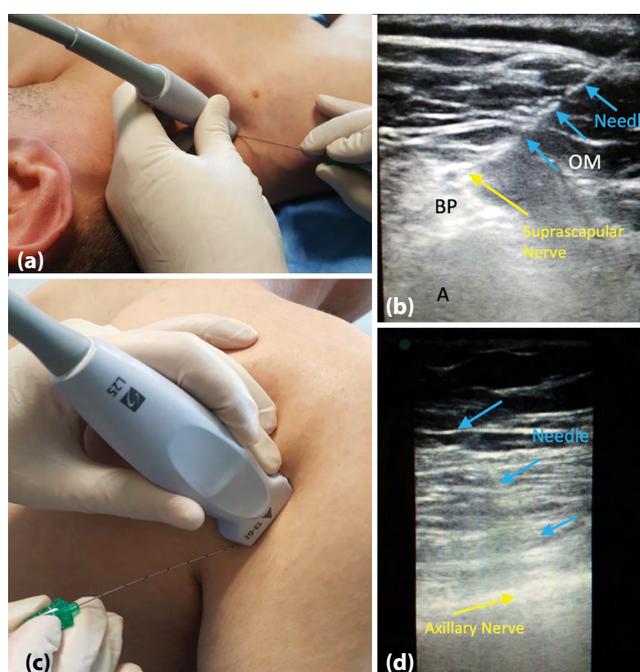
*Omuz artroplastisi perioperatif analjezisinde opioid kullanılmayan yeni bir kombine blok (ultrasound rehberliğinde subomohyoid supraskapular+posterior aksiller sinir) tekniği*

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To the Editor,

Combination of suprascapular nerve block and axillary nerve block performed under ultrasound guidance is a novel regional anesthesia technique.<sup>[1]</sup> The suprascapular block can either be performed at supraclavicular region anteriorly (subomohyoid block) or posteriorly at the level of the suprascapular fossa.<sup>[2,3]</sup> Axillary nerve is blocked posteriorly, where it passes through the quadrangular space close to the posterior circumflex humeral artery.<sup>[4]</sup> The post-operative analgesic effect of this combination has been well defined in a recent study. We report perioperative opioid-free analgesic effect of this technique as observed in our case of shoulder arthroplasty.

The patient was 71-year-old female with proximal humerus fracture, scheduled for shoulder arthroplasty. Her previous medical history included diabetes type II and obesity. Before induction of general anesthesia, we performed suprascapular nerve and axillary nerve blocks for perioperative analgesia. Initially, we performed an ultrasound-guided subomohyoid suprascapular nerve block at supraclavicular region (Fig. 1a, b). Then, we blocked the axillary nerve under ultrasound guidance at posterior of the shoulder, where it is located in close relation to posterior circumflex humeral artery (Fig. 1c, d). We implemented



**Figure 1.** (a) The position of the ultrasound probe and the needle shown on a volunteer during performance of subomohyoid suprascapular nerve block. (b) Ultrasound image of the subomohyoid suprascapular nerve block in our patient. (c) The position of the ultrasound probe and the needle shown on a volunteer during performance of posterior axillary nerve block. (d) Ultrasound image of the posterior axillary nerve block in our patient. BP: Brachial plexus; OM: Omohyoid muscle; A: Subclavian artery.

a 13–6 MHz low footprint linear ultrasound probe (L25x M-Turbo, Fujifilm SonoSite, Inc. Bothell, WA) and 8 cm echogenic block needle (Stimuplex® Ultra 360® B. Braun, Melsungen, Germany) in both blocks.

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We injected both nerves 8 ml of bupivacaine 0.5%. The block procedure was completed uneventfully and general anesthesia induction was performed using propofol 2 mg/kg, rocuronium 0.6 mg/kg, and fentanyl 2 µg/kg. The remaining course of the operation continued with sevoflurane 2.5% in a mixture of 50% oxygen and 50% air. There was no need of perioperative opioids. The patient reported no pain after the operation in the post-operative ward. Four hours after the operation, the patient reported pain which was evaluated as 6/10 in numerical pain scale and acetaminophen 1 g intravenous was administered. Pain was evaluated as 3/10 at post-operative 24<sup>th</sup> h. No opioids were needed in post-operative course, only routine acetaminophen injections were done.

Our case demonstrates that ultrasound-guided subomohyoid suprascapular combined with posterior axillary block which is defined as "shoulder block" may provide perioperative opioid-free analgesia as well as an adequate post-operative analgesia in shoulder arthroplasty. The shoulder block is a strong alterna-

tive to the interscalene block with the advantage of avoiding complications of interscalene block such as diaphragm paralysis, vertebral artery injection, Horner syndrome, or recurrent laryngeal nerve block.

## References

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