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CASE REPORT

Anterior approach to suprascapular nerve block combined with axillary nerve block for shoulder arthroplasty

Omuz artroplastisinde anterior yaklaşımla supraskapular sinir bloğu ile aksiller sinir bloğu

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Summary

Arthroscopic shoulder operations are associated with postoperative pain, which can lead to chronic pain if not treated effectively. The classic posterior approach for the suprascapular nerve is associated with higher technical failures, and it is a more painful procedure for the patients. We report a case of a 72-year-old male patient who underwent right shoulder arthroplasty. We performed ultrasound-guided suprascapular nerve block with an anterior approach, combined with an axillary nerve block, and provided effective analgesia.

Keywords: Anterior approach suprascapular nerve block; postoperative pain; shoulder arthroplasty.

Özet

Omuzun artroskopik operasyonlarında postoperatif ağrı etkili bir şekilde tedavi edilmezse kronik ağrı gelişebilir. Supraskapular sinir bloğunda klasik posterior yaklaşım daha yüksek oranda teknik başarısızlıkla ilgilidir ve hastalar için daha ağrılı bir işlemdir. Bu olgu sunumunda, elektif sağ omuz artroplasti operasyonu olan ve etkin postoperatif analjezi sağladığımız 72 yaşındaki erkek hastaya uyguladığımız ultrasonografi eşliğinde aksiller sinir bloğu ile anterior yaklaşımla yapılan supraskapular sinir bloğu ele alındı.

Anahtar sözcükler: Anterior supraskapular sinir bloğu; aksiller sinir bloğu; postoperatif ağrı; omuz artroplasti.

Introduction

Arthroscopic shoulder operations are associated with postoperative pain, which can lead to chronic pain if not treated effectively. Due to the risk of complications, more peripheral blocks are now preferred.[1] The classic posterior approach for the suprascapular nerve is associated with higher technical failures[2] and it is a more painful procedure for the patients. We would like to report a case which we performed ultrasound-guided anterior approach suprascapular nerve block as Siegenthaler et al.[3] described, combined with an axillary nerve block.

Case Report

A 72-year-old male patient weighing 80 kg and height of 175 cm, with ASA physical status II (with hypertension and diabetes), presented for a right shoulder arthroplasty. Patient was consented with suprascapular and axillary nerve blocks. Written consent to publish was obtained.

A linear high-frequency ultrasound was used (Esaote MyLab 5i, Florence, Italy). To perform suprascapular block, the probe was placed to the supraclavicular area and the brachial plexus was visualized. As the probe slid to laterally, the suprascapular nerve was identified under the omohyoid muscle while leaving the brachial plexus (Fig. 1). A 22G, 50 mm needle was inserted in-plane approach and 5 mL of 0.25% bupivacaine was injected around the nerve. Later, axillary nerve block was performed with 5 mL of 0.25% bupivacaine.

General anesthesia was induced with 2 mg/kg propofol, 1 mcg/kg fentanyl, 0.6 mg/kg rocuronium, and

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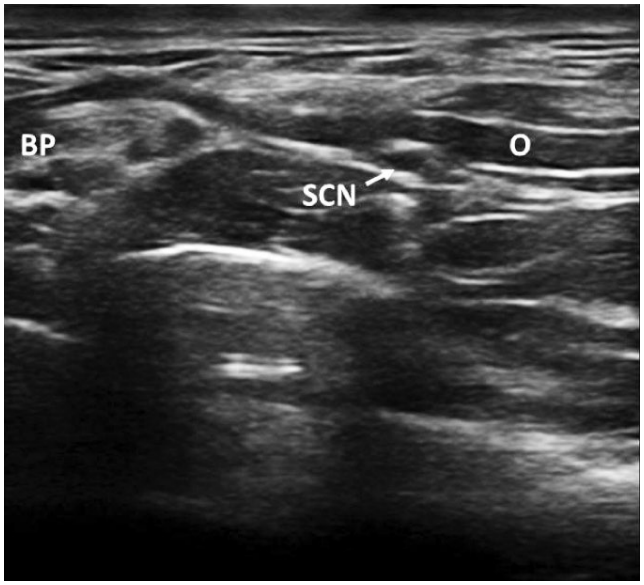

Figure 1. Ultrasound image of the anterior approach to the suprascapular nerve.
BP: Brachial plexus; SCN: Suprascapular nerve; O: Omohyoid muscle.

maintained with desflurane in 60% N20/40% oxygen. The surgery lasted 2 h and was completed uneventfully. The patient was administered 1 g paracetamol iv and provided with iv patient-controlled analgesia device containing morphine 0.5 mg/mL-1, set to deliver a 1 mg bolus dose of morphine, with an 8 min lockout time and 6 mg 1 h limit.

Patient was pain-free in the 8 h (VAS=0). He first reported pain at the postoperative 8th h (VAS=2) and responded to 1 gr paracetamol iv. At the postoperative 24th h, the patient had no pain, and his morphine consumption was 5 mg.

Discussion

The suprascapular nerve arises from the superior trunk of the brachial plexus, lies under the omohyoid muscle, and passes posteriorly toward to scapula.[3] It is possible to visualize the nerve under the omohyoid muscle and suprascapular block can be performed with anterior approach more easily than the classic posterior approach with higher patient comfort.

Dhir et al.[4] compared combined suprascapular nerve and axillary nerve blocks with interscalene block in arthroscopic shoulder surgery and they found that interscalene block provided better analgesia in the immediate postoperative period. However, a combination of suprascapular nerve and axillary nerve blocks provided better quality pain relief at rest with fewer adverse effects, and they concluded that for shoulder surgery. Similar to this study, we provided effective analgesia, and the anterior approach to the suprascapular nerve was painless, unlike the classic posterior approach to suprascapular nerve block.

In conclusion, although this case demonstrates the anterior approach to the suprascapular nerve produces effective analgesia combined with axillary nerve block in a patient who underwent shoulder arthroplasty, future randomized controlled trials should be performed.

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Informed Consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

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