

## Ultrasound-Guided Infraclavicular Block in a Patient with Huntington's Disease: Case Report

### Huntington Hastalığı Olan Bir Hastada Ultrasonografi Kılavuzluğunda İnfraklaviküler Blok: Olgu Sunumu

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#### ABSTRACT

Huntington's disease (HD) main symptoms is choreiform movements. The infraclavicular block is the brachial plexus block used as an alternative or adjunct to general anesthesia. The 65-year-old patient with HD was taken to the operating room due to left radius fracture operation. When the risks of general anesthesia were evaluated, ultrasound-guided infraclavicular block was successfully applied to the patient. Choreiform movements stopped completely and the operation was successfully performed.

**Keywords:** Huntington's disease, infraclavicular block, ultrasound-guided, choreiform movements

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#### ÖZET

Huntington hastalığı (HD) ana semptomları koreiform hareketlerdir. İnfraklaviküler blok genel anesteziye alternatif veya ek olarak kullanılan bir brakial pleksus bloğudur. 65 yaşındaki HD hastası sol radius kırığı ameliyatı için ameliyathaneye alındı. Genel anestezi riskleri değerlendirilerek hastaya ultrasonografi eşliğinde infraklaviküler blok başarıyla uygulandı. Koreiform hareketler tamamen durdu ve operasyon başarıyla gerçekleştirildi.

**Anahtar Sözcükler:** Huntington hastalığı, infraklaviküler blok, ultrasonografi kılavuzluğunda, koreiform hareketler

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## INTRODUCTION

Huntington's disease (HD) is an autosomal dominant disorder with progressive neurodegeneration (1). The main symptoms are personality disorder, choreiform movements, and decreased cognitive function (2). The most common motor symptom is dysphagia and the risk of pulmonary aspiration due to dysfunction of the pharyngeal muscles. For anesthesiologists, the main problems are difficult airway, sleep apnea, aspiration risk, and unexpected reactions to drugs (3). The infraclavicular block is the brachial plexus block used as an alternative or adjunct to general anesthesia. It can be used for anesthesia and analgesia in elbow, forearm, hand surgeries (4). In this case report, we aimed to present the ultrasound (US) guided infraclavicular block in the patient with HD, which we did not encounter in the literature.

## CASE REPORT

Detailed information about the patient's clinical status, anesthesia methods and risks to be applied was made to the patient and informed consent was given that the data could be used for scientific purposes. 63 kg weighted, 166 cm height, 65 years old female patient was scheduled for operation due to left radius fracture. Choreiform movements were present in the patient's entire body. He was on pridostigmin and olanzapine for the treatment of HD. Physical examination and laboratory tests were normal. The patient who was taken to the operation room underwent routine monitoring with electrocardiography, peripheral oxygen saturation (SpO<sub>2</sub>) and non-invasive arterial blood pressure (NIBP). The heart rate was 74/min, NIBP was 127/68 mmHg, SpO<sub>2</sub> was 96%. US-guided infraclavicular nerve block planned to provide anesthesia and postoperative analgesia. 1 mg of midazolam was administered for sedation. When the patient was lying on supine position, the head was turned towards the opposite side of the block. The arm on which the block was made was brought to the adduction position and the forearm was flexed. After providing regional asepsis, the US probe was placed longitudinally in the region of the lateral sagittal infraclavicular block. After the images of the axillary artery and brachial plexus cords were obtained, 80 mm long, 22 G block needle were passed through the skin in the same plane as the US probe and reached 8 o'clock position to the posterolateral direction of the artery. After checking the extravascular position with negative aspiration technique, 10 ml 2% lidocaine (Aritmal, OSEL, Turkey) and 15 ml 5% bupivacaine (Buvasin, VEM, Turkey) mixture were applied intermittently. Spread of regional anesthetics around each cord was followed by US during the injection. There was no vascular puncture or any other complication like pneumothorax. Surgical anesthesia was achieved in 11 minutes following the block. Choreiform movements disappeared on the left arm subsequently the nerve block and continued in other regions. No additional sedation and analgesia were required during the operation. The surgery was completed without any problem in 45 minutes and the patient was sent to the ward.

## DISCUSSION

Although there is no absolute contraindication of any anesthesia method, the incidence of atypical pseudocholinesterase in HD has increased and it has been reported that succinylcholine should be avoided and an abnormal response to non-depolarizing muscle relaxants may occur (5). It should be considered that inhalation agents increase muscle relaxant effects and cause delay in arousal. For this reason, total intravenous anesthesia is recommended and applied in literature (2,6). Spinal anesthesia has been successfully reported in patients with HD. (7,8). In the literature search, there was no case of peripheral nerve block in Huntington patients and there was a case of successfully placed interscalene catheter under USG guidance under general anesthesia for postoperative analgesia. (9). In our patient, we preferred to perform US-guided infraclavicular nerve block to avoid complications associated with general anesthesia. The left upper extremity choreiform movements disappeared when the anesthetic effect was fully achieved. Upper extremity movements slowly reappeared when the effect of the block was exhausted.

## CONCLUSION

As a result, US-guided infraclavicular nerve block can be used to avoid complications due to pulmonary aspiration and general anesthesia for appropriate surgical procedures in patients with HD.

## Conflict of interest

No conflict of interest was declared by the authors.

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