

COMPRESSIVE MONONEUROPATHY OF ULNAR NERVE IN THE CUBITAL CANAL CAUSED BY OSSIFICATION – A CASE REPORT

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Background

Cubital tunnel syndrome is the second most common canalicular syndrome of the upper extremity. It occurs when the ulnar nerve is compressed in the cubital tunnel of the elbow. The etiology of this syndrome is multifactorial. The most common symptoms of syndrome are pain, paresthesias of the little finger and ring finger, hypoesthesia and hypotrophy of the hypothenar and small muscles of the hand. Neurography is considered relevant if the conduction velocity through the ulnar nerve in the elbow region is less than 50 m/s and ultrasound finding is relevant if ulnar nerve cross-sectional area is greater than 10 mm².

Case report

We present a 24-year-old patient with spastic tetraplegia after a severe traumatic brain injury. The compressive neuropathy of the ulnar nerve in the area of the cubital tunnel was diagnosed by neurography. X-ray revealed extensive ossification of the elbow and ultrasound showed a thickened ulnar nerve. A cross-sectional area of ulnar nerve was 13.4 mm² along the medial condyle and in the area between the head of the ulnar flexor muscle, the nerve was still thickened and edematous, and measured 18.7 and 18.2 mm. Initially, a perineural blockade was performed for symptom relief, followed by operative decompression. Three months after the operation a control ultrasound of the nerve was performed. In the area of the medial condyle the cross-sectional area of ulnar nerve was 15.8 mm², while other measurements at typical locations were <10 mm².

Conclusion

The control ultrasound finding still indicated possible compression of the nerve in the area of the medial epicondyle. According to the literature the ulnar nerve can be compressed in 5 different places in the elbow area. It is important to consider the possibility of compression ulnar nerve in different places as well as possibility of multiple causes of compression present at the same.

Keywords: compressive mononeuropathy, ulnar nerve, ultrasound