Incidental Findings in Trauma Patients: Bifid Nervus Medianus

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Dear Editor,

In the literature, variations of the median nerve are mentioned to be trifid and bifid median nerves¹, a recurrent motor branch of the median nerve², and a median nerve with an anastomosis from the musculocutaneous nerve³. Apart from these, a persistent median artery has also been defined.² This artery accompanies the median nerve along its course. While these variations are rare, bifid median nerves are encountered at rates ranging from 2% to 26%.³⁶

A 44-year-old male patient presented to our clinic with a nine-month history of an ulnar nerve deficit in his right hand. The patient had undergone an operation in an external clinic after an in-vehicle traffic accident. The patient’s physical examination performed in our clinic revealed minimal hypothenar atrophy, abduction–adduction limitations, and ulnar hypoesthesia in the right hand, upon which he was operated on under general anesthesia. An intraoperative review revealed the ulnar nerve to be not intact and the presence of an intermediate defect, which was reconstructed using a sural nerve graft.

While a simultaneous bifid median nerve was observed in the patient, all other anatomic structures were found to be normal (Figure 1).

A detailed consent form was obtained from the patient for all procedures.

Variations of the median nerve are rarely encountered. In a radiologic study, Bayrak et al.⁷ observed the presence of bifid median nerves in 32 of 170 patients with carpal tunnel syndrome (CTS). The researchers revealed that of these 32 patients, the bifid median nerve was unilateral in 22 and bilateral in 10.⁷ Other studies further demonstrated that a bifid median nerve is usually accompanied by a persistent median artery variation. Gassner et al.⁴, using Doppler sonography, observed a persistent median artery to be associated with a bifid median nerve configuration in 10 of 16 hands.

In another study, Walker et al.⁸, having radiologically screened 1026 wrists, reported a rate of 8.6% for a bifid median nerve and 3.7% for a persistent median artery.

Lanz⁹ encountered bifid median nerve variations in 7 of 246 patients on who he performed carpal tunnel release surgeries. Further, he classified median nerve variations under the following four main groups:

I. Variations in the course of the thenar branch
II. Accessory branches at the distal portion of the carpal tunnel
III. Divisions or duplications of the median nerve in the carpal tunnel
IV. Accessory branches at the proximal portion of the carpal tunnel.

Figure 1. Intraoperative close-up view of the bifid median nerve
The bifid median nerve mostly follows an asymptomatic course and is not noticed unless the wrist is explored for an injury or for conditions such as CTS. Therefore, it is therefore difficult to diagnose. When exploring the wrist, it should be taken into account that different anatomic variations may be present, and attention should be given to a bifid median nerve.

**Informed Consent:** Written informed consent was obtained from patient who participated in this case.

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**REFERENCES**