



A Case of Schwannoma Arising From Brachial Plexus in an Operated Patient With the Diagnosis of Cubital Tunnel Syndrome

Kubital Tünel Sendromu Tanısı ile Opere Edilen Brakial Pleksus Kaynaklı Schwannoma Olgusu

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Introduction

Schwannomas are the frequently encountered neurogenic tumors of the thorax, especially in the posterior mediastinum, whereas in the peripheral nervous system, they are relatively uncommon and usually arise from one of the main nerves of the limbs. Schwannomas originating from the brachial plexus are rare and most of them are benign (1).

Cubital tunnel syndrome is the second most common compression neuropathy in the upper extremity. The main complaints are numbness in ulnar nerve distribution and hand weakness. Advanced or severe cubital tunnel syndrome causes irreversible muscle atrophy and hand contractures due to chronic denervation (2).

A 23-year-old female was referred to an orthopedics clinic with right hand weakness, pain and numbness five years ago. She had undergone surgery after an electrodiagnostic evaluation, which revealed right cubital tunnel syndrome. She

presented to our clinic complaining that her symptoms did not get better even she had additional ones, such as hand and forearm muscle atrophy. Motor evaluation revealed right forearm dorsal and volar, and right hand interosseous muscle atrophy as well as atrophy of the thenar and hypothenar areas. Right wrist flexion and extension muscle strength was 4/5. Abduction, adduction and opposition strength of the digits were 1/5. She did not have any additional muscle motor deficit. Sensory evaluation revealed C5-8 and T1 dermatomal hypoesthesia. There was a palpable mass in the supraclavicular region. Electrophysiological evaluation revealed low motor and sensory amplitudes for median, ulnar and radial nerves.

Chest radiograph showed a superior mediastinal mass. Cervical magnetic resonance imaging (MRI) showed a 5x5x4 cm mass (Figure 1). A vascular surgeon was consulted and the patient underwent surgery for a brachial plexus tumor. With supraclavicular incision, a 5x5x4 cm smooth-edged mass was found with larger base at the right thoracic apex. Pathologically

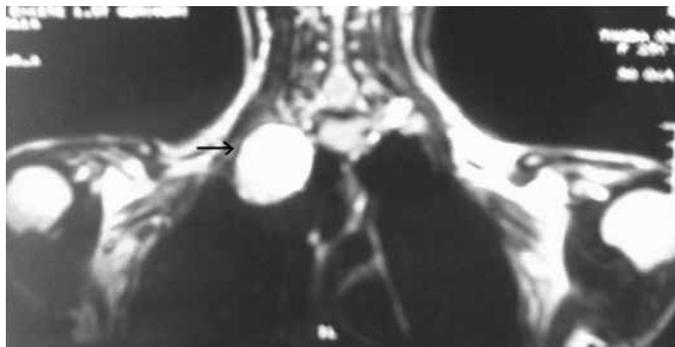


Figure 1. Magnetic resonance of the right supraclavicular region coronal sequences images: ovalar mass with well-defined margins, occupying the supraclavicular region, below the scalenus muscle (black arrow).

it was diagnosed as schwannoma originating from the brachial plexus. The patient was followed up with postoperative rehabilitation program. She was given strengthening exercises and occupational therapy for advancing her hand skills.

Schwannomas are mostly located at the parapharyngeal area and originate from vagus nerve. Schwannomas of this region are seen as middle neck masses while cervical and brachial plexus-originated schwannomas are seen as lateral neck masses (3). To establish a firm diagnosis of primary brachial plexus tumor in the supraclavicular region in the absence of a cervical mass is challenging (4). Pain radiating to the arm is seen in 44% of these patients (5). Our patient had a supraclavicular-located painless mass.

During the management of patients suspected of having upper extremity entrapment neuropathies, it should not be

forgotten that brachial plexus-originated tumors could mimic entrapment neuropathies at the beginning (3,6,7).

Morbidity resulting from permanent nerve damage due to missed or delayed diagnosis should be prevented with a proper physical examination for nerve assessment. Since permanent damage is a devastating result for the patient, it has a potential risk for medico-legal problems for the physicians if the only evaluation made is physical examination and electrophysiological tests. Physicians should be educated for peripheral nerve tumor morbidities and patients should be managed with evidence-based medicine protocols including early and proper consultations in order to prevent undesirable outcomes.

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