

Subclavius posticus muscle: clinical significance of a rare supernumerary muscle

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The subclavius posticus (SP) is described either as a variation of subclavius or as an aberrant muscle, extending from the first costochondral junction to the suprascapular ligament or the superior border of the scapula lateral to the insertion of the inferior belly of omohyoid. This muscle, due to its proximity to the neurovascular structures, is considered a potential risk factor for thoracic outlet syndrome, axillary vein thrombosis and suprascapular neuropathy, although its presence is rare.

This study was conducted at the Department of Anatomy, Faculty of Medicine, Peradeniya to find out the presence and the variations of SP.

Seventeen formalin fixed cadavers were examined after removing the clavicle leaving the subclavius intact. Among the thirty-four shoulders dissected, four SP muscles were identified (11.76%). In one cadaver, a muscle originating at the first costochondral junction running dorsolaterally inferior to the clavicle over the axillary neurovascular bundle towards the scapula was noted bilaterally. The distal insertion was the upper border of the scapula and the supraspinatus fascia just lateral to the attachment of omohyoid and medial to suprascapular ligament. The vein proximal to the muscle was grossly dilated with multiple collaterals suggestive of a compressive venopathy. The normal subclavius was absent.

In another cadaver, a supernumerary muscle was noted with normal subclavius, originating at the first costochondral junction, passing below the subclavius over the neurovascular bundle, before inserting to the superior border of the scapula and suprascapular ligament on the right side, and the base of the coracoid process and suprascapular ligament on the left. In both cadavers, the suprascapular nerve passed immediately below the muscle. The supraspinatus and infraspinatus muscles and small muscles of the hand were not atrophied, which would have suggested a suprascapular neuropathy and T1 root compression respectively.

Presence of SP may narrow the cervicoaxillary pathway leading to thoracic outlet syndrome and suprascapular neuropathy. Although evidence of compressive venopathy was present, apparent signs of neuropathy were not found but more objective evidence would be important in excluding it. Both static and dynamic MRI may play a role in diagnosis of neuropathy in the presence of subclavius posticus.