

Variation in the origin of suprascapular artery

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ABSTRACT

Variation in the origin of the suprascapular artery was observed in one of the 30 cadavers dissected. The suprascapular artery in our case emerged from the first part of the axillary artery on the left side in a male cadaver, while it arose from the thyrocervical trunk on the right side in the same cadaver. Later in its course it passed obliquely behind the clavicle and brachial plexus to reach the suprascapular notch where it was accompanied by the suprascapular nerve, and both together passed beneath the transverse scapular ligament. It then supplied the supraspinatus and took part in the anastomosis around the scapula. © IJAV. 2010; 3: 178–179.

Key words [axillary artery] [suprascapular artery] [thyrocervical trunk] [supraspinatus] [anastomosis]

Introduction

The suprascapular artery usually arises from the thyrocervical trunk of the subclavian artery, although it may arise from the third part of the subclavian artery. It later descends laterally across scalenus anterior, phrenic nerve, brachial plexus and subclavian artery. On reaching the superior border of the scapula, it passes above the superior transverse ligament, which separates it from suprascapular nerve passing below the ligament.

Numerous variations in the origin of the branches of the subclavian artery have been reported. Earlier authors have described about the variant origin of the suprascapular artery from the third part of subclavian artery or axillary artery. One such rare case of the origin of suprascapular artery is been highlighted.

Case Report

During the routine dissection of first MBBS students, we observed a rare variation in the branching pattern of the axillary artery. The suprascapular artery in one of the male cadavers emerged from the first part of the axillary artery on the left side (Figure 1). It later ascended for about 0.5 cm above the medial third of the clavicle and then passed obliquely behind the clavicle and brachial plexus to reach the suprascapular notch where it was accompanied by the suprascapular nerve. Then, both artery and the nerve together passed beneath the transverse scapular ligament (Figure 2). It then supplied the supraspinatus muscle and later passed to infraspinous

fossa through the spinoglenoid notch. Finally, it took part in the anastomosis around the scapula. Meanwhile the suprascapular artery on the right side arose normally from the thyrocervical trunk, and passed above the transverse scapular ligament.

Discussion

Variant origin of the suprascapular arteries have been described earlier by numerous authors [1–6]. However, in the present study we observed that suprascapular artery arose from the first part of the axillary artery on

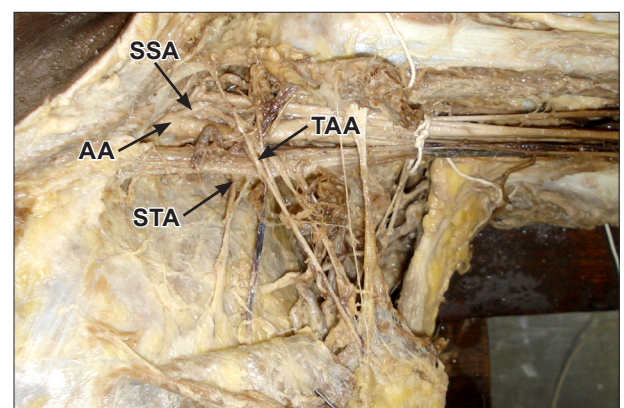


Figure 1. Suprascapular artery arising directly from the first part of axillary artery. (SSA: suprascapular artery; AA: axillary artery; TAA: thoraco-acromial artery; STA: superior thoracic artery)

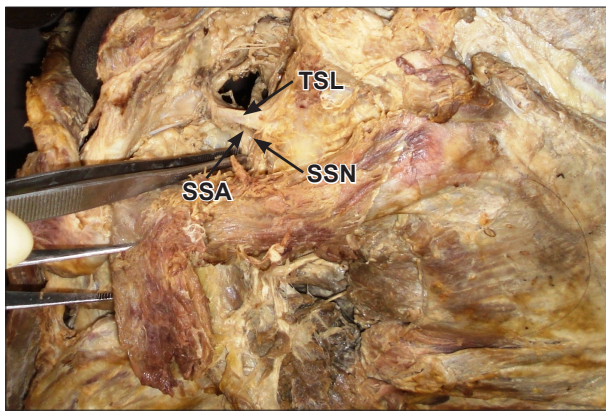


Figure 2. Suprascapular artery accompanied by suprascapular nerve passing below the transverse scapular ligament. (*SSA: suprascapular artery; TSL: transverse scapular ligament; SSN: suprascapular nerve*)

the left side in a male cadaver, while it arose from the thyrocervical trunk on the right side. Similar observations were made in 1.6% of cases studied [5]

However, suprascapular artery arising from the third part of subclavian artery has been reported earlier in 22% [3] and in 25% of the cases [7]. Suprascapular artery arising from internal thoracic artery was reported earlier in 10% [3] and in 5% cases [7].

Unusual origin of the suprascapular artery has been implicated as the causative factor for suprascapular neuropathy causing compression of the suprascapular nerve beneath the transverse scapular ligament. Suprascapular nerve injuries have become increasingly recognized as a cause of shoulder pain and dysfunction.

Damage to suprascapular artery may lead to microemboli in vasa nervosum of the suprascapular nerve. Hence knowing the origin and branching pattern of suprascapular artery would help in the management of the diseases of the cervical and shoulder region, which could be of vascular origin [5].

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