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## Variation in Axillary Artery Branches (A Case Report)

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The axillary artery, a continuation of the subclavian artery, begins at the first rib's outer border and ending normally at the inferior border of the Teres major muscle and continuing further distally as Brachial artery. The axillary artery has several branches that supplies axillary region. Several variations about the Axillary artery and its branches were have been reported. In this case, from the second part of this artery, we found a common trunk between Lateral thoracic and Subscapular arteries. Other branches of subscapular also has been separated from this trunk.

**Key words:** Axillary artery, variation, lat. Thoracic, subscapular artery

## INTRODUCTION

The subclavian and axillary arteries are gaining increasing interest in the cardiac surgery community as they have been successfully used as cannulation sites for cardiopulmonary bypass in thoracic aortic procedures and redo operations. They have also been taken for insertion of intra aortic balloon pumps and most recently they are under discussion for use as an inflow vessel in coronary artery surgery (Bonatti and Coulson, 2000).

The axillary artery begins at the lateral border of the first rib as a continuation of the subclavian artery and ends at the lower border of the teres major muscle, where it continues as the brachial artery. The pectoralis minor muscle crosses in front of the axillary artery and, for purposes of description, is said to divide it into three parts: the first part of axillary artery is before the upper border, the second part is behind and the third part of axillary artery is after the lower border of pectoralis minor muscle (Williams *et al.*, 1995).

The branches of axillary artery supply the thoracic wall and the shoulder region and are as follows: from first part: Highest thoracic artery; Second part: Thoracoacromial trunk and Lateral thoracic artery; Third part: Subscapular, Anterior and Posterior circumflex humeral arteries.

Also the thoracoacromial trunk pierces the clavipectoral fascia and immediately divides into terminal branches (Williams *et al.*, 1995).

## CASE REPORT

During routine dissection for undergraduate students in dissection room of Shahid Beheshti University of Medical Sciences in Tehran, Iran, in one old man cadaver,

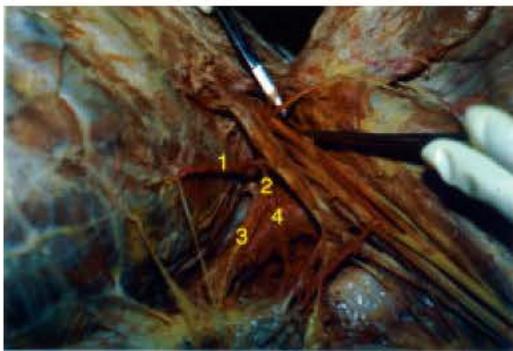


Fig. 1: Left axillary region in our case, the arteries showed by red, 1 = lateral thoracic 2 = subscapular a. 3 = thoracodorsal a. and n. 4 = circumflex humeral a

we found that the pattern of branches in the left Axillary artery is abnormal, specially in second and third part of it.

In this case, from the lower border of second part, a big branches is divided that it is a common trunk for lateral thoracic and subscapular arteries (Fig. 1). This trunk extends inferiorly and laterally in axillary space and give rise some branches such as: Lateral thoracic artery, Subscapular artery (this branch then give rise the Thoracodorsal artery), Muscular branches and ends as Circumflex scapular artery and extends to infraspinatus space.

## DISCUSSION

Variation in branches of axillary artery have been reported, also the number of branches that arises from it in axillary spaces, is different (Pantaik *et al.*, 2000, Bergman *et al.*, 2002). Occasionally, the superficial brachial artery arises from axillary artery behind the pectoralis minor muscle (Sarıkcioglu *et al.*, 2001).

Also translocation of branches in second and third parts of axillary have been reported (Saeed and Ryosuke, 2002). In other case, the posterior circumflex humeral artery arises from the subscapular artery (Durgun *et al.*, 2002). Also in some cases anastomose branches between axillary artery and brachial arteries or between axillary and forearm arteries have been reported (Uzun and Seelig, 2000).

In our case, the pattern of axillary artery branches is differ from the other cases that they reported previously.

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