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RESEARCH ARTICLE

CADAVERIC STUDY OF VARIATIONS IN THE BRANCHING PATTERN OF AXILLARY ARTERY IN SOUTH INDIAN POPULATION

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A B S T R A C T

Aim & Objectives: The present study was an attempt to study the variations of the branching pattern of the axillary artery.

Materials & Methods: The present study was done on 30 cadavers irrespective of sex, in the department of Anatomy, in Kurnool medical college, Kurnool, India.

Results: The axillary artery took origin as a continuation of subclavian artery in all the 30 specimens. The variations were observed in origin of subscapular artery

Conclusion: Knowledge of the variations in branching pattern of axillary artery is very important for orthopediciains, anatomists, vascular surgeons and anesthetists.

INTRODUCTION

Axillary artery (AA) is continuation of subclavian artery at the outer border of the first rib and at the inferior border of teres major it continues as the brachial artery. axillary artery gives six branches, first part gives superior thoracic, second part gives thoraco acromial (TAA) and lateral thoracic arteries (LTA), third part gives subscapular artery (SSA), anterior circumflex humeral artery (ACHA) and posterior circumflex humeral artery (PCHA) [1]. Axillary artery branching pattern is not slandered, branches arises as a common trunks or separately as single branches [2].

MATERIALS AND METHODS

The present study was conducted on upper limbs of 30 cadavers at Department of anatomy, Kurnool government medical college, Kurnool, South India after obtaining proper consent from cadavers relatives. Cadavers related to 45- 70 in age group. Axillary region was dissected and exposed the branches of axillary artery according to the standard dissection methods described by Romanes in cunnighams manual of practical anatomy. Variations of Obtained branches of axillary artery were recorded.

RESULTS

Present study observed that no anatomical variations were seen in First part of axillary artery. Subscapular artery arose from second part as direct branch in 15% of cases (FIG. 1). Third part of axillary artery given subscapular & posterior circumflex humeral artery together a common trunk in 60% of cases (FIG.2).

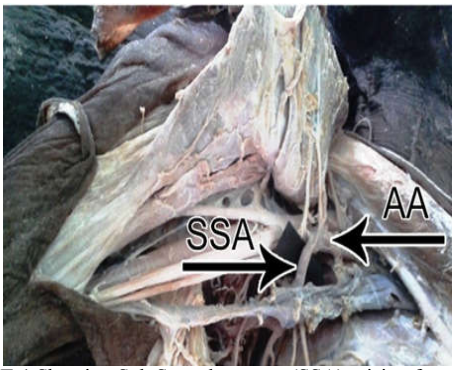

FIGURE 1 Showing Sub Scapular artery (SSA) arising from second part of axillary artery (AA).

DISCUSSION

The arterial anomalies are occurring because of defects in embryonic development of the vascular plexus, This may be due to arrest at any stage of development showing regression, retention or reappearance and may lead to variations in the arterial origins and courses of the major upper limb vessels [3]. In the present study sub scapular artery arose from 2nd part as a direct branch in 15% of cases is similar to Samta gaur et al study which observed in 4% cases [4]. Occasionally circumflex scapular, thoraco dorsal, anterior and posterior circumflex humeral, profunda brachii and ulnar collateral arteries arises from common subscapular trunk [5]. DeGaris and Swartley study found to axillary arteries variations were especially related to their site and pattern of origin [6]. 30% of cases subscapular artery can arise from a common trunk with posterior circumflex humeral artery. Raghu Jetti reported the

superficial brachial artery from the second part of axillary artery [7].

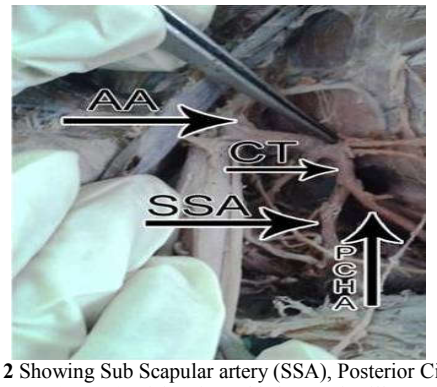

FIGURE 2 Showing Sub Scapular artery (SSA), Posterior Circumflex Humeral Artery (PCHA) arising from third part of axillary artery (AA) as Common Root (CT).

CONCLUSION

In present study, variation was observed in origin of subscapular artery from axillary artery. The subscapular artery in 60% of limbs arose from 3rd part of axillary as a common trunk, and from 2nd part as a direct branch in 15% of cases. Anatomical knowledge of vascular variations in upper limb may useful to vascular surgeons to avoid complications during axilla surgeries and can avoid diagnostic errors in vascular interventions.

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