

ANOMALOUS HIGH ORIGIN OF RADIAL ARTERY: A CASE REPORT

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ABSTRACT

The radial artery is commonly accessed for many vascular and reconstructive surgeries and also for arterial blood sampling and cannulation procedures. The radial artery commences from the brachial artery at the level of neck of the radius in the cubital fossa. Proximally, it is overlapped anteriorly by brachioradialis muscle, but elsewhere in its course it is covered only by the skin, superficial and deep fasciae. During routine dissection of left upper limb of adult male cadaver in accordance with ethical standards at the department of anatomy at Dr. RPGMC Kangra at Tanda, high origin of the radial artery from brachial artery was observed. The brachial artery after giving profunda brachii branch divides in the proximal 1/3rd of arm, corresponding to the origin of brachialis muscle into radial artery and a common trunk for ulnar and common interosseous arteries. The course of radial artery was superficial throughout the arm and forearm. The radial artery on the right side had normal origin and course. This high origin radial artery is termed as brachioradial artery in the literature. Variations in the arterial tree of upper limb are fairly common, having an embryological basis. Accurate anatomical knowledge of the variation is of great clinical importance in performing many diagnostic and therapeutic procedures so as to avoid any iatrogenic injury.

KEYWORDS : radial artery, high origin, case report

INTRODUCTION

Radial artery commences from brachial artery at the level of neck of radius in the cubital fossa. Proximally, it is overlapped anteriorly by brachioradialis muscle, but elsewhere in its course it is covered only by skin, superficial and deep fasciae. The artery lies superficially between brachioradialis and flexor carpi radialis muscle in the distal aspect of forearm and at this site pulse is palpated at the wrist.¹

Radial artery is commonly accessed for many vascular and reconstructive surgeries and also for arterial blood sampling and cannulation procedures.

CASE REPORT

During routine dissection of left upper limb of adult male cadaver in accordance with ethical standards at the department of anatomy at Dr. RPGMC Kangra at Tanda, high origin of the radial artery from brachial artery was observed. The brachial artery after giving profunda brachii branch divides in the proximal 1/3rd of arm, corresponding to the origin of brachialis muscle into radial artery and a common trunk for ulnar and common interosseous arteries. The course of radial artery was superficial throughout the arm and forearm. No branches were given in the entire course till it reached the palm. The artery enters the anatomical snuff box passing deep to the tendons of abductor pollicis longus and extensor pollicis brevis and then passes between the two heads of first dorsal interossei muscle to form the deep palmar arch in palm. The radial artery on the right side had normal origin and course.

DISCUSSION

High origin radial artery is termed as brachioradial artery in the literature.² Most often, the radial branches arise proximally, leaving a common trunk for the ulnar and common interosseous arteries.¹ Many cases have been reported with similar variations either unilateral or bilateral.^{3,4}

CONCLUSION

Variations in the arterial tree of upper limb are fairly common, having an embryological basis. This is mainly because of their multiple and plexiform sources, the temporal succession of emergence of principal arteries, anatomises and periarticular networks and functional dominance followed by regression of some paths. Accurate anatomical knowledge of the variation is of great clinical importance in performing many diagnostic and therapeutic procedures so as to avoid any iatrogenic injury.

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Site of high origin of radial artery

