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Original Research Paper

Anatomy

CASE REPORT- UNILATERAL ABSENCE OF PROFUNDA BRACHII ARTERY

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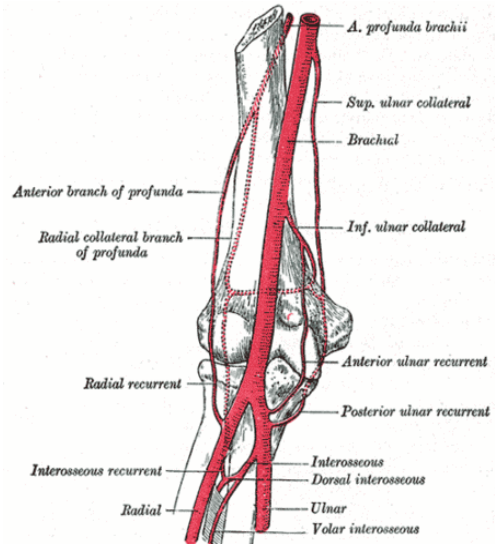
ABSTRACT

The axillary artery, branch of subclavian artery continues as brachial artery from lower border of teres major muscle. During a routine cadaveric dissection of forearm vessels, the profunda brachii artery was found to be missing. The nutrient branch, deltoid branch and the terminal branches are directly arising from the trunk of brachial artery. These variations are useful during catheterisation of brachial artery or during surgical or therapeutic procedures.

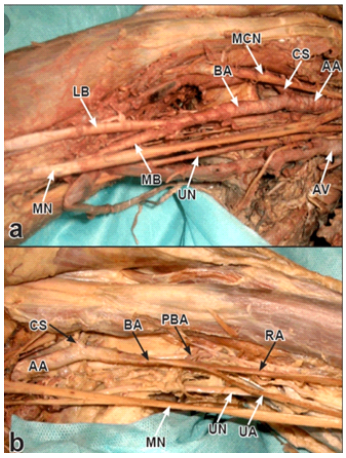
KEYWORDS :

INTRODUCTION



The profunda brachii artery arises from the posteromedial side of the brachial artery soon after passing distally to teres major. It passes posteriorly between the long and medial heads of triceps, lying close to the radial nerve. It lies in the posterior groove of the humerus, alongside the radial nerve and deep to triceps. It divides into its terminal branches within the groove.it gives branches to the deltoid muscle (which, however, primarily is supplied by the posterior circumflex humeral artery) and to the muscles between which it lies; it supplies an occasional nutrient artery which enters the humerus behind the deltoid tuberosity.

A deltoid branch ascends between the long and lateral heads of the triceps brachii to anastomose with the posterior humeral circumflex artery; the medial collateral artery, a branch, descends in the middle head of the triceps brachii and assists in forming the anastomosis above the olecranon of the ulna; and, lastly, a radial collateral artery runs down behind the lateral intermuscular septum to the back of the lateral epicondyle of the humerus, where it anastomoses with the interosseous recurrent and the inferior ulnar collateral arteries.

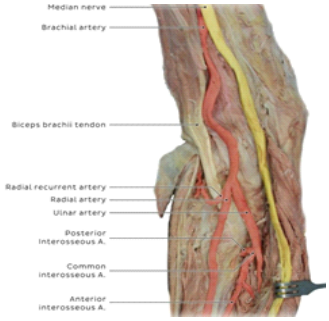


CASE REPORT

During a routine gross anatomy dissection dissection of upper limb (arm) of an elderly female cadaver at the Apollo Institute of Medical Science and Research, Hyderabad, multiple variations were observed, of which absence of profunda brachii artery was one among them. The incision was on the midline of the arm , the skin and fascia are cleared and the muscles dissected and the arteries are traced from the axillary artery till the anastomoses.

OBSERVATION

The absence of the profunda brachii artery, was observed only in the left arm of the cadaver. The nutrient artery took origin from the main trunk of brachial artery below the point of origin of profunda brachii and enters the nutrient foramen of humerus posterior to the deltoid tuberosity.



DISCUSSION

During the dissection classes in the Department of Anatomy at Melaka Manipal Medical College, a 50-year-old male cadaver showed unilateral variations in the branching pattern of the third part of the left axillary artery. The observations include:

1. An abnormal trunk taking origin from the third part of the axillary artery gave rise to anterior and posterior circumflex humeral, subscapular, radial collateral, middle collateral and superior ulnar collateral arteries .
2. Absence of profunda brachii artery

The arterial pattern of this specimen was different from other reported arterial variations, because (1) subscapular, anterior and posterior circumflex humeral arteries arising from a common trunk instead of the third part of axillary artery, (2) absence of profunda brachii artery, (3) radial collateral and middle collateral arteries arising from common trunk instead of profunda brachii artery, (4) superior ulnar collateral artery taking origin from the common trunk instead of brachial artery.

Normally, the profunda brachii is a large branch from the posteromedial aspect of the brachial artery, distal to the teres major. It follows the radial nerve closely, at first posterior between the long and medial heads of the triceps, then in the spiral groove covered by the lateral head of the triceps. It supplies muscular branches, the nutrient artery of the humerus and finally divides into terminal radial and middle collateral branches.] In the present case there was no profunda brachii artery, radial and middle collateral arteries took origin from the common trunk coming from the axillary artery. The rest of the course of these branches was normal and took part in anastomoses around the elbow.

CONCLUSION

With the increased number of access cases being performed annually, appreciation of vascular anomalies is paramount. For both surgical intervention and routine patient care, accurate knowledge of the course and the relationship to surrounding structures are of great practical importance. Inappropriate cannulation of these arteries due to aberrant locations in or near the antecubital fossa can result in thrombosis, gangrene, and even amputation of the limb.

REFERENCES

1. Standring S, Johnson D, Ellis H, Collins P. Gray's anatomy . 39th ed. Churchill Livingstone: London 2005.p.856.
2. Uglietta JP, Kadir S. Angiographic study of variant arterial anatomy of the upper extremities. Cardiovasc Int Radiol 1989;12:145-8. [PUBMED]
3. Poteat WL. Report of a rare human variation absence of the radial artery. Anat Rec 1986;214:89-95. [PUBMED]
4. Fuss FK, Matula CW, Tschabitscher M. The superficial brachial artery. Anat Anz 1985;160:285-94.
5. Nakatani T, Tanaka S, Mizukami S. Superficial brachial arteries observed in bilateral arms. Kaibogaku Zasshi 1996;71:308-12. [PUBMED]