

Anatomical Variation of Superficial Branch of Radial Nerve in Gujrat Region

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Abstract

Introduction: Radial nerve carried fibres entirely roots fifth cervical roots to first thoracic of brachial plexus. It supplies posterior (extensors compartment) of upper limb.

Material and Method: The current study were escort working 30 human anatomy cadavers 9i (bilateral) from anatomy department, Government. Medical college, vadodara of Gujarat region. The procedure dissection carry out in the course of post graduation work, anatomy department to exit out the anatomical variations of bifurcation of superficial branch of radial nerve in relation with lateral epicondyle of Humerus.9i

Results: 9i The current study notice anatomical variations of bifurcation of superficial branch of radial nerve in relation with lateral epicondyle of Humerus.9i

Both side right and left dissections carried out. In sixteen specimen shows that level of bifurcation of radial nerve at level of lateral epicondyle.

In six specimen shows that level of bifurcation of radial nerve above the level of lateral epicondyle.

In eight specimen shows that level of bifurcation of radial nerve below the level of lateral epicondyle.

Pictures variations of radial nerve taken with.

Conclusion: Afterwards the study tasks of thirty human anatomy cadaveric upper limbs the dissimilar anatomical variations in the level of bifurcation distribution of superficial branch of radial nerve were came across. The external branch of the radial nerve is frequently damaged peripheral nerve succeeding the spinal accessory , common peroneal nerves & controllable to restoration.

Key Words: Brachial plexus', Radial nerve, axillary artery

Introduction

Radial nerve carried fibres entirely fifth cervical segment to first thoracic segment of brachial plexus .

Within upper arm radial nerve be placed which it get to the spiral groove through accompanied profunda brachii vessels. Within Spiral groove anterior boundaries formed by middle 1/3 of shaft of Humerus .

Within spiral groove

It Gives five branches first one branch is lower lateral cutaneous nerve innervate skin of lateral surface of arm till elbow.

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Second branch is Posterior cutaneous nerve of the forearm

Third branch is given to lateral head of triceps.

Fourth branch is given to medial head of triceps.

Fifth branch is given to anconeus.

In the radial groove, the nerve runs downwards and laterally between the lateral and medial heads of triceps, in contact with Humerus.

At lower end of groove 5 cm below the deltoid tuberosity, the nerve pierce lateral intermuscular septum.

Now it runs downwards go in the cubital fossa.

Within anterior compartment of arm above the lateral epicondyle, it permits three branches.

I. Nerve to brachialis

II Nerve to brachioradialis.

III Nerve to extensor carpi radialis longus

Between level of lateral epicondyle of Humerus divided two branches.

The **deep branch** also known as posterior interosseal nerve which lie in cubital fossa supplies Extensor carpi radialis brevis and Supinator. Following innervates two muscles it passes between substance of supinator and go in the dorsal compartment of the forearm and supplies all the posterior compartment of muscles of arm. Its permit articular branches to the distal radio-ulnar, wrist, and carpal joints.

The superficial branch

Is sensory sensation carried that innervate sensory sensation of skin of the posterior surface of hand laterally and posterior surfaces of lateral 3 and ½ digits near to proximal the nail floor.

Aims and Objectives

Aims:

To study the anatomical variant of superficial branch of radial nerve which is finished in the course of cadaveric dissection.⁽¹⁾

Objectives

· To describe distance of superficial radial nerve to wrist joint.

· To describe branching distribution of superficial radial nerve.

· To describe the motor twig from the superficial branch of radial nerve.⁽²⁾

Materials and Method

The cross sectional study were follow through in anatomy department in Baroda medical college, Baroda, Gujarat State . total of thirty icadavers (bilateral) 9iobserved during post graduation study. This study come across anatomical variations of bifurcation of superficial branch of radial nerve in relation with lateral epicondyle of Humerus relation at level of lateral condyle, below the level of lateral epicondoyle, above the level of lateral epicondyle.^{(2)9bBb}

Totally embalmed cadavers approachable in the Department of Anatomy during post graduation study were embrace during April 2018 – December 2018 and specimen were observed .

Observation

v **To describe the level of bifurcation of radial nerve in relation to the lateral epicondyle of humerus.**

Observe the level of bifurcation of radial nerve, as at the level, above the level and below the level of lateral epicondyle of humerus.⁽²⁾

Level of Bifurcation

At the level of condyle



Above the condyle



below the condyle



Results

TABLE- 1 LEVEL OF BIFURCATION OF RADIAL NERVE IN RELATION WITH LATERAL EPICONDYLE OF HUMERUS

Level of bifurcation of radial nerve	No. of specimen	%
At the level	16.	53.33 %
Above the level	6.	20%
Below the level	8.	26.66 %.

Table-1 shows that the common pattern of SBRN was seen in at the level of lateral epicondyle in 16 specimens (53.33%).The SBRN arose from the radial nerve above the level of lateral epicondyle in 6 specimens(20%) and below the lateral epicondyle in 8 specimens.(26.66%)(3,5,6)

TABLE-2: COMPARISON BETWEEN THE RIGHT AND LEFT SIDE FOR BIFURCATION OF SUPERFICIAL RADIAL NERVE IN RELATION TO LATERAL EPICONDYLE OF HUMERUS

LEVEL OF BIFURCATION OF SBRN	RIGHT SIDE.	%	LEFT SIDE	%
At the level	8.	26.66%.	8.	26.66%.
Above the level	5.	16.66%	1.	3.33%
Below the level	2.	6.06 %	6.	20.00%

Table-2 Shows the comparison between right and left side for the bifurcation of superficial branch of radial nerve in relation with lateral condyle of humerus. On the right side and left side was seen in 26.66% and 26.66% at the level respectively, 16.66% and 3.33% respectively above the level, and 6.06% and 20.00% below the level respectively(6)

Discussions

TABLE-3 COMPARISON OF THELEVEL OF BIFURCATION OF SBRN.

Author	Level of bifurcation	Incidence of bifurcation
Present study	At the level	53.33%
	Above the level	20%
	Below the level	26.66%
Abram et al [1]	At the level	6.6%
	Above the level	40%
	Below the level	53.33%

Table : 3 shows comparison between the level bifurcation of SRN with other studies. In present study, the level of bifurcation is with higher incidence at the level of lateral epicondyle of humerus with 53.33%.(3)

Conclusion

Afterwards the study tasks of thirty human anatomy cadaveric upper limbs the dissimilar anatomical variations in the level of bifurcation distribution of superficial branch of radial nerve were came across.

The external branch of the radial nerve is frequently damaged peripheral nerve succeeding the spinal accessory , common peroneal nerves & controllable to restoration.^(11,12,7)

Ethical Clearance : Taken Sumandeep Vidyapeeth.

Source of Funding: Self

Conflict of Interest: Nill

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