

Median Nerve formation by two laterals and one medial root –A Case Report

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Introduction

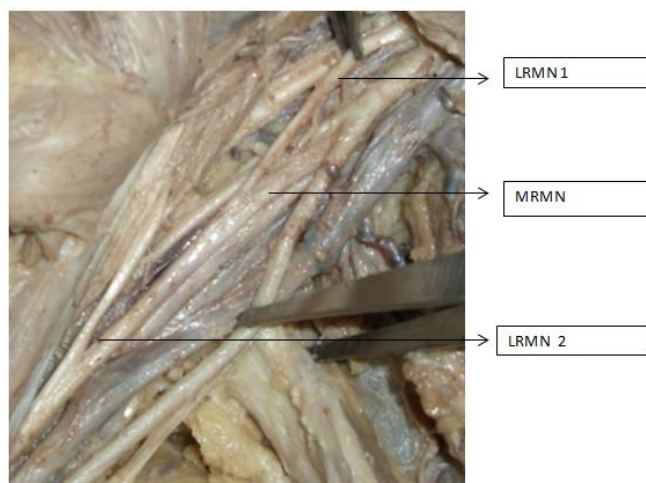
Normally median nerve is formed lateral to third part of axillary artery by the union of a lateral root from lateral cord and a medial root from the medial cord. Formation is Y- shaped. Medial root crosses in front of III part of Axillary. A number of variations in the formation of median nerve, its relationship to the axillary artery and communication with musculocutaneous nerve have been reported by earlier workers. In the present study during routine anatomical dissection we encountered interesting case of variations in the formation of median nerve in the axilla. This variations is accompanied by vascular anomalies also as reported in the earlier literature.

In middle aged female cadaver, on the right side median nerve was formed by 3 roots- 2 lateral & 1 medial. One lateral root is joining proximally and another lateral root piercing through coracobrachialis and joining the median nerve distal to insertion of Pectoralis major.

Musulocutaneous nerve has its normal course through coracobrachialis

Note : that the medial root was passing behind the III part of axillary artery..

An anomalous trunk (*) giving origin to profunda brachii & circumflex humeral arteries pass in between proximal lateral root & medial root.



LRMN –Lateral Root of Median Nerve

MRMN – Medial Root of Median Nerve

Discussion

Venieratos and Anagnostopoulou(1998)(1) reported three types of communications between median and musculocutaneous nerves.

Type I –Communication between median and musculocutaneous nerves(MCN) proximal to the entrance of MCN into coracobrachialis.

Type II – Communicating trunk pass through coracobrachialis muscle to join median nerve.

Type III – MCN and communicating trunk did not pass through the muscle.

In the present case the communicating trunk passing from MCN to median nerve is of Type II.

This kind of communication is a result of passage of some fibers of median nerve from the lateral cord passing into the musculocutaneous rather than into the lateral root of the median and then rejoining the median nerve at a lower level. When this occurs, the lateral root of the median nerve is typically small. Formation of median nerve by two lateral and one medial root was reported earlier by

Sargon et al, 1995 (2)

Abhaya et al 2003 (3)

Sathyanarayana et al. 2010(4)

Uzun and Seelig, 2001(5) reported the formation of median nerve by 4 roots, 3 from lateral & 1 from medial cord.

Pandey & Shukla, 2006(6) reported the formation of Median nerve by the contribution from all the three cords of the brachial plexus.

Knowledge of the various types of median nerve formation and the variable relationship of the roots of median nerve to the axillary artery and association of vascular anomalies is very important during surgeries in the axillary region.

Injury to such a variant nerve may lead to a galaxy of manifestations.

Clinical implications of such variations have to be kept in mind during anaesthetic procedures of brachial plexus, shoulder arthroscopy, traumatic injuries involving axillary region.

References

1. Venieratos D, Anagnostopoulou S; Clarification of communication between the musculocutaneous

nerve and median nerve, Clinical anatomy 1998, volume 11 page 327-331

2. Sargon M, Uslu S, Celik H, et al; A variation of median nerve at the level of brachial plexus, Bull de Association Des Anatomy 1995, volume 79, page 25-26

3. Abhaya A, Khanna J and Prakash R; Variation of lateral cord of brachial piercing coracobrachialis muscle, Journal of Anatomical Society of India (2003) Volume 52 (2), page 168-170

4. Satyanarayana N, Vishwakarma N, Kumar GP, Guwa R, Dutta AK and Sunitha P; Variation in relation of cord of brachial plexus and their branches with axillary and brachial artery- a Case report , Nepal Medical College Journal (2009), Volume 11 (1) page 69-72

5. Uzun A, Seeling L; A variation in the formation of median nerve communicating branch between musculocutaneous nerve and median nerve, Folia Morphologica, 2001 volume 60 (2) page 99-101

6. Pandey and Shukla V; Anatomical variation of cord of brachial plexus and median nerve, Clinical Anatomy (2007) volume 20, page 150-156