DOI: 10.18410/jebmh/2015/969

CASE REPORT

UNILATERAL VARIATION OF THE MEDIAN NERVE: A CASE REPORT

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HOW TO CITE THIS ARTICLE:
Rajat Dutta Roy, Santona Thakuria, Debabani Bora. "Unilateral Variation of the Median Nerve: A Case Report". Journal of Evidence based Medicine and Healthcare; Volume 2, Issue 41, October 12, 2015; Page: 7135-7137, DOI: 10.18410/jebmh/2015/969

ABSTRACT: Median nerve is formed in the axilla from the union of the medial and lateral roots coming from the medial and lateral cord of the brachial plexus respectively either in front or lateral to the axillary artery. This case which is seen in a 60 year old male cadaver reports a variant union of the medial and lateral root embracing the profunda brachii artery to form the median nerve.

INTRODUCTION: The brachial plexus is formed by the union of the ventral rami of the lower four cervical nerves and the greater part of the first thoracic ventral ramus.[1]

The median nerve has two roots from the lateral (C5, 6, 7) and medial (C8, T1) cords, which embrace the third part of the axillary artery, and unite anterior or lateral to it.[1] There is a wide variation in the formation of the median nerve as described by many authors.[2] Variations in formation and location of nerves in relation to axillary artery are important during surgery of the axilla as well as during surgery for carcinoma of breast. Further, knowledge of these variations can explain many unexplained clinical symptoms of nerve compression.

CASE REPORT: During routine dissection of the axilla of a 60 year old embalmed male cadaver for 1st MBBS students in Jorhat Medical College, Jorhat we found a unilateral variation in the formation of the median nerve. In the right axilla, the median nerve was formed by the union of the medial and lateral root by embracing the profunda brachii artery instead of the axillary artery. Its further course in the arm was medial to the brachial artery. (Figure 1)

The course and relation of the brachial plexus in the left axilla however showed the normal course.

Figure 1: Showing the median nerve formed from the union of the medial and lateral root of the median embracing the profunda brachii artery.

Figure 1

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MN: Median nerve, MR: Medial root of the median nerve, LR: Lateral root of the median nerve, UN: Ulnar nerve, MCN: Musculocutaneous nerve, PB: Profunda Brachii artery, AA: axillary artery, BA: Brachial artery, CBMs: Coracobrachialis muscle.

Figure 2: showing the median nerve formed from the union of the medial and lateral root of the median embracing the profunda brachii artery.

Figure 2

MN: Median nerve, MR: Medial root of the median nerve, LR: Lateral root of the median nerve, UN: Ulnar nerve, MCN: Musculocutaneous nerve, PB: Profunda Brachii artery, AA: axillary artery, BA: Brachial artery, CBMs: Coracobrachialis muscle.

DISCUSSION: Variation of median nerve has been reported in literature from abnormal communication with other nerves,[3,4] additional root[5,6] and supplying flexor muscles of arm.[7] Uzan et al[8] reported a case of formation of the median nerve from four roots. Ghosh et al[9] reported a case of formation of median nerve from three roots out of which two were from lateral cord and one from medial cord, the second lateral root and the medial root was formed in front of the profunda brachii artery. Many cases have been reported where the median nerve remain medial to the third part of axillary artery.[10,11] In our case the lateral and medial root instead joined and formed the median nerve embracing the profunda brachii artery.

CONCLUSION: Variations of the brachial plexus and of the median nerve should be kept in mind during surgery of the axillary region. This knowledge can explain some unusual clinical signs not explained by a normal brachial plexus.

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Date of Submission: 24/09/2015.
Date of Peer Review: 25/09/2015.
Date of Acceptance: 29/09/2015.
Date of Publishing: 12/10/2015.