ORIGINAL RESEARCH PAPER

Anatomy

KEY WORDS: median nerve, brachial plexus, flexor retinaculum

VARIATION IN FORMATION AND DISTRIBUTION OF MEDIAN NERVE – A CASE REPORT

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ABSTRACT

Variation in origin and distribution of median nerve has been observed bilaterally in a male cadaver aged 55 years , in department of anatomy, IMS, Banaras Hindu university, Varanasi during routine dissection.

The anatomical variations in the formation, course and termination of brachial plexus are well documented and have clinical significance to surgeons, neurologists and anatomists. The present case report describes the unusual origin of median nerve, arising as direct continuation of lateral cord and receiving a small additional branch from medial cord. In the upper part of forearm median nerve divides in to two equally thick branches which go deep to flexor retinaculum. One of the branches followed usual course of median nerve in palm while the other branch ended piercing the fascia around 2cm above the distal border of flexor retinaculum.

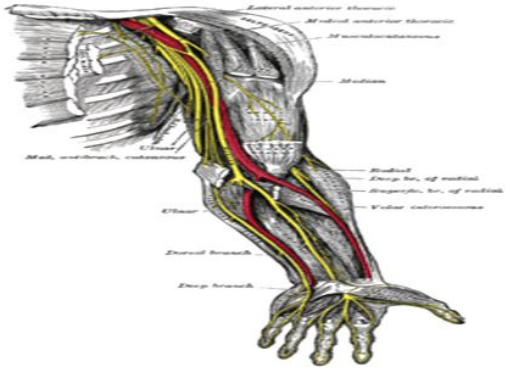
Introduction

The median nerve is formed of lateral and medial roots. The lateral root is the continuation of the lateral cord while the medial root is derived from the medial cord of the brachial plexus. The trunk of median nerve, thus formed, descends on the lateral side of the axillary artery.[1] It has no branches in the upper arm. It enters the forearm between the two heads of pronator teres and gives off the anterior interosseous nerve, which supplies all the flexor muscles of the forearm apart from flexor carpi ulnaris and the ulnar half of flexor digitorum profundus. The median nerve itself passes deep to the flexor retinaculum at the wrist.[2]

Immediately below the retinaculum the nerve divides in to lateral and medial divisions.The lateral division gives off a muscular branch to thenar muscles, and three digital branches for lateral one and half digits including the thumb.Out of the three digital branches ,two supply the thumb and one the lateral side of the index finger.The medial division divides in to two common digital branches for the second and third interdigital clefts, supplying the adjoining sides of the index, middle and ring fingers.[3]

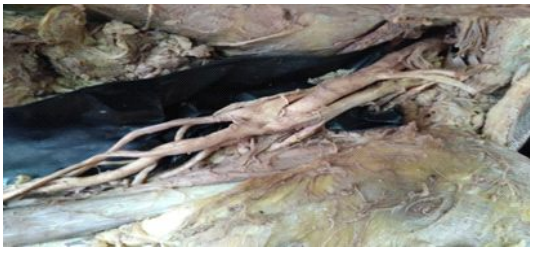
Case report

During routine dissection in the department of anatomy,variation in the formation and distribution of median nerve was found bilaterally in a male cadaver of around 55 years of age.The median nerve was arising as direct continuation of lateral cord and receiving a small additional branch from medial cord of brachial plexus. In the upper part of forearm median nerve divides in to two equally thick branches which go deep to flexor retinaculum. One of the branches followed the usual course of median nerve in palm. On entering the palm, it gave off motor branches to the thenar muscles and the radial two lumbricals, and cutaneous branches to the palmar aspect of the thumb, index and middle fingers and the radial half of the ring finger. While the other branch just ended after piercing the fascia around 2cm above the distal border of flexor retinaculum without supplying any structure.



NORMAL FORMATION AND COURSE OF MEDIAN NERVE

VARIABLE FORMATION ON RIGHT SIDE



VARIABLE FORMATION ON LEFT SIDE

VARIABLE COURSE IN FOREARM. BOTH THE BRANCHES GOING DEEP TO FLEXOR RETINACULUM.

VARIABLE DISTRIBUTION IN PALM. OTHER BRANCH ENDED IN THE PALM WITHOUT SUPPLYING ANY STRUCTURE.

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