INTRODUCTION: Median nerve is formed in axilla by the union of medial root of median nerve and lateral root of median nerve. The medial root crosses downward and laterally in front of the third part of axillary artery and joins with lateral root. Profunda brachii artery is a branch arising from the posterior surface of the proximal part of the brachial artery and follow the radial nerve to enter the spiral groove.

AIM AND OBJECTIVE: To study the variation in formation of median nerve and anatomical variations in arterial formations – profunda brachii artery because knowledge of such variations is important in clinical practice for evaluation of injuries without misinterpretation of clinical symptoms and during surgeries of limbs to prevent accidental injuries to nerves and vessels.

MATERIAL AND METHODS: This study was conducted in Department of Anatomy of Osmania medical college, koti, Hyderabad. During routine undergraduate dissection on 22 formalin fixed human cadaver 20 males & 2 female (44 upper limbs); were dissected for the study. The cadavers with visible trauma, pathology or prior surgeries were excluded from the study. Routine dissection of the axilla and upper limb was followed. After removal of skin, loose connective tissue, fat and lymph nodes of axilla the cords of brachial plexus were identified and the median nerve was identified & carefully dissected, and also axillary artery and brachial artery identified and dissected. At first, the origin is confirmed and then they were traced down. Any variations found were noted and photographed. The results were analysed and compared to previous studies.

RESULTS: Low level of formation of median nerve in arm, profunda brachii artery arising from third part of axillary artery and its passage between medial root of median nerve and lateral root of median nerve was identified in one cadaver on right side. The percentage of low level formation of median nerve in arm and passage of profunda brachii artery in between medial root of median nerve and lateral root of median nerve is 2% among 44 upper limbs.

CONCLUSION: The knowledge on median nerve variations and upper extremity vasculature variations is essential for medical practitioners, anatomists, radiologists, anaesthetist, neurosurgeons and orthopaedic surgeons during surgical operation of the upper limb and is essential to prevent injury and post operative complications particularly in patients requiring dialysis or undergoing arteriography. Also, it is also important for those patients who need arteriovenous bypass.

KEYWORDS
Median Nerve, profunda Brachii Artery, Variations, Medial Root And Lateral Root Of Median Nerve.
DISCUSSION

In the present study low level of formation of median nerve in arm and profunda brachii artery arising from third part of axillary artery and passage between medial root of median nerve and lateral root of median nerve was identified in one cadaver on right side.

There are several case reports on numerical variation of the roots of the Median nerve. The commonest numerical variation is the formation of the median nerve by three roots instead of two and there are number of case reports on such median nerves (Ibrahim et al., 2005; Surendran et al., 2012; Herath et al.; Patil et al., 2016). For formations of the median nerve by four roots also been reported by few authors (Uzun & Seelig; Satyanarayana et al., 2009; Meshram et al.1). Median nerve is also formed by five roots very rarely (Natisi et al.1). There are several reports on formation of the median nerve at different sites of the axilla and arm with different relation to the axillary artery or to the brachial artery (Badawoud et al., 2016). For complications of the brachial plexus, especially when there is the need of axillary-axillary one for hemodialysis.

REFERENCES


CONCLUSION

The knowledge on median nerve variations and variations in the upper extremity vasculature is essential to medical practitioners in dealing with surgery around axilla in order to prevent post-operative complications. The knowledge of these variations may be helpful for the anatomists, radiologists, anaesthetists, neurosurgeons and orthopaedic surgeons during surgical operation of the upperlimb and is essential to prevent injury, particularly in patients requiring dialysis or undergoing arteriography. Also, it is also important for those patients who need arteriovenous bypass with thigh autogenous access or with grafts, especially when there is the need of axillary-axillary one for hemodialysis.

REFERENCES