

A GROSS ANATOMICAL STUDY ON THE FORMATIONS, BRANCHING PATTERN AND VARIATIONS OF THE CORDS OF THE ANTERIOR DIVISIONS OF BRACHIAL PLEXUS IN CADAVERS

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Introduction :

The Brachial plexus is a complex network of nerves of the peripheral nervous system which supplies both sensory and motor innervations to the upper limb. Brachial plexus supplies the upper limb and is formed by ventral rami (Anterior rami) of lower four cervical nerves and first thoracic nerves¹. The five roots emerge downwards laterally between scalenus anterior and medium muscles. More than 50% of anatomical variations in cadaveric studies of human neural system have been reported to belong to the brachial plexus. Though there are number of studies done in regard to Brachial plexus and its variation, it is hourly need for the updated details of the brachial plexus in the South Indian population.

Aim & Objectives :

The main aim of the present study is to observe the brachial plexus and its variations under various parameters related to formation, variation and branching pattern of anterior divisions of brachial plexus.

Materials and methods

50 upperlimb specimen available in the Department of Anatomy were used for the present study. study was done by routine dissection in the dissection hall and the observations were made. Details were noted, tabulated and discussed.

Observation

6% of specimens showed branches emerging from the anterior divisions of upper and middle trunk. Lateral pectoral nerve was seen emerging from the anterior divisions of upper and middle trunk. No variations are observed and in all the 50 specimens, the Lateral cord is formed by anterior divisions of upper and middle trunk. 20% of variations in the branching pattern of Lateral cord were observed. Lateral Pectoral nerve emerged from the anterior divisions of brachial plexus, of which, in two specimens, the origin of lateral pectoral nerve was from the anterior division of upper trunk.

Conclusion

Brachial plexus variations have great significance and a proper knowledge of these variations is the topic of interest to surgeons, clinicians, and researchers for the benefit of patients. Sonographic investigations can also be used for identifying the nerves and for providing effective nerve blocks, to ensure a proper treatment outcome

References

A.K. Datta; Essentials of Human Anatomy; part III; Superior and Inferior Extremities; p(49).Fazan V, Amadeu A, Calaffi A, Felio C. Brachial Plexus variations in its formation and main branches. Acta Cirurgica Brasileisa. 2001; 18(5): 14-18.

Bhanu PS,et al , Formation of median nerve without the medial root of medial cord and associated variations of the brachial plexus. Int J Anat Var 2010;3:27-9