

Case Report

BILATERAL MULTIPLE VARIATIONS IN THE FORMATION OF THE BRACHIAL PLEXUS AND ITS TERMINAL NERVES: A CASE REPORT

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ABSTRACT

Background: Variations in formation of brachial plexus roots, trunks, divisions and cords are not uncommon and maybe of important in regional anaesthesia involving the upper limb. However, in the present case we are reporting a rare bilateral multiple variations observed during routine dissection on a 77-years-old embalmed male cadaver on left and right brachial plexus. Understanding the anatomical variations involving brachial plexus is important and might benefit the physicians, surgeons, anaesthesiologists and neuroanatomists during their routine procedures involving the cervical, axillary and the upper limb regions.

KEY WORDS: BRACHIAL PLEXUS; TRUNKS; TERMINAL NERVES; VARIATIONS.

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BACKGROUND

Brachial plexus is a principle somatic nerve plexus supplying the upper limb situated in the posterior triangle of the cervical region and in the axillary region. This plexus is a result of union of anterior rami of inferior four cervical nerves (C5, C6, C7, and C8) and the anterior ramus of the first thoracic nerve (T1). In normal anatomy, the brachial plexus is described to have roots, trunks, divisions, cords and terminal nerves [3, 6]. At the lateral border of the anterior scalene muscle, the C5 and C6 roots unite to form the superior trunk, C7 forms middle trunk, and C8 and T1 unites to form the inferior trunk, each of which splits into anterior and posterior divisions in the floor of the posterior triangle of the neck.

At the upper border of the first rib, these divisions form cords which are related to the second part of the axillary artery. All posterior divisions join to form posterior cord (C5 to T1), anterior divisions of the superior and middle trunks join to form lateral cord (C5 to C7), and anterior division from inferior trunk forms the medial cord (C8 to T1). Just distal to the inferior border of the pectoralis minor muscle, near the third part of the axillary artery, the cords give off their terminal branches, including the axillary, musculocutaneous, radial, median, and ulnar nerves [8].

Variations involving the brachial plexus has been reported and discussed by many researchers [2, 6, 7] and they were found to involve different