Q9 – Brachial Plexus with Applied Aspect

Definition Note

> The brachial plexus is a network of nerves formed by the anterior rami of spinal nerves C5, C6, C7, C8, and T1. It supplies motor and sensory innervation to the upper limb.

Formation

The brachial plexus is formed by the union, division, and redistribution of the anterior rami of C5 to T1 spinal nerves. It is organized into roots, trunks, divisions, cords, and terminal branches.

Roots

The roots are formed by the anterior rami of C5, C6, C7, C8, and T1 spinal nerves. They lie in the neck and give branches such as the dorsal scapular and long thoracic nerves.

Trunks

The roots unite to form three trunks: upper trunk (C5–C6), middle trunk (C7), and lower trunk (C8–T1). The trunks are located in the posterior triangle of the neck.

Divisions

Each trunk divides into anterior and posterior divisions. Anterior divisions supply flexor compartments, while posterior divisions supply extensor compartments.

Cords

The divisions recombine to form three cords named according to their relation to the axillary artery: lateral, medial, and posterior cords.

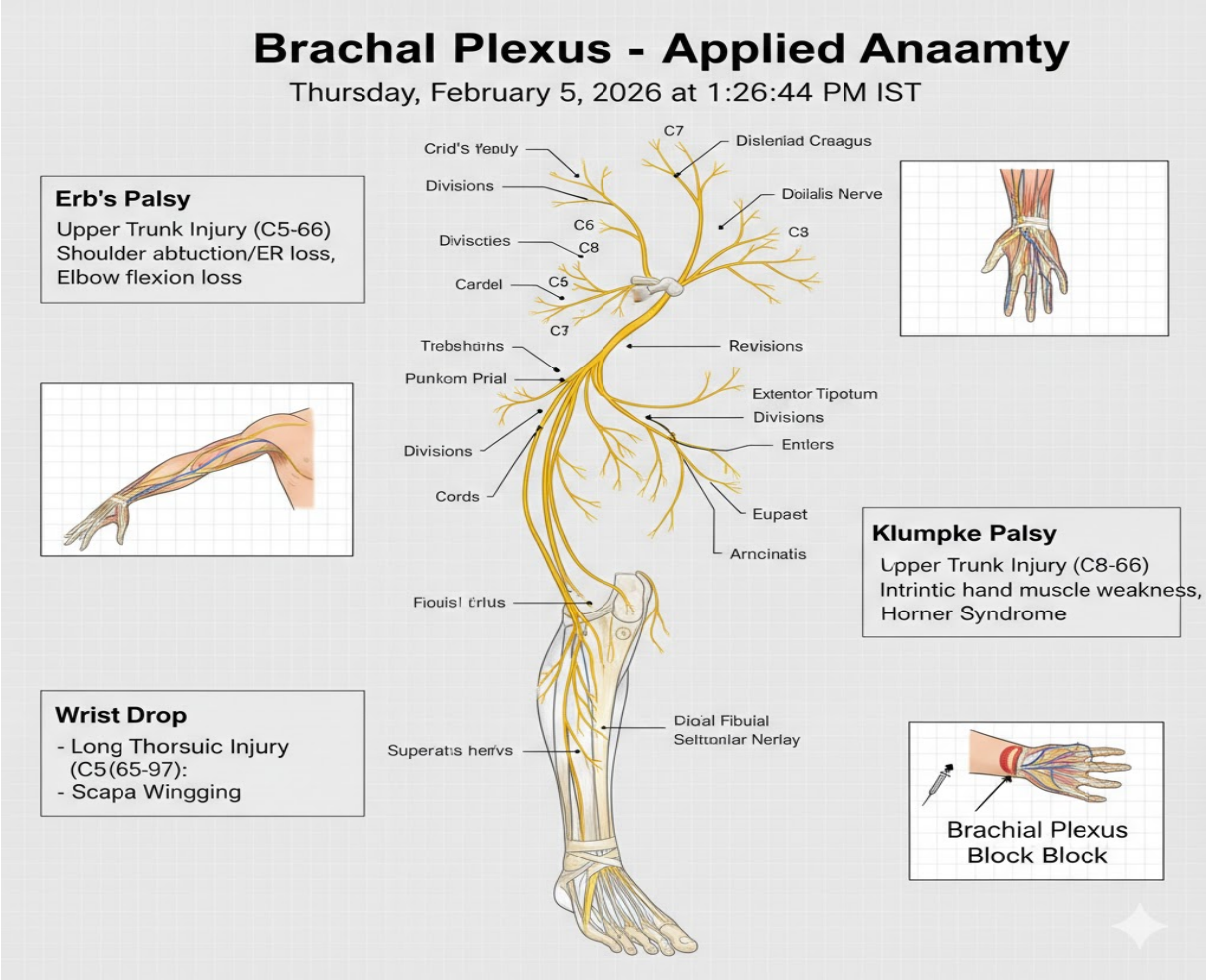
Terminal Branches

The major terminal branches are musculocutaneous, median, ulnar, axillary, and radial nerves.

Applied Anatomy

Erb’s palsy occurs due to injury of the upper trunk (C5–C6) and results in the waiter’s tip deformity. Klumpke’s palsy occurs due to injury of the lower trunk (C8–T1) and causes claw hand with possible Horner syndrome. Radial nerve injury leads to wrist drop. Brachial plexus block is used for regional anesthesia of the upper limb.

Labeled Diagram – Brachial Plexus with Applied Aspect



Conclusion: The brachial plexus is a complex nerve network essential for upper limb function. Understanding its anatomy and applied aspects is crucial for clinical diagnosis and surgical procedures.