

Answers

- [1.1] **B.** The deltoid and supraspinatus muscles, which are innervated by the axillary and suprascapular nerves, respectively, are the primary abductors of the arm at the shoulder.
- [1.2] **D.** Injury to the musculocutaneous nerve will result in loss or weakness of flexion at the elbow due to paralysis of the biceps brachii and brachialis muscles.
- [1.3] **E.** The C8 and T1 portions of the lower brachial plexus make up the majority of the ulnar nerve.

ANATOMY PEARLS

- ❖ Widening the angle between the neck and shoulder may stretch the C5 and C6 roots and/or superior trunk, thereby damaging the axillary, musculocutaneous, and suprascapular nerves.
- ❖ An upper plexus injury results in Erb palsy, which is characterized by an adducted and medially rotated arm, extended elbow, and pronated hand (waiter's tip sign).
- ❖ The axillary nerve is at risk from fractures of the surgical neck of the humerus.
- ❖ The musculocutaneous nerve supplies all the muscles of the anterior compartment of the arm.
- ❖ An abnormal increase in the angle between the upper limb and thorax and/or severe abduction traction may stretch the C8 and T1 roots and/or the inferior trunk and, hence, affect the ulnar and median nerves.
- ❖ A lower plexus injury may result in Klumpke palsy, which is characterized primarily by signs of ulnar nerve damage (claw hand).
- ❖ The ulnar nerve innervates all but five muscles of the hand: the three thenar muscles and the lumbricals to the index and middle fingers. In ulnar nerve palsies, the patient is unable to abduct and adduct the fingers.
- ❖ A posterior cord injury results in signs of radial nerve damage (wrist drop).

REFERENCES

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