UNIT 14. DISSECTION: CUBITAL FOSSA AND THE ANTERIOR FOREARM

STRUCTURES TO IDENTIFY:

- Brachioradialis
- Flexor carpi radialis
- Pronator teres
- Palmaris longus
- Bicipital aponeurosis
- Flexor carpi ulnaris
- Radial nerve
- Flexor digitorum superficialis
- Biceps tendon
- Flexor digitorum profundus
- Brachial artery
- Flexor pollicis longus
- Radial artery
- Pronator quadratus
- Ulnar artery
- Flexor retinaculum
- Common interosseous artery
- Anterior interosseous artery
- Posterior interosseous artery
- Median nerve
- Anterior interosseous nerve
- Ulnar nerve

DISSECTION INSTRUCTIONS:

1. Free the bicipital aponeurosis from the deep fascia but leave it attached to the biceps tendon. Locate and clean the brachioradialis and pronator teres muscles without destroying their nerve and blood supply (N. plates 433, 446; G. plate 6.45). Define the cubital fossa and clean the structures in it. From lateral to medial locate these structures: radial nerve (can be found entering the cubital fossa between the brachialis and brachioradialis mm), biceps tendon, brachial artery and the median nerve.

2. Remove the skin from both hands, being especially careful with the fingers.

3. The anterior osteofascial compartment of the forearm contains eight muscles (N. plates 442, 443, 446 - 450, 433; G. plates 6.56 - 6.61, Table 6.10 p. 553). Identify the pronator teres and clean the flexor carpi muscles in the anterior forearm. The flexor carpi radialis and the flexor carpi ulnaris muscles should be cleaned to the wrist, but the palmaris longus crosses the wrist and inserts into the palmar aponeurosis. Clean the palmar aponeurosis (N. plate 459; G. plate 6.63). The palmaris longus muscle is absent in some individuals, but the palmar aponeurosis will be present. On one side, the palmar aponeurosis should be reflected and a continuation of the palmaris longus muscle, or removed if the muscle is absent, by carefully detaching it from its attachments in the wrist and hand.

4. Cut the pronator teres muscle one inch from its insertion on the radius on both sides. Elevate the superficial muscles by flexing the wrist and clean the flexor digitorum superficialis muscle. It divides into four tendons near the wrist. Clean the palmar...
surface of the wrist and identify the flexor retinaculum. It, with the carpal bones, forms the carpal tunnel. The tunnel transmits the four tendons of the flexor digitorum superficialis, the four tendons of the flexor digitorum profundus, the tendon of the flexor pollicis longus and the median nerve.

5. Locate the median nerve proximal to the retinaculum between the tendons of the flexor carpi radialis and palmaris longus muscles.

6. Identify the ulnar nerve and vessels which pass superficial to the retinaculum, immediately lateral to the pisiform bone.

7. On one side, carefully cut through the flexor retinaculum. Now detach the radial origin of the flexor digitorum superficialis muscle and elevate it and its tendons so that the flexor digitorum profundus, flexor pollicis longus and the pronator quadratus muscles can be cleaned. Clean the median nerve, radial artery and ulnar artery throughout the forearm. Shortly after the ulnar artery is given off, it gives rise to the common interosseous artery. The common interosseous divides almost immediately into the anterior and the posterior interosseous arteries. The anterior interosseous artery passes distally, anterior to the interosseous membrane and is covered by the flexor pollicis longus and the flexor digitorum. The posterior interosseous artery passes straight posteriorly between the proximal ends of the radius and the ulna and goes above the proximal border of the interosseous membrane to reach the posterior aspect of the forearm.