

ANTERIOR COMPARTMENT OF ARM

CORACOBRACHIALIS (SE)

Origin- tip of the coracoid process of scapula

Insertion- middle of medial border of humerus

Nerve supply- musculocutaneous nerve

Actions- flexion and adduction of arm

Events occurring at the level of insertion-

- Ulnar nerve pierces medial intermuscular septum enters posterior compartment of arm
- Radial nerve pierces lateral intermuscular septum enters anterior compartment of arm
- Median nerve crosses in front of brachial artery from lateral to medial side
- Basilic vein pierces deep fascia and becomes deep
- Shaft of humerus becomes triangular in shape
- Nutrient branch of brachial artery enters nutrient foramen of humerus

BICEPS BRACHII MUSCLE- ATTACHMENTS, NERVE SUPPLY AND ACTIONS

Origin:

Long head- supraglenoid tubercle of scapula

Short head- tip of coracoid process of scapula

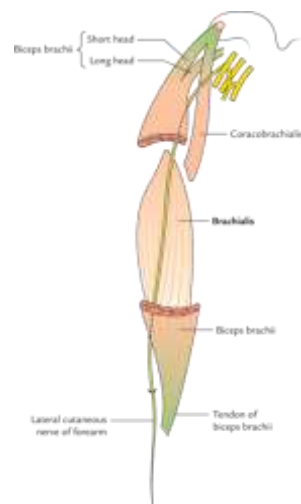
Insertion- posterior part of radial tuberosity

Nerve supply- musculocutaneous nerve

Actions- supination of forearm when elbow is flexed, flexion of elbow and shoulder

MUSCULOCUTANEOUS NERVE- ROOT VALUE, ORIGIN, RELATIONS, COURSE, BRANCHES

Root value- C5, C6



Origin- from lateral cord of brachial plexus

Course and relations- it runs lateral to 3rd part of axillary artery, pierce coracobrachialis and descend in front of arm between biceps brachii and brachialis. Just above the elbow it pierces the deep fascia and becomes lateral cutaneous nerve of forearm.

Branches-

Muscular branches- coracobrachialis, biceps brachii, brachialis

Cutaneous branch- musculocutaneous continues as lateral cutaneous nerve of forearm supplies skin over lateral side of forearm

Articular branches- elbow joint

Brachial artery

Origin- it is the continuation of the axillary artery at the level of the lower border of teres major

Course- it runs downwards in front of arm till the neck of radius in cubital fossa where it terminates by dividing into terminal branches radial and ulnar arteries

Relations

Anterior- skin, superficial fascia, deep fascia, median nerve crossing from lateral to medial side, bicipital aponeurosis

Posterior- long head of triceps, medial head of triceps, coracobrachialis, brachialis, radial nerve, profunda brachii artery

Lateral- median nerve in upper part, biceps brachii in lower part

Medial- ulnar nerve, basilica vein, medial cutaneous nerve of forearm in upper part, median nerve in lower part

Branches

Muscular branches

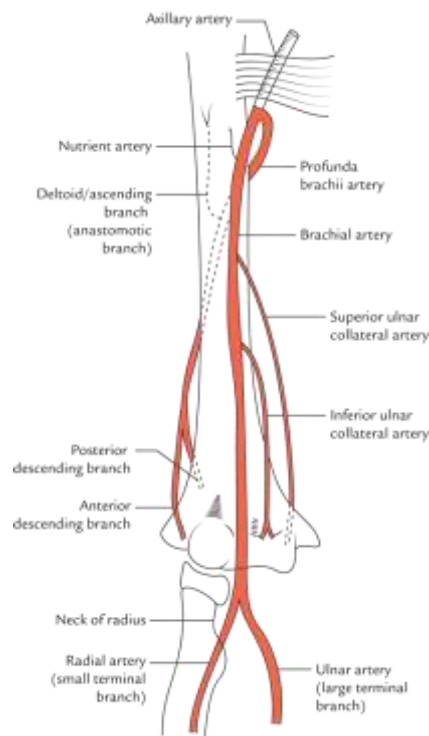
Profunda brachii artery- supplies posterior compartment of arm

Superior ulnar collateral artery- runs along with ulnar nerve and takes part in anastomosis around the elbow joint

Inferior ulnar collateral artery- arises 5cm above elbow joint and takes part in anastomosis around elbow joint

Nutrient artery- to humerus

Applied anatomy- pulsations can be felt in front of elbow medial to biceps brachii tendon



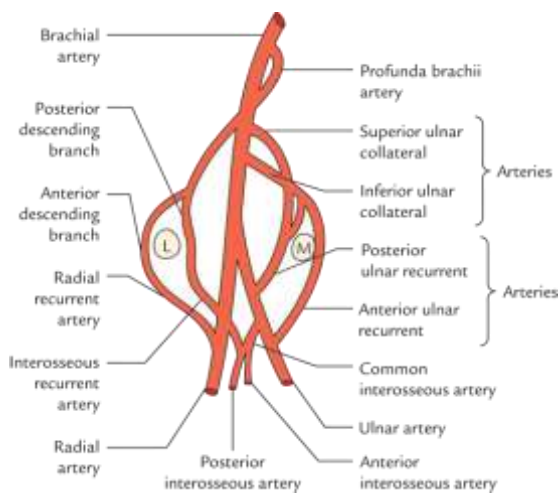
Anastomosis around elbow joint

In front of lateral epicondyle of humerus- anterior branch of profunda brachii with radial recurrent artery

Behind lateral epicondyle of humerus- posterior branch of profunda brachii with interosseous recurrent artery

In front of medial epicondyle of humerus- anterior branch of inferior ulnar collateral with anterior ulnar recurrent branch

Behind medial epicondyle of humerus- superior ulnar collateral artery and posterior branch of inferior ulnar collateral with posterior ulnar recurrent



artery

Cubital fossa- boundaries and contents

Boundaries

Lateral- brachioradialis

Medial- pronator teres

Apex- crossing of brachioradialis over pronator teres

Base- imaginary line connecting two epicondyles of humerus

Roof- skin, superficial fascia, deep fascia, bicipital aponeurosis, median cubital vein, basilica vein, cephalic vein, medial cutaneous nerve of forearm, lateral cutaneous nerve of forearm

Floor- brachialis, supinator

Contents

Brachial artery, ulnar artery, radial artery

Median nerve

Tendon of biceps brachii

Events occurring at insertion of coracobrachialis (SA)

Ulnar nerve pierces medial intermuscular septum enters posterior compartment of arm

Radial nerve pierces lateral intermuscular septum enters anterior compartment of arm

Median nerve crosses in front of brachial artery from lateral to medial side

Basilic vein pierces deep fascia and becomes deep

Shaft of humerus becomes triangular in shape

Nutrient branch of brachial artery enters nutrient foramen of humerus

Biceps brachii muscle- nerve supply and actions

Nerve supply- musculocutaneous nerve

Actions- supination of forearm when elbow is flexed, flexion of elbow and shoulder

Brachialis - attachments, nerve supply and action

Origin- lower half of anterior surface of shaft of humerus, adjacent surfaces of medial and lateral intermuscular septa

Insertion- ulnar tuberosity, anterior surface of coronoid process of ulna

Nerve supply- musculocutaneous, radial

Actions- flexion of elbow

Musculocutaneous nerve

Origin- from lateral cord of brachial plexus

Course and relations- it runs lateral to 3rd part of axillary artery, pierce coracobrachialis and descend in front of arm between biceps brachii and brachialis. Just above the elbow it pierces the deep fascia and becomes lateral cutaneous nerve of forearm.

Branches -

Muscular branches- coracobrachialis, biceps brachii, brachialis

Cutaneous branch- musculocutaneous continues as lateral cutaneous nerve of forearm supplies skin over lateral side of forearm
Articular branches- elbow joint

Name the muscles supplied by musculocutaneous nerve

Coracobrachialis, biceps brachii, brachialis

Branches of brachial artery

Muscular branches

Profunda brachii artery

Superior ulnar collateral artery

Inferior ulnar collateral artery

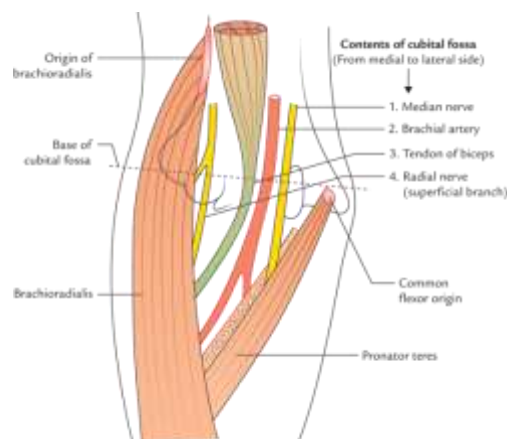
Nutrient artery

Cubital fossa- boundaries, contents and clinical applications

Boundaries

Lateral- brachioradialis

Medial- pronator teres



Apex- crossing of brachioradialis over pronator teres

Base- imaginary line connecting two epicondyles of humerus

Roof- skin, superficial fascia, deep fascia, bicipital aponeurosis, median cubital vein, basilica vein, cephalic vein, medial cutaneous nerve of forearm, lateral cutaneous nerve of forearm

Floor- brachialis, supinator

Contents

Tendon of biceps brachii

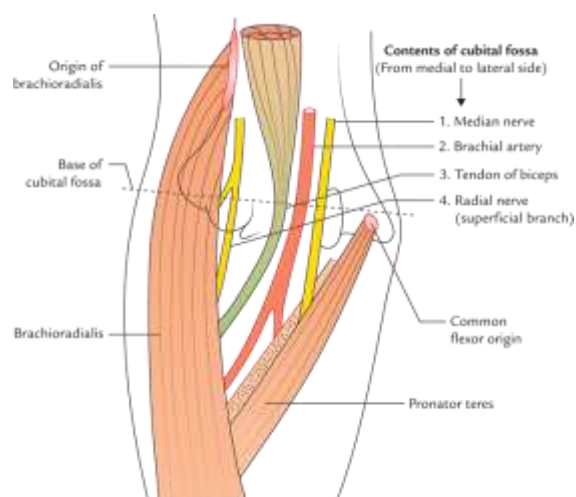
Brachial artery, ulnar artery, radial artery

Median nerve

Clinical applications

Median cubital vein used for veni puncture, Intravenous injections and cardiac catheterizations

Draw a neat labeled diagram of boundaries and contents of cubital fossa



CUBITAL FOSSA(SE / SA)

Cubital fossa is a triangular hollow area situated in front of elbow.

Boundaries:

Laterally- Brachioradialis muscle

Medically- Pronator Teres muscle

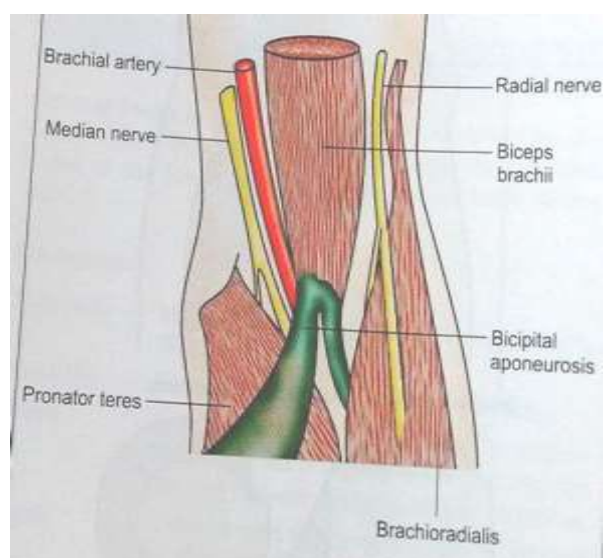
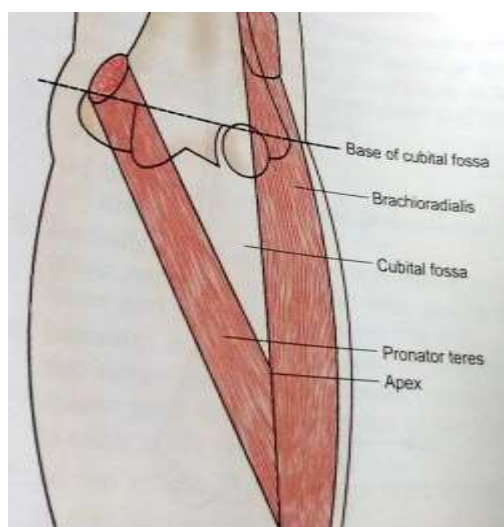
Base- Directed upwards formed by imaginary line joining the two epicondyles of humerus

Apex - Directed downwards formed by meeting point of medial and lateral borders.

Roof- skin, superficial fascia containing median cubital vein, medial and lateral cutaneous nerves of forearm.

Deep fascia- Bicipital aponeurosis

Floor - formed by 2 muscles Brachialis, Supinator



Contents- From medial to lateral,
Median Nerve

Brachial artery - terminates by dividing into Radial artery & Ulnar artery.

Tendon of Biceps Brachii

Radial Nerve

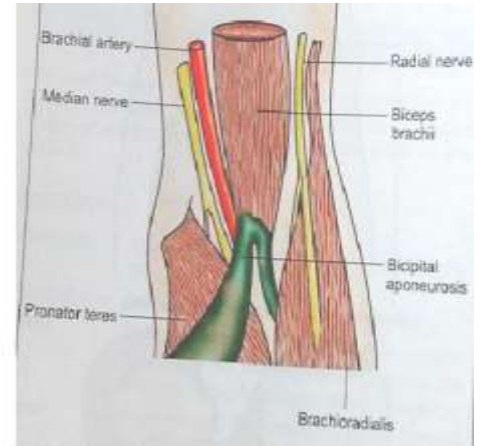
Applied Anatomy-

Median cubital vein is used to draw blood.

Brachial artery in the cubital fossa is used to record Blood Pressure.

Biceps Brachii tendon is used to elicit tendon reflex.

DRAW NEAT LABELLED DIAGRAM OF BOUNDARIES AND CONTENTS OF CUBITAL FOSSA(SA)

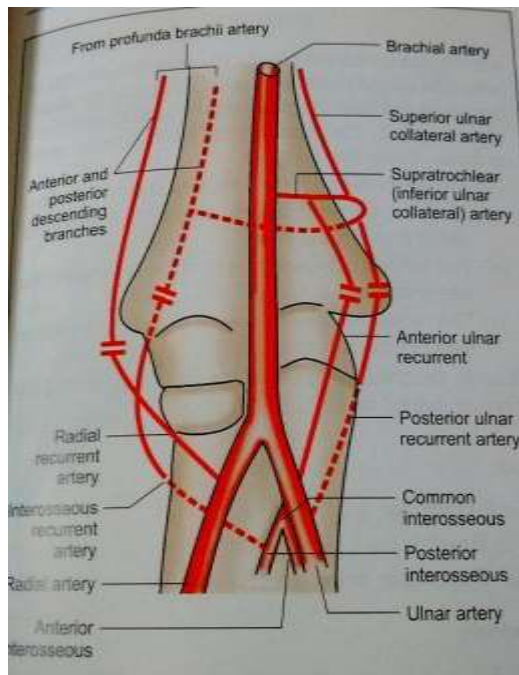


ANASTOMOSIS AROUND THE ELBOW (SE)

Anastomoses around elbow links the brachial artery with radial and ulnar arteries.

Functional importance

This arterial anastomosis ensures the normal circulation to forearm and hand when elbow is flexed and the brachial artery is compressed temporarily .



In front of lateral epicondyle of humerus-

Anterior descending branch of Profunda Brachii artery anastomosis with radial recurrent branch of radial artery.

Behind the lateral epicondyle of humerus-

Posterior descending branch of Profunda Brachii artery anastomosis with interosseous recurrent branch of posterior interosseous artery.

In front of medial epicondyle of humerus-

Inferior ulnar collateral branch of brachial artery anastomosis with anterior ulnar recurrent branch of ulnar artery

Behind the medial epicondyle of humerus-

Superior ulnar collateral branch of brachial artery anastomosis with posterior ulnar recurrent branch of ulnar artery.