

Viva Voce – Chapter: Arm

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A. General & Surface Anatomy

Q1. What is the extent of the arm?

? From *shoulder joint to elbow joint*.

Q2. What divides the arm into compartments?

? **Medial and lateral intermuscular septa** derived from deep fascia.

Q3. Name the compartments and their nerve supply.

?

- **Anterior (flexor)** ? Musculocutaneous nerve.
- **Posterior (extensor)** ? Radial nerve.

Q4. What are the palpable bony landmarks of the arm?

? Acromion, greater and lesser tubercles, medial and lateral epicondyles, and olecranon.

Q5. What is the significance of the line joining the epicondyles and olecranon?

? In extension ? all three lie in a *straight line*; in flexion ? form a *triangle* ? important for diagnosing dislocations and fractures.

B. Muscles of Arm

Q6. Name the muscles of the anterior compartment.

? *Biceps brachii, Coracobrachialis, Brachialis*.

Q7. Which muscle is called the “workhorse” of elbow flexion?

? *Brachialis* (acts in all positions of pronation and supination).

Q8. What is the origin of the short and long heads of biceps brachii?

?

- Short head ? *Coracoid process of scapula.*
- Long head ? *Supraglenoid tubercle of scapula.*

Q9. What is the insertion of biceps brachii?

? *Radial tuberosity and bicipital aponeurosis.*

Q10. What is the function of biceps brachii?

? Flexes elbow and supinates forearm (especially when flexed).

Q11. Which muscle is pierced by musculocutaneous nerve?

? *Coracobrachialis.*

Q12. What is the nerve supply of brachialis?

? *Musculocutaneous nerve (C5–C6) and a small branch from radial nerve.*

Q13. What is the chief extensor of the elbow joint?

? *Triceps brachii.*

Q14. What is the nerve supply of triceps brachii?

? *Radial nerve (C6–C8).*

Q15. Which part of triceps is involved in shoulder adduction?

? *Long head.*

Q16. What is the insertion of triceps brachii?

? *Olecranon process of ulna.*

Q17. What is the action of anconeus muscle?

? Assists triceps in elbow extension and stabilizes elbow joint.

Q18. What are the spinal segments tested in biceps and triceps reflexes?

?

- Biceps reflex ? C5–C6 (musculocutaneous).
 - Triceps reflex ? C7–C8 (radial).
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C. Nerves of the Arm

Q19. Which nerve supplies all muscles of anterior compartment?

? *Musculocutaneous nerve.*

Q20. What is the root value of musculocutaneous nerve?

? C5, C6, C7.

Q21. What happens if musculocutaneous nerve is injured?

? Weak elbow flexion and loss of sensation on lateral forearm.

Q22. What is the root value of median nerve?

? C5–T1.

Q23. What is the relation of median nerve to brachial artery?

? Lateral in upper arm, crosses in front, medial in lower arm.

Q24. Does median nerve give any branches in arm?

? No, it gives **no branches** in the arm.

Q25. What is the root value of ulnar nerve?

? C8, T1.

Q26. Where does ulnar nerve pierce the medial intermuscular septum?

? Midway down the arm ? then passes behind *medial epicondyle*.

Q27. Why is ulnar nerve called the “funny bone”?

? Because it lies superficial behind medial epicondyle; when struck, causes tingling pain along medial forearm and hand.

Q28. What is the root value of radial nerve?

? C5–T1.

Q29. Which artery accompanies the radial nerve in spiral groove?

? *Profunda brachii artery.*

Q30. What are the cutaneous branches of radial nerve in the arm?

? Posterior cutaneous nerve of arm, lower lateral cutaneous nerve of arm, posterior cutaneous nerve of forearm.

Q31. What is the motor supply of radial nerve in arm?

? *Triceps brachii and anconeus.*

Q32. What is the effect of radial nerve injury in spiral groove?

? *Wrist drop* (loss of wrist and finger extension).

Q33. What is the effect of radial nerve injury in axilla?

? *Crutch palsy* ? loss of elbow, wrist, and finger extension.

D. Arteries and Veins

Q34. From where does the brachial artery arise?

? Continuation of *axillary artery* beyond lower border of *teres major*.

Q35. Where does the brachial artery terminate?

? At the level of *neck of radius in cubital fossa* ? divides into *radial and ulnar arteries*.

Q36. What are the branches of brachial artery?

? Muscular, Profunda brachii, Nutrient to humerus, Superior & inferior ulnar collaterals, Terminal (radial & ulnar).

Q37. Which is the largest branch of brachial artery?

? *Profunda brachii artery.*

Q38. Where can brachial pulse be felt?

? In cubital fossa, *medial to tendon of biceps brachii*.

Q39. Which vein connects cephalic and basilic veins?

? *Median cubital vein.*

Q40. Why is median cubital vein chosen for venipuncture?

? It is superficial, fixed by perforators, and separated from artery by *bicipital aponeurosis*.

E. Cubital Fossa

Q41. What is the cubital fossa?

? A triangular depression on anterior aspect of elbow.

Q42. What are its boundaries?

?

- Medial ? Pronator teres.
- Lateral ? Brachioradialis.
- Base ? Line joining epicondyles.

Q43. What forms the roof of the cubital fossa?

? Skin, superficial fascia, *median cubital vein*, and *bicipital aponeurosis*.

Q44. What forms the floor of cubital fossa?

? *Brachialis (medially)* and *Supinator (laterally)*.

Q45. What are the contents (from medial to lateral)?

? *Median nerve*, *Brachial artery*, *Biceps tendon*, *Radial nerve*.

Q46. What lies superficial to the fossa and may be used for blood sampling?

? *Median cubital vein*.

Q47. What is the clinical importance of bicipital aponeurosis?

? It separates the *median cubital vein* from the *brachial artery*, preventing accidental arterial puncture.

F. Clinical & Reflex Testing

Q48. What is tested by biceps jerk?

? Integrity of *musculocutaneous nerve* (C5–C6).

Q49. What is tested by triceps jerk?

? Integrity of *radial nerve* (C7–C8).

Q50. What happens if the brachial artery is injured in supracondylar fracture?

? May cause *Volkmann's ischemic contracture* due to muscle ischemia.

Q51. What are the signs of Volkmann's ischemic contracture?

? Flexion deformity of wrist & fingers, pain on passive extension, and claw-like posture.

Q52. What happens in musculocutaneous nerve injury?

? Weak flexion at elbow, loss of lateral forearm sensation.

Q53. What are the effects of ulnar nerve injury at elbow?

? *Claw hand*, loss of sensation in medial 1½ fingers.

Q54. What is the effect of median nerve injury in the arm?

? Weak pronation, loss of flexion of thumb and index, *ape hand deformity*