CLAVICLE — BONY FEATURES

The clavicle is an S-shaped modified long bone that connects the upper limb to the axial skeleton.

Clavicle has

- 2 ends (Medial & Lateral)
- Shaft

ENDS OF CLAVICLE

🔹 Medial (Sternal) End

- Large, quadrangular
- Articulates with:
  → Manubrium of sternum
  → First costal cartilage
- Forms → Sternoclavicular joint

Articular surface extends onto inferior aspect.

- Lateral (Acromial) End
  - Flattened (from above downward)
  - Articulates with:
    → Acromion process of scapula
  - Forms → Acromioclavicular joint

Small oval articular facet present.

SHAFT OF CLAVICLE

Divided into:

Clavicle shaft
→ Medial 2/3
→ Lateral 1/3

- Curvature (Very Important for Side Determination)

Medial 2/3

→ Convex forwards

Lateral 1/3

→ Concave forwards

This gives the clavicle its S-shape.

SURFACES & FEATURES

The shaft has:

→ Superior surface
→ Inferior surface
→ Anterior border
→ Posterior border

- Superior Surface
  - Smooth
  - Subcutaneous

- Easily palpable
- No major attachments

Clinical: Most fractures are visible due to subcutaneous position.

🔹 Inferior Surface (Rough — Important Viva Area)

From lateral to medial:

Lateral 1/3

→ Conoid tubercle

→ Trapezoid ridge

Medial 2/3

→ Groove for subclavius muscle

→ Impression for costoclavicular ligament (costal tuberosity)

IMPORTANT LANDMARKS

- Conoid Tubercle
  - Posteroinferior aspect of lateral 1/3
  - Attachment → Conoid ligament
- Trapezoid Ridge
  - Anteroinferior to conoid tubercle
  - Attachment → Trapezoid ligament
- Groove for Subclavius
  - Middle part of inferior surface
- Costal Tuberosity
  - Medial inferior surface
  - Attachment → Costoclavicular ligament

JOINTS OF CLAVICLE

Clavicle participates in two joints:

Clavicle

→ Medial end → Sternoclavicular joint

→ Lateral end → Acromioclavicular joint

- Sternoclavicular Joint
  - Synovial saddle type (functionally ball-and-socket)
  - Has articular disc
  - Only bony articulation between upper limb & axial skeleton

---

- Acromioclavicular Joint
  - Plane synovial joint
  - Stabilized mainly by coracoclavicular ligament

PECULIARITIES OF CLAVICLE (Highly Important for MCQ)

Clavicle is:

→ Only long bone lying horizontally

→ Only long bone ossifying mainly by intramembranous ossification

→ Only long bone with two primary centers

→ Subcutaneous throughout

→ First bone to start ossification

→ Has no medullary cavity

SIDE DETERMINATION

Stepwise Method:

1. Identify ends
   → Medial end → Large & quadrangular
   → Lateral end → Flat

2. Identify curvature
   → Medial 2/3 convex forward
   → Lateral 1/3 concave forward

3 Identify inferior features

→ Conoid tubercle should face downward & posterior

Flowchart:

Clavicle bone

→ Identify flat end → Lateral

→ Identify bulky end → Medial

→ Keep conoid tubercle inferior & posterior

→ Curve anteriorly convex medially

→ Bone side determined

SEX DETERMINATION

Female clavicle is:

→ Thinner

→ Lighter

→ Shorter

→ Less curved

→ Smoother

Male clavicle:

→ Thicker

→ Heavier

→ More curved

→ Rougher

FUNCTIONS OF CLAVICLE

Clavicle acts as:

→ Strut holding limb away from trunk

→ Protector of subclavian vessels & brachial plexus

→ Transmitter of force from upper limb to axial skeleton

→ Shock absorber

Flowchart:

Upper limb force → Clavicle → Sternoclavicular joint → Axial skeleton

---

OSSIFICATION

Clavicle

→ Two primary centers in shaft

- Appear at 5th–6th week IUL
- Fuse around 45th day

→ One secondary center at medial end

- Appears at 17–18 years
- Fuses at 22–23 years (last epiphysis to fuse in body)

🔥 VIVA POINTS

- Most commonly fractured bone
- Common fracture site → Junction of medial 2/3 & lateral 1/3
- Protects neurovascular bundle
- Only bony connection of upper limb to trunk

Resources:

i) Snell's Clinical Anatomy by Regions (Book by Lawrence E. Wineski)

ii) BD Chaurasia's Human Anatomy: Regional and Applied Dissection and Clinical

---

-> The End <-