Scapula

Scapula

General Features

- **Flat, triangular bone** forming the posterior part of the shoulder girdle.
- Lies on the **posterolateral aspect of thorax** between 2nd and 7th ribs.
- Provides large surface area for **muscle attachment** and contributes to the shoulder joint.

Parts of Scapula

1. **Angles**
    - Superior angle ? level of T2 vertebra.
    - Inferior angle ? level of T7 vertebra.
    - Lateral angle ? thick, bears glenoid cavity.
2. **Borders**
    - Superior ? short, with suprascapular notch.
    - Medial (vertebral) ? parallel to vertebral column.
    - Lateral (axillary) ? thick, bears infraglenoid tubercle.
3. **Surfaces**
    - Costal surface ? concave, forms subscapular fossa.

- Dorsal surface ? divided by spine into supraspinous and infraspinous fossae.

4. **Processes**
    - **Spine** ? prominent ridge, ends laterally as **acromion**.
    - **Acromion** ? articulates with clavicle.
    - **Coracoid process** ? hook-like projection, muscle attachment.
5. **Glenoid Cavity**
    - Shallow, pear-shaped cavity.
    - Articulates with head of humerus ? forms shoulder joint.
    - Supraglenoid tubercle (long head of biceps).
    - Infraglenoid tubercle (long head of triceps).

Attachments (Summary)

- **Muscles attached**:
    - Medial border ? serratus anterior, levator scapulae, rhomboids.
    - Lateral border ? teres minor, teres major.
    - Coracoid process ? pectoralis minor, short head of biceps, coracobrachialis.
    - Spine ? trapezius (upper), deltoid (lower).
    - Subscapular fossa ? subscapularis.
    - Supraspinous fossa ? supraspinatus.

- Infraspinous fossa ? infraspinatus.

Ossification of Scapula

- **Begins: 8th week intrauterine life**.
- **Primary center**: appears near the glenoid cavity ? expands to form body.
- **Secondary centers**:
  - 2 for coracoid process.
  - 2 for acromion.
  - 1 for medial border of scapula.
  - 1 for inferior angle.
  - 1 for glenoid cavity.
- Fusion of secondary centers completed around **20–25 years**.
- Thus, scapula has **1 primary + 7 secondary centers**.

Clinical Anatomy

- **Fractures**:
  - Rare due to protection by muscles and chest wall.
  - When occur, usually associated with rib fractures.
- **Winged scapula**:
  - Paralysis of serratus anterior (injury to long thoracic nerve).

    - Medial border of scapula protrudes backward when pushing against resistance.

- **Dislocation of acromioclavicular joint**:
    - Common in contact sports.
    - Results in prominent acromion (step deformity).
- **Scapular dyskinesis**:
    - Abnormal scapular movements due to muscle imbalance.
- **Ossification centers**: important in **forensic age estimation**.