

Upper Limb Dislocation Patient Management

A dislocation involves the complete separation of joint surfaces. Shoulder dislocations alone account for 50% of all major joint dislocations, making timely and effective management crucial to prevent long-term morbidity. Annually, approximately 2% of the population experiences a joint dislocation.



Common Upper Limb Dislocations & Anatomy



Shoulder (Glenohumeral)

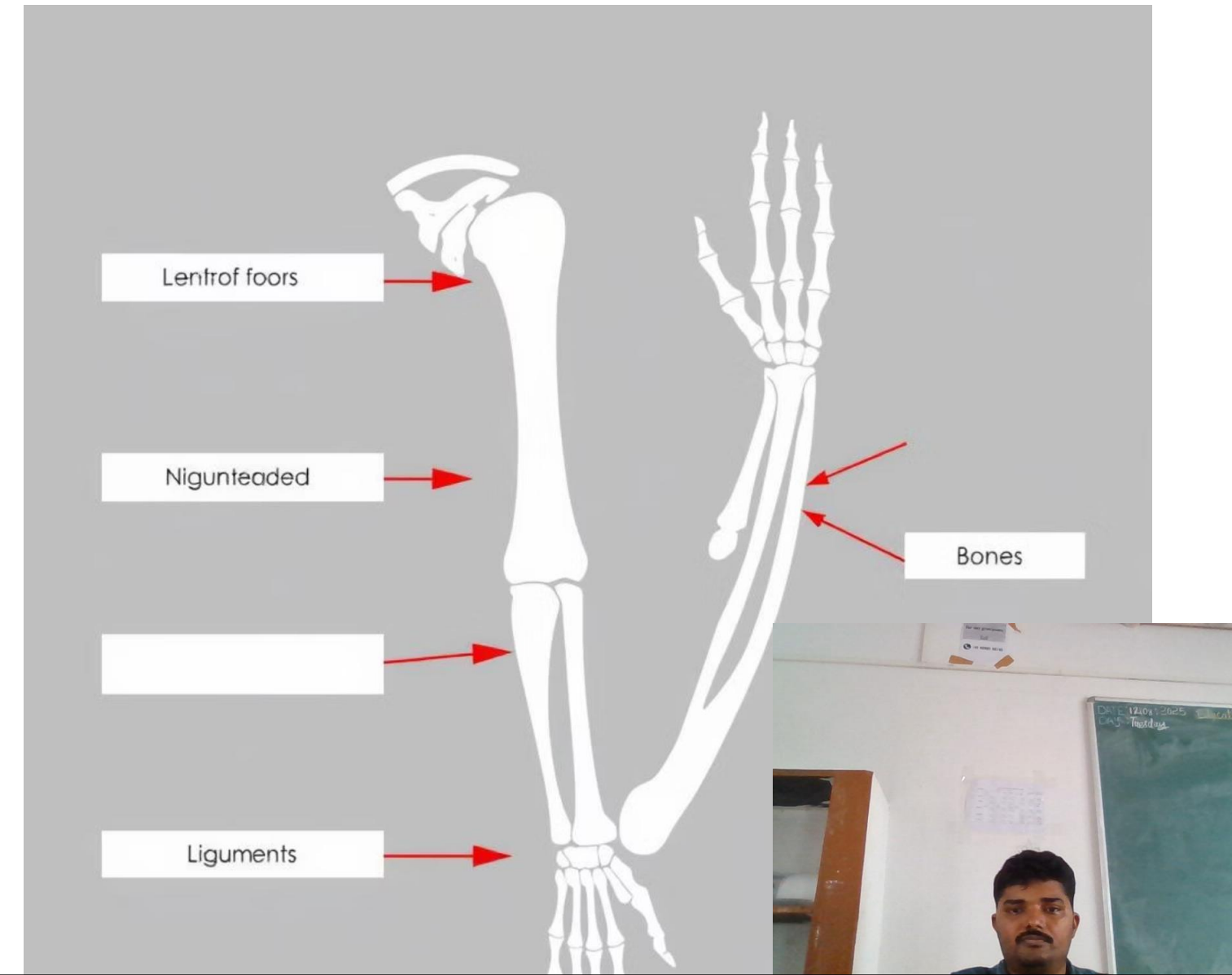
- Most common (95% anterior).
- Humeral head displaces from glenoid fossa.
- Often involves labrum, rotator cuff, axillary nerve.

Elbow

- Second most common in adults and children.
- Olecranon displaces from humerus, often posterior.
- Radial head, ulna dislocated from humerus.

Digits (Finger/Thumb)

- Common in sports injuries.
- Interphalangeal (IP) or metacarpophalangeal (MCP) joints.
- Often involves collateral ligament injury.



Initial Assessment & Diagnostics



Patient History

Gather information on the mechanism of injury, any previous dislocations, and the exact time of injury to understand the context and urgency.



Physical Exam

Assess for visible deformity, pain levels, and crucial neurovascular status. Check axillary nerve function for shoulder dislocations and radial/ulnar function for elbow injuries. Document sensory and motor functions and palpate pulses.



Imaging

Obtain standard X-rays (AP, lateral, scapular Y-view for shoulder) to confirm dislocation and rule out associated fractures such as Hill-Sachs or Bankart lesions. Pre-reduction X-rays are crucial for proper diagnosis.



Reduction Techniques: General Principles

Analgesia & Sedation

Administer pain relief and sedation (conscious sedation or intra-articular lidocaine) before attempting reduction to ensure patient comfort and cooperation.

Controlled Maneuvers

Employ gentle, slow, and continuous traction during reduction. Specific techniques include Kocher, Stimson, Cunningham, or external rotation for shoulders; traction-countertraction for elbows; and longitudinal traction for digits.

Muscle Relaxation

Achieving adequate muscle relaxation is essential for a successful, less traumatic reduction. This often involves medication to ease muscle spasms.

Confirmation

After reduction, clinically assess the joint for restored contour and range of motion. Confirm successful reduction and rule out new fractures with post-reduction X-rays.



Post-Reduction Management

Immobilization

- Slings for shoulder (1-3 weeks), splints for elbow/digits (few days to 2 weeks).
- Shoulder: Position of comfort, often internal rotation.

Pain Management

- Utilize NSAIDs, ice, and short-term opioids if needed for effective pain control.

Early Rehabilitation

- Gradual return to range of motion and strengthening, starting within 1-2 weeks, guided by physical therapy.
- Prevents stiffness, especially important for elderly patients and elbow dislocations.

Patient Education

- Educate on activity modification, signs of recurrence, and follow-up schedule.



Potential Complications

Nerve Injury

Axillary nerve (5-20% shoulder dislocations) and ulnar nerve (elbow) are common. Most resolve spontaneously, but pre- and post-reduction assessment is vital.

Vascular Injury

Rare but limb-threatening, especially the brachial artery in elbow dislocations. Prompt assessment of distal pulses and perfusion is crucial.

Recurrent Dislocation

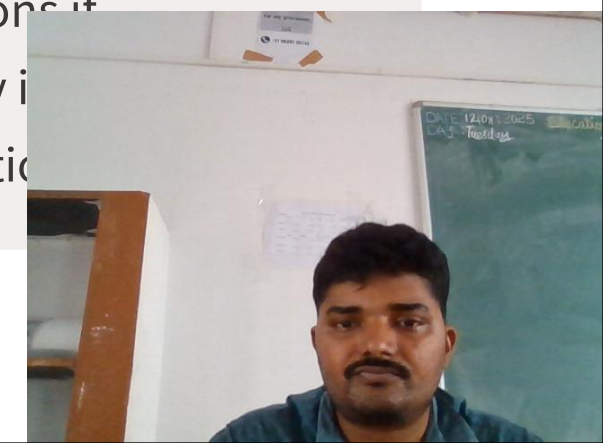
High risk in young, active patients (up to 90% under 20). Lower risk with older age and appropriate post-reduction care and rehabilitation.

Associated Fractures

Commonly seen with glenoid rim, humeral head, greater tuberosity, and olecranon fractures, requiring careful assessment.

Stiffness/Arthrosis

Particularly prevalent in elbow dislocations if immobilization is prolonged or the injury is severe, emphasizing the need for early mobilization.



When to Refer or Operate

Referral or surgical intervention is indicated in several scenarios to ensure optimal patient outcomes.

1

Failed Closed Reduction

If initial attempts at non-surgical reduction fail due to muscle spasm or interposition of soft tissue/bone fragments.

2

Neurovascular Compromise

Any signs of ongoing nerve or vascular injury that persist or appear after reduction.

3

Associated Unstable Fractures

Fractures that require surgical fixation for stability and proper healing, such as significant glenoid rim fractures.

4

Recurrent Instability

Patients experiencing multiple episodes of dislocation despite conservative management often indicate underlying issues like labral tears or bone loss.

5

Complex Injuries

Ligamentous ruptures, particularly in the elbow, that necessitate surgical repair for joint integrity and function.





Diagnosis



Treatment



Follow Up



Genetics



Neurology

Conclusion & Key Takeaways

Prompt Diagnosis: Accurate assessment through history, physical exam, and X-rays is vital for effective management.

Rapid Reduction: Perform reduction as soon as safely possible to minimize complications and reduce patient discomfort.

Thorough Assessment: Always re-evaluate neurovascular status rigorously after reduction to detect any new or persistent injuries.

Tailored Management: Individualize immobilization and rehabilitation plans to suit each patient's specific injury and

Anticipate Complications: Educate patients on potential issues and signs requiring re-evaluation to ensure ongoing

