

FRACTURES OF THE CLAVICLE

In children the clavicle fractures easily, but it almost invariably unites rapidly and without complications. In adults mid shaft clavicle fractures are common Fractures.

Can occur due to direct trauma or fall on the shoulder or the outstretched hand In fractures of the outer end, if the ligaments are intact there is little displacement; but if the coracoclavicular ligaments are torn, or if the fracture is just medial to these ligaments, displacement may be severe and closed reduction impossible.

Clinical features

arm is clasped to the chest to prevent movement. A subcutaneous lump may be obvious vascular complications are rare, Outer third fractures are easily missed or mistaken for acromioclavicular joint injuries.

Imaging

Radiographic analysis requires at least an anteroposterior view and another taken with a 30 degree cephalic tilt.

Treatment

Undisplaced fractures Non-operative management consists of applying a simple sling for comfort (between 2–3 weeks) and the patient is then encouraged to mobilize the limb as pain allows. no evidence that the traditional figure-of-eight bandage confers any advantage. Displaced more than 2 cm treated by plating or intramedullary fixation. Displaced lateral third fractures are associated with disruption of the coracoclavicular ligaments Surgery to stabilize the fracture is often recommended.

Complications

EARLY damage to the subclavian vessels and brachial plexus injuries are all very rare.

LATE

1. Non-union Lateral clavicle fractures have a higher rate of nonunion surgical treatment need.
2. Malunion.
3. Stiffness of the shoulder.

FRACTURES OF THE SCAPULA

Mechanisms of injury

due to direct trauma or fall on the shoulder or the outstretched hand

Treatment

Surgery is not necessary. The patient wears a sling for comfort, and from the start practices active exercises to the shoulder, elbow and fingers. displaced by more than 5 mm surgical fixation should be considered.

ACROMIOCLAVICULAR JOINT INJURIES

is common and usually follows direct trauma.

Mechanism of injury

A fall on the shoulder with the arm adducted may strain or tear the acromioclavicular ligaments and upward subluxation of the clavicle may occur; if the force is severe enough, the coracoclavicular ligaments will also be torn, resulting in complete dislocation of the joint.

Pathological anatomy and classification

Type I is an acute sprain of the acromioclavicular ligaments; the joint is undisplaced.

Type II the acromioclavicular ligaments are torn and the joint is subluxated with slight elevation of the clavicle.

Type III the acromioclavicular and coracoclavicular ligaments are torn and the joint is dislocated; the clavicle is elevated

Type IV the clavicle is displaced posteriorly

Type V clavicle is displaced very markedly upwards

Type VI clavicle is displaced inferiorly beneath the coracoid process

Clinical features

If there is tenderness but no deformity, the injury is probably a sprain or a subluxations. With dislocation the patient is in severe pain and a prominent ‘step’ can be seen and felt. Shoulder movements are limited.

X-ray

In AP X-Ray The distance between the coracoid process and the inferior border of the clavicle is measured on each side; a difference of more than 50 per cent is diagnostic of acromioclavicular dislocation.

Treatment

Sprains and subluxations the arm is rested in a sling until pain subsides (usually no more than a week) and shoulder exercises are then begun.

Dislocations Type III There is no convincing evidence that surgery provides a better functional result than conservative treatment

Operative repair should be considered only for patients with extreme prominence of the clavicle by plate fixation with anchor. Elbow and forearm exercises are begun on the day after operation and active-assisted shoulder movements 2 weeks later, increasing gradually to active movements at 4–6 weeks. Strenuous lifting movements are avoided for 4–6 months.

Complications

Rotator cuff syndrome An acute strain is sometimes followed by supraspinatus tendinitis. This is directly due to the primary injury or it results from post-traumatic oedema or inflammation of the overlying acromioclavicular joint is unclear. Treatment with anti-inflammatory may help.

Ossification of the ligaments. Bony spurs may predispose to later rotator cuff dysfunction, which may require operative treatment.

Secondary osteoarthritis A late complication of Type I and II injuries is osteoarthritis of the acromioclavicular joint. This can usually be managed conservatively, but if pain is marked the outer 2 cm of the clavicle can be excised. The patient will be aware of some weakness during strenuous over-arm activities and pain is often not completely abolished.

DISLOCATION OF THE SHOULDER ANTERIOR DISLOCATION

Dislocation is usually caused by a fall on the hand. The head of the humerus is driven forward, tearing the capsule and producing avulsion of the glenoid labrum (the Bankart lesion).

Clinical features

- Pain is severe
- The patient supports the arm with the opposite hand
- The lateral outline of the shoulder may be flattened

X-Ray

The anteroposterior x-ray will show the overlapping shadows of the humeral head and glenoid fossa, with the head usually lying below and medial to the socket.



Treatment

In the Hippocratic method, gently increasing traction is applied to the arm with the shoulder in slight abduction, while an assistant applies firm countertraction to the body

The arm is rested in a sling for about three weeks in those under 30 years of age and for only a week in those over 30. abduction and lateral rotation must be avoided for at least another 3 weeks.

Complications

early

- *Rotator cuff tear*
- *Nerve injury* The axillary nerve is most commonly injured
- *Vascular injury* The axillary artery may be damaged,
- *Fracture-dislocation*

late

- *Shoulder stiffness* especially in patients over the age of 40.
- *Unreduced dislocation* Operative reduction is indicated after 6 weeks after injury
- *Recurrent dislocation* tears the shoulder capsule and glenoid labrum is detached surgery need in young patients

POSTERIOR DISLOCATION OF THE SHOULDER

less than 2 per cent of all dislocations around the shoulder. internal rotation and adduction happens most commonly during a fit or convulsion,

Clinical features

The arm is held in internal rotation and is locked in that position.

X-Ray

In the anteroposterior film the humeral head, because it is medially rotated, looks abnormal in shape (like an electric light bulb) and it stands away somewhat from the glenoid fossa (the 'empty glenoid' sign).



Treatment

The acute dislocation is reduced (usually under general anaesthesia) by pulling on the arm with the shoulder in adduction immobilized in a sling for 3–6 weeks to allow the posterior capsule to heal

Complications

- *Unreduced dislocation* At least half the patients with posterior dislocation have 'unreduced' lesions when first seen.
- *Recurrent dislocation or subluxation*