

Fractures of the distal end of the humerus

AO classification

A – extraarticular (avulsive a supracondylar)

B – partially intra-articular

C – completely intra-articular

Other classifications

A. Supracondylar (extraarticular)

- Occur mainly in children in falls when forces act indirectly or directly on the elbow in the sense of hyperflexion or hyperextension.

Division

- **Extension:**
 - More common, distal fragment dislocated dorsally, anterior fragment may injure the a. brachialis;
 - high risk of forearm compartment syndrome and development of Volkmann's ischemic contracture..
- **Flexion:**
 - distal fragment dislocated ventrally.

Treatment

- **Conservative** (with intact innervation and blood supply):
 - repositioning by traction and flexion for the extensor type, traction and extension for the flexor type;
 - application of a circular plaster cast (in supination and flexion for the extension type, in extension for the flexion type) - must not press in the elbow socket, checking blood supply and innervation in the periphery - for 4 weeks.
- **Surgery:**
 - fixation with two crossed Kirschner wires inserted percutaneously.



Healing supracondylar fracture (operative therapy - Kirschner wires)

B. Intercondylar (intra-articular)

- more common in adults;
- arise from a fall on a flexed elbow;
- the fracture line is T- or Y-shaped;
- dislocated fractures are treated surgically (open repositioning and OSY with screws and splints);
- only non-dislocated fractures are treated conservatively.

Clinical signs and diagnosis

- Significant swelling and haematoma of the ulnar landscape, pain on elbow movement; clinically, the epicondyle and olecranon do not form a straight line (in elbow extension) or an isosceles triangle (in elbow flexion).
- It is necessary to check peripheral blood supply to the a. radialis (possible injury to the a. brachialis) and innervation of the n. radialis.
- X-ray (mainly lateral projection).



Fracture of the capitulum humeri

Complications

- Volkmann's ischemic contracture;
- limitation of elbow mobility - mainly due to paraarticular ossifications;
- angular deformities - cubitus varus et valgus.

References

Related articles

- Humerus

Source

- PASTOR, Jan. *Langenbeck's medical web page* [online]. [cit. 2022-17-12]. <<http://langenbeck.webs.com>>.



Fracture of the capitulum humeri



Fracture of the capitulum humeri