

Humeral fractures

Humeral fractures

Fractures of the diaphyseal portion of the humeral shaft are extra-articular fractures and as such require mechanical alignment. Non-operative treatment with functional bracing will achieve union in an acceptable position within 12 weeks in over 80% of cases. Gravity can provide traction on the arm and in conjunction with a humeral brace helps to hold alignment and allow early range of motion of the elbow . Active shoulder abduction is avoided until fracture union to prevent varus deformity . Shoulder movement must not be absent during treatment and so gravity-assisted pendulum exercises are instituted early on to prevent shoulder stiffness. As the fracture approaches the metaphyseal region of the humerus it becomes more difficult to control with humeral bracing. Distal third extra-articular fractures of the humerus can be treated non-operatively in a humeral brace but have a tendency to go into varus. Articular fractures of the distal humerus require anatomical reduction and stable fixation to allow early joint movement. Internal fixation is indicated for displaced intra-articular fractures, non-union or delayed union, open fractures, multiple injuries and those fractures not held in an acceptable position with brace treatment. Fixation of diaphyseal fractures can be achieved with intramedullary nailing or plate and screw fixation. Plate fixation is associated with higher union rates and lower rates of reintervention (Figure 32.25). The radial nerve is the most commonly injured nerve in humeral shaft fractures. Treatment of a humeral shaft fracture with a concomitant radial nerve palsy remains topical. Most will recover spontaneously . In general, if the nerve injury occurs at the time of the original injury , non-operative treatment can be considered. If it occurs after the injury , for example at the time of brace application, then it should be explored. When exploring the radial nerve, plate and screw fixation is then undertaken to stabilise the humerus. Humeral fractures

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