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SEGMENTAL HUMERUS FRACTURE, EASIER SAID THAN DONE

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INTRODUCTION:

Some comminuted or segmental humeral fractures have been well-treated by functional bracing, but some also have been reported to have a bad outcome. If surgery is required, unlocked nailing has the disadvantage of unstable fixation, and plating has the disadvantage of extensive soft tissue injury.

REPORT:

A 25 years old lady, alleged motor vehicle accident and complain of right arm pain & right elbow restricted movement. On examination, tenderness at right arm, reduced range of motion of right elbow. Distal pulses palpable and good circulation. Plain radiograph showed segmental fracture at midshaft & supracondylar right humerus.

The patient is placed in the left lateral position with the operated arm with the shoulder with 90° flexion over a support with appropriate padding, under general anesthesia. This setup allows easy access to an image intensifier, for anteroposterior view of humerus & elbow. After the arm and shoulder are draped freely, only longitudinal traction force is applied to the elbow to enable fracture reduction. A posterior triceps spliting approach, with skin incision from proximal 3rd arm to elbow region. Articular surface reduced & hold with pointed reduction clamp & k-wires. Double precontoured periarticular locking plates inserted. Fracture at shaft of humerus reduced & locking diaphyseal plate inserted. The reduction was confirmed with intraoperative image intensifier.

The arm is immobilized in a sling for 3 to 4 weeks. Passive and pendulum exercises are initiated as soon as pain and swelling subside.

Figure 1: Pre-operative radiograph

Figure 2: Post-operative radiograph

CONCLUSION:

There has been great controversy about management of complex segmental fractures of supracondylar humerus. The keys to success include compression of the fractures, static locking, postoperative external support, and experienced surgical technique.