

Fractures of the Diaphysis of the Humerus: Our Therapeutic Vision

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Purpose: Fractures of the humeral shaft are relatively common, accounting for approximately 1% to 5% of all fractures. The annual incidence ranges between 13 and 20 per 100,000 people and is higher with age. The purpose of this work is to show the results obtained in fractures of the humeral shaft through minimally invasive fixation with a fine intramedullary nail (Steinmann) and a monopolar external fixator.

Methods: In a prospective descriptive study from January 2018 to August 2023, patients with humerus fractures were treated by osteosynthesis with a fine intramedullary nail (Steinmann) and a monopolar external fixator. Patients were followed up 6-months postoperatively.

Results: In total, 103 humeral shaft fractures were treated. AO/OTA classifications were as follows: 47 type A (21 were 12A1, 15 were 12A2, and 11 were 12A3); 31 type B (19 were 12B2 and 12 were 12B3). The remaining 25 fractures were type C (14 were 12C2 and 11 were 12C3). In some cases, basically in groups 12B and 12C, increased interfragmentary compression was required after 6 to 8 weeks because little bone callus was visible on radiographs. Consolidation was achieved in 98% of patients between 12 and 16 weeks without presence of neurologic injury (radial nerve); functional recovery of the scapulohumeral joint was complete in all patients.

Conclusion: Minimally invasive osteosynthesis of humeral shaft fractures with a closed fine intramedullary nail and a monopolar external fixator produces good results related to bone consolidation and scapulohumeral functional recovery in a relatively short time.