

Management of Diaphyseal Fractures of Humerus with Interlocking Nail – A Prospective Study in a Tertiary Care Hospital

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Abstract

Background: Fractures of the humeral shaft are very common in upper limb fractures. It accounts for 3% of all fractures. Many treatment modalities are available for humeral shaft fractures. The present study tried to evaluate the outcome of the treatment of diaphyseal fractures of the humerus with interlocking nails. **Methods:** This cross-sectional study was conducted in the Department of Orthopedics, Prathima Institute of Medical Sciences, Naganur, Karimnagar. Patients included in the study were age more than 19 years the physis is fused. Closed reduction not feasible and patients with polytrauma where the closed reduction was not possible and patients with comminuted and pathological fractures. All the necessary blood investigations (complete blood count, blood urea, serum creatinine, blood sugar, HIV, HBsAg). ECG and chest X-rays were taken on a routine bases. All the cases were treated by closed intramedullary interlocking nailing in an antegrade manner except five cases which required the opening of fracture site to treat radial nerve palsy. **Results:** In our study, n=16(53.3%) patients had fractured at the middle third of the humerus, n=10(33.3%) patients had fractured at the lower third of humerus and n=4(13.3%) patients had fractured at the upper third of the humerus. In our study, n=10(33.3%) patients had oblique fracture, n=10(33.3%) patients had transverse fracture, another n=8(26.6%) patients had comminuted fracture and n=2(6.6%) patient had spiral fracture. Fixation of fracture n=25(83.4%) patients was treated by closed intramedullary nailing. These nails were passed in an antegrade manner and locked in static mode. N=5(16.6%) patients required open reduction because of associated radial nerve palsy, which was decompressed and the fracture was fixed with the interlocking nail in static mode. **Conclusion:** Closed intramedullary nailing with an interlocking nail is a safe and reliable method of treating humeral shaft fractures. It is an excellent method of managing comminuted and unstable humeral shaft fractures. Since closed nailing preserves the fracture hematoma, it appreciably decreases the time required for a fracture to consolidate and achieves a high rate of fracture union.