

Operative vs Non-operative Treatment of Humeral Shaft Fractures

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- High success rate with splint, cast, brace
- Intrinsically good natural history for healing
- Certain specific operative indications (IM nail, plate)

- Literature controversial re: op vs nonop
 - Mahabier et al, Injury 2013
 - 186 pts: no diff
 - Denard et al, Orthopaedics 2010
 - 213 pts: less nonunions and malunions with ORIF
- No RCTs
- Gold standard is still functional bracing

Specific operative indications:

- floating elbow / shoulder
- polytrauma
- bilateral humeral fractures
- pathological fractures
- open fractures
- vascular injury

Associated radial nerve palsy

- Natural history of radial palsy in closed #'s good:
- No evidence exploration improves recovery
- Primary repair rarely possible

Meta-analysis of plate fixation vs IM nailing

- Plating better
 - Less complications, delayed unions, shoulder pain and impingement and re-operations

Conclusions

- Functional bracing is the treatment of choice for most humeral shaft fractures
- In 2013, ORIF with a plate is the treatment of choice for humeral shaft fractures that require operative intervention including open #'s and multiple trauma