The Use of Evidence Based Medicine for Proximal Humeral Fractures and Their Complications

Locking Plate Fixation: Can we do better?

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General problems

- We still aren't sure who benefits from an operation, especially in the elderly
- High failure rate with conventional fixation
- Locked plating not as successful as was hoped
- Secondary reconstruction (hemiarthroplasty) not as good as primary intervention
- Few high quality studies to guide treatment

Technical problems

- Osteoporotic bone
    - Screw penetration
    - Plate pull-off
    - Varus collapse
- Tuberosity pull-off
- Avascular necrosis
- Nonunion (plate failure)

How to maximize success with ORIF

- Calcar reduction
- No varus
- Calcar screw
- Suture greater tuberosity

Conclusions

- Most patients (especially the elderly) can and should be treated non-operatively
- Several well – established principles are important to maximize success with the use of PHLP's
- There are some improvements that can be made to current plating strategies
- Reverse TSA may be beneficial in primary treatment of severe proximal humeral fractures