

2018 OTA Boot Camp

Proximal Humerus: Fix, Replace or Leave Alone

Introduction:

- Proximal humerus fractures incidence is rising
- There is a bimodal distribution
 - Younger patients are associated with high energy mechanism
 - Older patients generally have associated osteopenia
- New developments with treatments over the last few years
- Treatment should be adapted to patients based on pre-morbid state

Non-operative treatment

- Most proximal humerus fractures can be treated nonoperatively
- New literature (the PROFHER trial) provides scientific basis
- Low demand or older patients should be preferentially treated nonoperatively
- Rehabilitation should focus on early motion and return to function

Open Reduction and Internal Fixation

- Mainstay of treatment for displaced fractures is ORIF with locked plating
- Suture augmentation of the rotator cuff should always be performed
- Adapting approach (deltoid split vs delto-pectoral) can be helpful
- Proper surgical technique (reduction, calcar screws) can reduce failures
- Other adjuncts (fibular allografts, cages) can be useful in complex cases

Hemiarthroplasty

- Has fallen out of favor recently for four part or head split fractures
- Technically demanding procedure: Humeral height and tuberosity fixation are key
- Reserved for younger patients with non-repairable joint surface

Reverse Shoulder Arthroplasty

- Has become the focus of treatment in patients above 65 years old
- Recent meta-analysis demonstrate superiority to Hemi arthroplasty
- Surgical technique should include fixation of tuberosities
 - Functional outcomes improved with healed tuberosities
- Complications can be disastrous

Conclusion

- Proximal humerus fracture are still a clinical challenge
- All treatment options remain useful when adapted to the right situation