

Technical Tips in 3 and 4-Part Proximal Humerus ORIF

Moderator: Utku KANDEMIR, MD

Panel: John Gorczyca, MD, Milan Sen, MD, Michael Gardner, MD, Michael McKee, MD

Utku Kandemir	Introduction, common deformity and deforming forces
John Gorczyca	Patient positioning & How to Reduce the Fracture?
Milan Sen	From the provisional reduction to definitive fixation
Michael Gardner	When You Need To Augment The Bone And How?
Michael McKee	How to decide on screw lengths and how to avoid intra-articular hardware, and what to do when you have intra-articular hardware postop?

Panel Discussion: Questions & Answers & Discussion with Case Examples

Introduction, Common Deformity and Deforming Forces in 3-4 part Fractures

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- Most Treated NONOPERATIVELY, but rate of surgically treatment is increasing
- ORIF is the most common type of surgical treatment in US
- Complication rate after ORIF is up to 44% (Brunner 2009)
- Parts:
 - Head
 - Greater tuberosity
 - Humeral shaft
 - Lesser tuberosity
- Deformity/ Fracture Patterns
 - Varus
 - Valgus
 - Complete displacement
- Deforming Forces:
 - Supraspinatus – greater tuberosity: VARUS, medialization
 - Infraspinatus /Teres minor - greater tuberosity: VARUS, POSTEROSUPERIOR displacement
 - Subscapularis – lesser tuberosity: INT rotation
 - Deltoid – shaft: shortening
 - Pectoralis major-shaft: Adduction/medialization /IR of shaft
 - Latissimus dorsi, teres major –shaft: IR of the shaft
- Surgical options:
 - ORIF, CRPP, IMN, Sutures
- Surgical Goal: Anatomic reduction, Stable fixation, that will allow EARLY ROM
- STIFFNESS is the most common problem
- Surgical treatment is TECHNICALLY CHALLENGING