Introduction
1) Preoperative Planning

- Imaging
  - CT
  - MRI

2) Implant Choice

- Reverse
  - Severe glenoid bone loss
  - Older patient
3) Glenoid Exposure

- Inferior capsular release

- Critical in glenoid implantation
  - Inferior capsular release
  - Neuromuscular paralysis
  - Gradual tissue elongation
4) Glenoid Preparation

- Reaming
  - Correct deformity
  - Create surface to match back of implant
  - May require removal of subchondral bone

- 3 patterns of loosening identified
  - Subsidence
  - Superior tilt
  - Posterior tilt
  - Subsidence and posterior tilt associated with reaming subchondral bone

- Radius of curvature gauges
  - Measure radius of curvature of native glenoid
4) Glenoid Preparation

- Reamers
  - Matched to measured radius of curvature
  - Minimal bone removal
  - Subchondral bone preserved
  - Components match native radius of curvature

5) Correction of Deformity

- Biconcave glenoid
  - Difficult to identify intraoperatively

- Biconcave glenoid
  - Will require removal of some subchondral bone
  - Center hole will “migrate” anteriorly during reaming
  - Reverse?
6) Prosthetic Mismatch

• Prosthetic mismatch is the difference of the radius of curvature between the glenoid component and the humeral head component (R – r)

6) Prosthetic Mismatch

• Conforming
  - mismatch = 0
  - stable
  - minimal wear
  - increase potential for loosening secondary to obligate translation

6) Prosthetic Mismatch

• Nonconforming
  - mismatch > 0
  - allows translation
  - ↓ stress
  - ↑ wear
  - ↓ stability
6) Prosthetic Mismatch

- Ideal prosthetic mismatch may be in excess of 5.5 mm

7) Glenoid Component

- Keel vs. peg
  - Peg better for radiolucent lines
  - 2 years and 5 years

8) Intraoperative Trialing

- Critical for biconcave glenoid
- Arm held in 30 degrees external rotation and posteriorly directed force applied
9) Soft Tissue Balancing

- Soft tissues corrected in most cases by use of anatomic implant
- Biconcave glenoid is exception
  - Posterior capsular distension

9) Soft Tissue Balancing

- Posterior capsulorrhaphy if necessary

10) Rehabilitation

- Neutral rotation to protect posterior capsulorrhaphy
10) Rehabilitation

- Aquatic therapy
- Protect subscapularis/posterior capsulorrhaphy

Thank You