Glenohumeral Arthritis and Shoulder Arthroplasty – Background

Please review slides and readings before the lecture

Please Review

- AAOS Comprehensive Review Chapter 76: Arthritis and Arthroplasty of the Shoulder
  http://orthoportal.aaos.org/ebooks/icl/display.aspx?chapter=EBOOKS_ICL_51_1_01
- Primal Pictures’s 3D Atlas of Human Anatomy of the Shoulder and Arm
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Most Common Arthropathies

- Osteoarthritis
- Post Traumatic
- Rheumatoid/Inflammatory
- Capsulorraphy
- Avascular Necrosis
- Cuff Tear Arthropathy

What Patients Complain Of

- Pain—Referred to Deltoid Insertion
- Restricted Movement
- Loss of Function
- Grinding or Clicking

Hallmarks Of Physical Exam

- Tenderness Posterior Joint Line
- Restriction—Passive Motion ("Frozen Shoulder")
- "Hard" (Deep) Crepitus
- Deformity Variable—OA Posterior Wear

Things to Look For

- Inspect: Scars, Medial Wear, Posterior Wear, LHB
- Palpation: AC, Biceps, Crepitus
- Strength: ER (Cuff), Belly Press (Subscap)
- N/V--Axillary
# Before You Start

- Pre-op Planning
- X Ray
  - AP
  - Axillary
- Disease Process
- Wear Pattern

# CT Scan Helpful—Surgical Planning

- Glenoid Version
- Amount Of Wear
- Osteophytes
  - Glenoid
  - Humerus

# Additional Information

- Center Of Glenoid Vault
- Determine Entry Point
- Amount of Reaming

# 3-D Reconstruction

- Understand Anatomy
- Old Trauma
- Malunion GT or LT

# Do You Need MRI?

- Many Patients Already Have
- ER Strength On Exam
- Disease Process Cuff Integrity
  - OA-normal
  - CTA-Gone
  - AVN-Normal
  - Old Trauma
Total Shoulder Replacement

- More Than 40 Years
- New Surface --Pain Relief
- Equals Other Joint Implants—

Anatomic Design

- Unconstrained
- Need Functioning Cuff
  - Motion
  - Stability

Reverse Prosthesis

- More Constrained

- Deltoid Powered
- Not Need Cuff

What We Have Learned

- Many Designs Work Well
- Pain Relief Predictable-New Surface
- Function—Soft Tissue Dependent
- Soft Tissue Balance—Longevity Of Implant
- Results—Depend On Disease

OSTEOARTHRITIS

- Ideal candidate
- Predictable Result
- Rotator Cuff Normal
Characteristics of OA

- Epidemiology
  - Bimodal
    - Men 50-60
    - M/W Old
- RTC Tears Rare
- Posterior Wear
- Posterior Subluxation
- Walch Classification

OSTEARTHRITIS

Characteristics of RA/Inflammatory

- Epidemiology
  - Women>Men
- RTC Tears
  - Common 1/3 Soft Tissue and bone Disease
- Wear is Medial
- Bone is Soft

OA—Posterior Wear

Definitive arthroplasty

Case--Rheumatoid---Inflammatory

Cuff Tear Arthropathy

- Bad Cuff
- Bad Bone
- Poor tissue
Cuff Tear Arthropathy

- Massive Tear
  - Primary
- Joint Changes
  - Follow
- Trauma, Nutrition

Characteristics of CTA

- Epidemiology
  - 70-80's
- RTC Tears
- Wear is Superior
- Favard Classification
- Some can elevate

ROCKING HORSE GLENOID