



Elbow Arthritis w/ Dr. O'Brien



Causes of Arthritis

- Primary arthritis
- Inflammatory arthritis
- Post-traumatic arthritis



Primary arthritis

- Pathophys- osteophyte formation, capsular contracture, loose bodies. Relative preservation of joint space
- Presentation- 50 M
 - PE- loss terminal flexion/extension, painful locking. Minimal midrange ROM. Ulnar neuropathy



Primary arthritis

- Xray- osteophyte formation at coronoid process, radiocapitellar arthritis. Ulnohumeral space relatively maintained
- CT- useful to plan arthroscopic procedures
- Management: typically responds to debridement procedures. TEA rarely indicated



Inflammatory arthritis

- Pathophys- rheumatoid is most common.
 - Synovitis that causes stiffness + pain throughout the arc of motion. Flexion contractures.
 - Eventual articular cartilage destruction, periarticular erosion, cyst
- Presentation- older female. PE- stiffness + pain throughout ROM



Inflammatory arthritis

- Workup- Larsen grading system, Mayo classification
- Management: Larsen 1/2-arthroscopic osteocapsular procedure-synovectomy

Grade	Definition
0	Normal
1	Soft tissue swelling, slight joint space narrowing (< 25% of the original joint space), periarticular osteoporosis
2	Definite early abnormality, one or several small erosions
3	Medium destructive abnormality, marked erosions
4	Severe destructive abnormality, large erosions
5	Gross deformity, the bony outlines of the joint have disappeared

Mayo Clinic Classification of the Inflammatory Elbow

Grade	Findings (specific to elbow)
I	Osteoporosis
II	Joint space narrowing
III	Architectural changes of bones
IV	Gross destruction and instability

Data from Morrey BF, Adams RA. Semiconstrained arthroplasty for the treatment of rheumatoid arthritis of the elbow. J Bone Joint Surg Am 1997;74:479-90

Post-traumatic arthritis

- Pathophys- after injury
- Presentation- younger, hx of elbow trauma (dislocations, distal humerus fractures)
- Management- younger patients- interposition arthroplasty

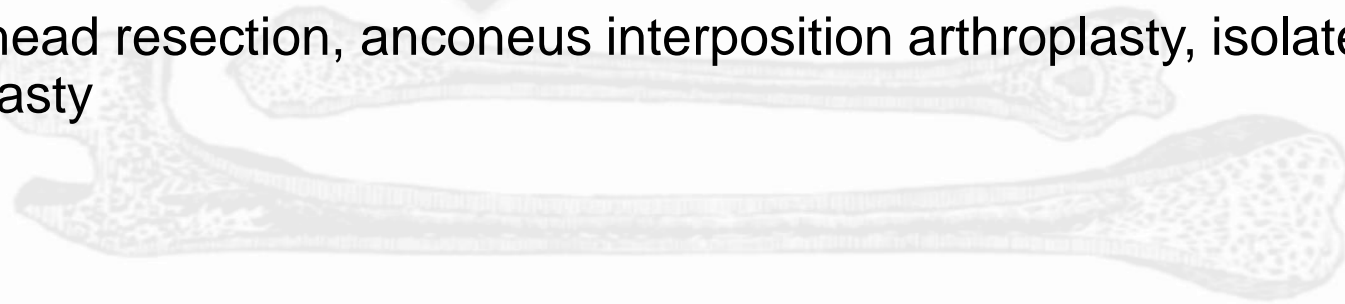


A

B

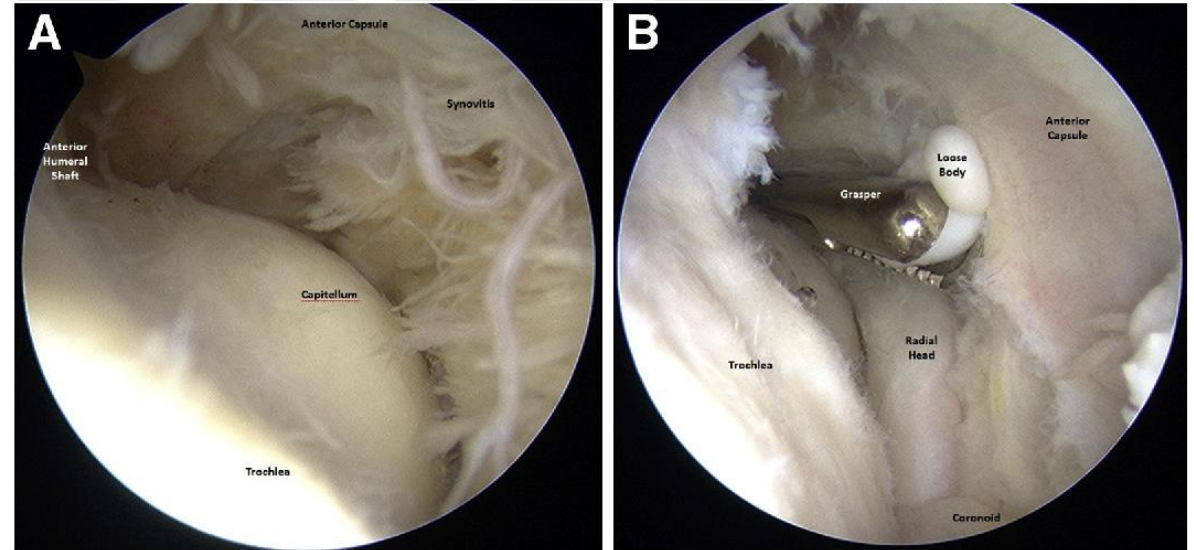
Treatment options

- Non-op: NSAIDs, corticosteroid injections, activity modification
- Operative treatment options:
 - Debridement procedures
 - Interposition arthroplasty
 - Total elbow arthroplasty
 - Isolated radiocapitellar arthritis
 - Radial head resection, anconeus interposition arthroplasty, isolated radiocapitellar arthroplasty



Osteocapsular arthroplasty

- Debridement of entire articulation + associated procedures (synovectomy, loose body removal)
- Open procedures assoc w/ higher complication and revision rates
- Complication- transient nerve palsy, HO



Viewing from the DAM portal, the anterior compartment of the elbow is evaluated. Specifically, the ar

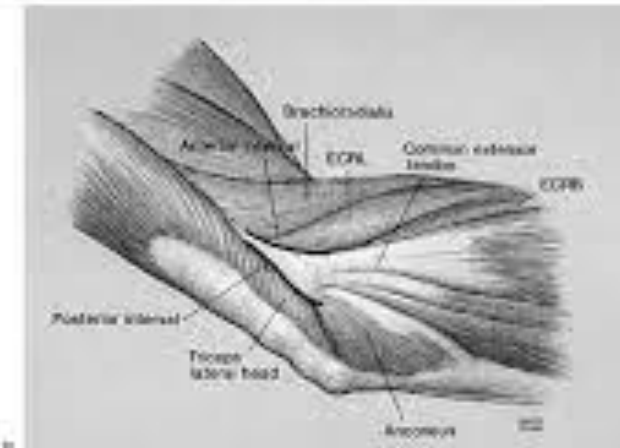
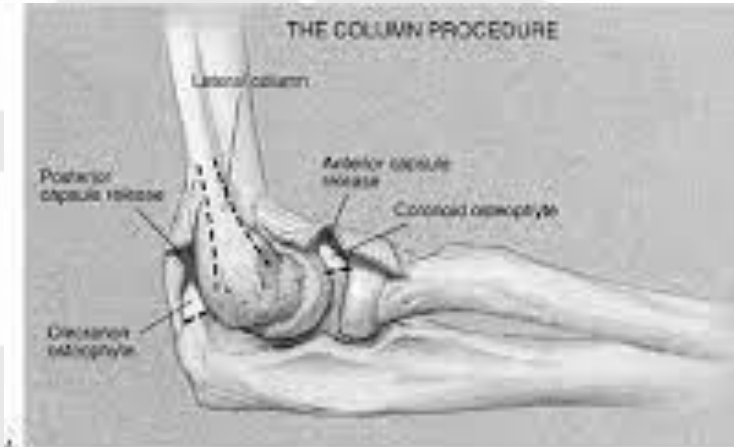
Outerbridge Kashiwagi procedure

- Midline posterior approach (or arthroscopic)
- Fenestration made connecting olecranon + coronoid fossae
- Removes osteophytes at olecranon tip, coronoid tip + olecranon and coronoid fossa



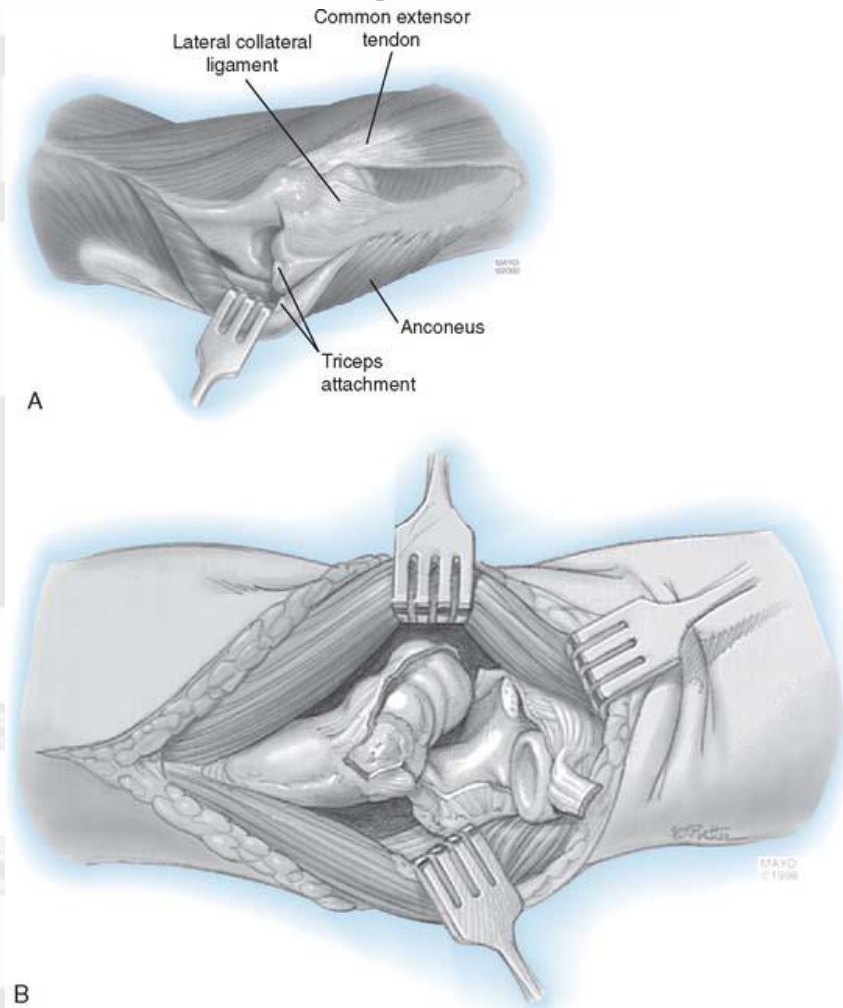
Column procedure

- Open /arthroscopic, medial/lateral incisions. Preserve collaterals
- Release posterior bundle of MCL in pts w/ $<90^\circ$ flexion



Interposition arthroplasty

- Allograft tissue affixed to distal humeral articular surface
- Biologic interposition between diseased articular surfaces
- Indication: young patient w/ loss of ulnohumeral joint space
- Pre-op elbow instability assoc w/ poorer post-op outcomes



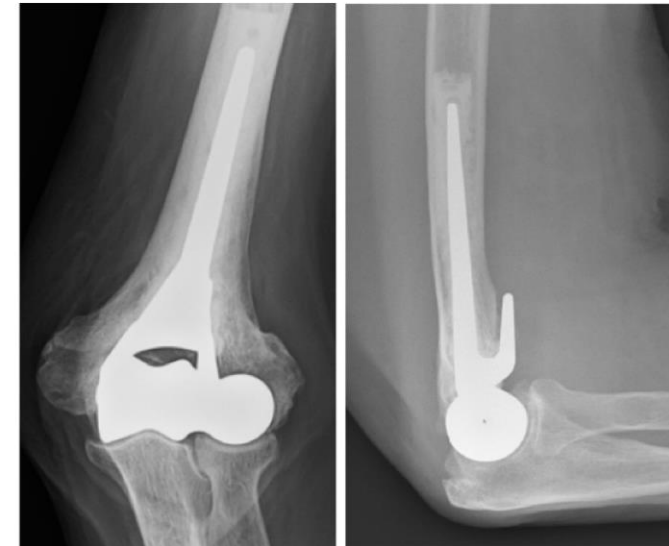
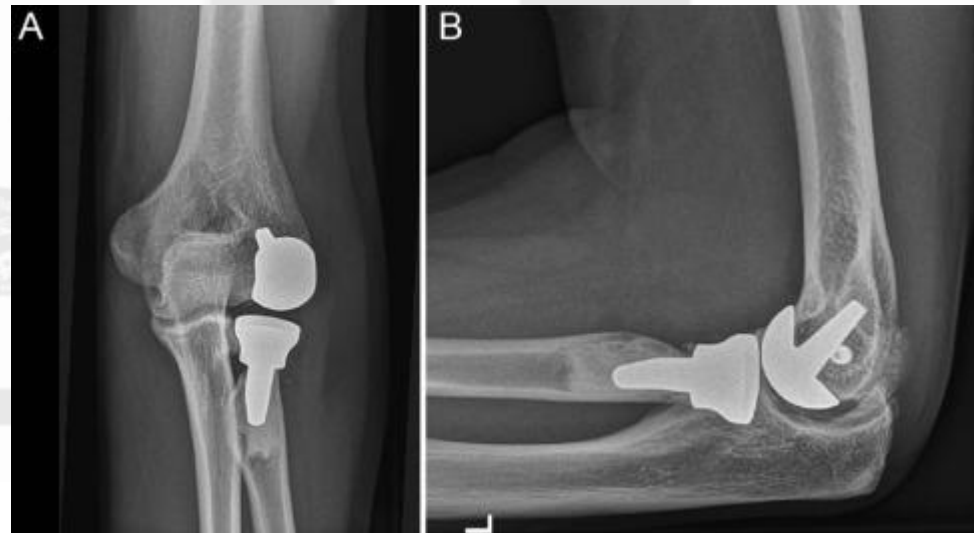
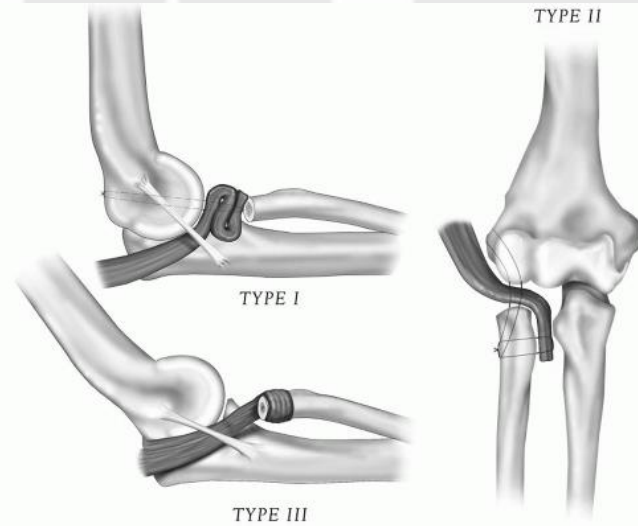
Total elbow arthroplasty

- Linked/unlinked/ convertible implant design
- High constraint- inc rate of aseptic loosening
- Semiconstrained - sloppy hinge at ulnohumeral interface
- Indication: advanced rheumatoid, low demand w/ post-traumatic arthritis



For isolated radiocapitellar arthritis

- Radial head resection
- anconeus interposition arthroplasty
- isolated radiocapitellar arthroplasty
- distal humeral hemiarthroplasty



Resources, thank you Dr. O'Brien!

- AAOS Resident Orthopaedic Core Knowledge

NAILED

