

Convertible Platform: Myth or Reality

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COI Disclosure Information

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Shoulder Arthroplasty

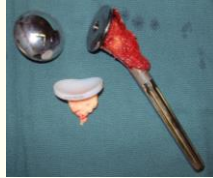
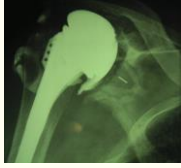
- Numbers rapidly increasing
 - 14,000 to 46,000 over 8 years
 - Increasing 12% per year
- Revisions make up 10% of all arthroplasties



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Revision Shoulder Arthroplasty

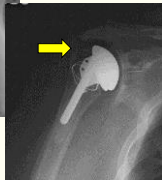
- Indications
 - Infection
 - Malposition
 - Aseptic loosening
 - Rotator cuff tear
 - Subscapularis
 - posterosuperior



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Revision Shoulder Arthroplasty Complications

- OR time
- Blood loss
- Bone loss
- Intraoperative fracture
- Nerve injury
- Increased risk of infection



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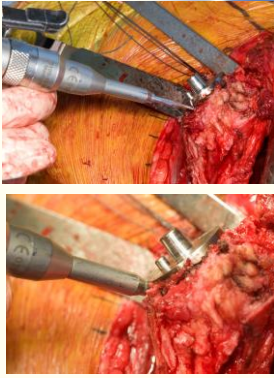
Revision TSA

- Fracture pitfalls
 - Greater tuberosity fracture-lateral fin
 - Bone ingrowth surfaces proximally
 - Cortical perforation with cement removal or reaming

- Radial nerve, other neurapraxia

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Stem
without a
collar



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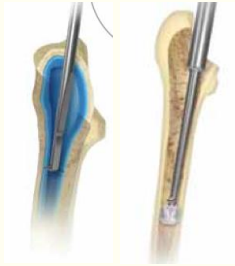
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Cement removal

- Biomet ultradrive
 - Caution
 - Extreme heat
 - Humerus sensitive
 - Radial nerve
 - Constant water flow
 - 2-3 seconds



Photos- Biomet ultradrive

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Convertible Platform Arthroplasty

- Easy revision
- Humeral stem preserved
- Interchangeable metal backed glenoid
 - MB still controversial



Exactech

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Convertible Platform Indications

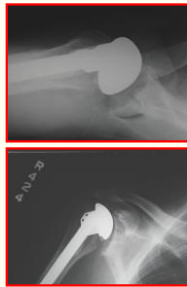
- RTC tear
- Revision of hemi for fracture
 - Tuberosity complications



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Cuff Tear after Arthroplasty

- Little known
 - RTC disease progressive older age group
 - Radiographic studies unreliable in postoperative setting
 - Elderly patients-not treated



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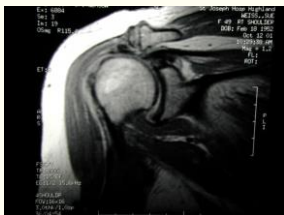
Cuff Tear after Arthroplasty

- Mayo experience (Cofield)- 8%
 - Early 1/3
 - Late 2/3
- Miller and Bigliani, (compl of shoulder sx, 1993)
 - 3-4%
- Wirth, JBJS, 1996
 - 2%

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Cuff Tear after Arthroplasty

- Cuff disease at time of surgery likely under unrecognized
 - Thinning
 - Interstitial tearing
- Routine pre op
 - None had nl. Cuff
 - Intact at surgery
- Thinning and PTRTC tears, not relevant



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Subscapularis Tears

- Most common cuff problem
 - Arthrotomy and repair
- Problem = healing and/or loss of function??



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Convertible Platform Results

- 29 revisions
 - 5 hemi
 - 8 TSA cemented
 - 16 TSA with MBG
- Etiology
 - Glenoid loosening, RTC tear, instability, tuberosity osteolysis, pain
- (Arrow convertible platform)

Valenti, Int Orth, 2015

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Convertible Platform

- Stem preserved in 18 cases (72%)
- Stem removal- malposition
 - Proximal- tension
- 2 MB glenoids revised

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Valenti, Int Orth 2015

Convertible Platform Results

- 56 revisions
 - 13 without stem exchange
 - 43 with stem exchange
- 6 convertible platform stems removed
 - 2 loose, 3 proximal malposition, 1 excessive retroversion

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Gerber, CORR, 2015

Convertible Platform

	with stem exchange	Without stem exchange
Blood loss	831	485
OR time	176	118
Intraop complications (fractures, N's)	13	1

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Gerber, CORR, 2015

Convertible Platform Stem Results

Importantly- in the absence of complications, equivalent results

Highlights the difficulty of stem extraction
Focus on easy revisability/removal

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Limitations

- Malposition
 - Proximal malposition
 - Increased tension, plexopathy, reduction
 - Ulnar N most vulnerable
 - Version
 - Instability
 - Failure of MB glenoid component
 - Infection
 - 2 staged revision?

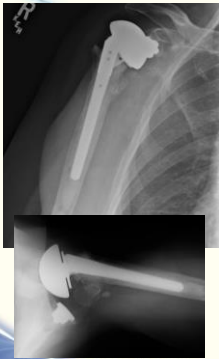
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Case



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Case 2



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Myth or Reality

- Reality
- But like all procedures, correct indications
 - Works when the index procedure done well
- Be prepared to exchange components that have a problem that will compromise longevity of new construct

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Myth or Reality

- Future Directions
- Key feature- ease of removal
 - Address bone loss
 - Intraoperative fractures
- Malpositioned components present challenges that require removal

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Thank you



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