Five-Year Outcomes of Powerlifters and Bodybuilders Undergoing Stemless Aspherical Humeral Head Resurfacing along with an Inlay Glenoid

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DISCLOSURES

LAV - Consultant CONMED

JWU - Royalties from Smith & Nephew Corporation, Consultant Med Shape Corporation, and Arthrosurface Corporation.

JEZ - Consultant Arthrosurface Corporation

KSH - Consultant Arthrosurface Corporation
GH DJD in Bodybuilders/Powerlifters

- Common Problem
- Minimal Literature
- Relatively Young
- Wish to continue training
- Surgery tough
  - Muscle mass
  - Compressible fatty tissue
- HH flattened with large osteophytes
Surgical Options

• Arthroscopic debridement with capsular release and excision of osteophytes
• Hemiarthroplasty
• Ream and Run Hemiarthroplasty
• Hemiarthroplasty with interposition glenoid arthroplasty
• Total Shoulder Arthroplasty
Aspherical HH Resurfacing

• Non-spherical head significantly increased range of motion and restored GH kinematics close to the native joint during humeral axial rotation, as compared with those of a spherical prosthetic head

A series of competitive or high-level recreational bodybuilders and powerlifters with advanced GHA who expressed a strong desire to continue their sport were managed utilizing a novel stemless aspherical resurfacing of the humeral head (HHR) combined with an inlay glenoid (IG).
Shoulder Resurfacing

Surgical Technique

- HH is exposed, Osteophytes resected
- Diameter measured in 2 planes
- Guidepin placed in center of the head & parallel to anatomic neck
- Diseased articular surface reamed
- HH reduced retracted posterior to expose glenoid
Inlay Glenoid Technique
Demographics

• Enrollment: n=11 patients
• 1 Bilateral
• All male ex competitive or high level recreational BB/PL
• Average Age: 45.6 (range: 25-57)
• Diagnosis: primary OA
• All multiple prior inj + NSAIDS
• 4 arthroscopic debridement
• F/U 32mo ave (74mo-8mo)
Hospitalization

- Blood Loss: Mean 111 ml
- No transfusions required
- All Patients ambulatory
Results: Outcomes

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<th>Pre-op</th>
<th>Post-op</th>
<th>*p &lt; 0.0001</th>
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<tr>
<td>WOOS</td>
<td>29.2</td>
<td>27.9</td>
<td>*84.4</td>
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<tr>
<td>ASES</td>
<td></td>
<td></td>
<td>*78.2</td>
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<tr>
<td>Constant</td>
<td>26.9</td>
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<td>*92.0</td>
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Results:

ROM:
Mean FF \uparrow 115 \rightarrow 145
ER 30 \rightarrow 60

8/11 have returned to at least moderate lifting
CONCLUSIONS

• Reproducible technique based on individual anatomy
• Bone stock preservation for procedures
• Minimal impact on soft tissues envelope
• No lateralization of the glenoid
• Lower risk of intraoperative morbidity than stemmed procedures
• Less blood loss
• Outpatient
• Reassuring 2-5 year data
Thank You