Biceps Tenodesis in 30-Year-Old and Younger Military Servicemembers: Trends & Longer-Term Follow-up

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ePoster #15

I (and/or my co-authors) have something to disclose.

All relevant financial relationships have been mitigated.

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Background

Subpectoral Biceps Tenodesis for Treat
Isolated Type II SLAP Lesions in a You
Active Population

Jonas Pogorzelski,
Alexander V.

N=20, mean f/u: 3 years

Return to Play After Biceps Tenodesis and Transfer in a Young, Athletic Population

BRIAN J. LIN, BS; I
STEPHEN J. O'BRIE
CEI, MD; DAVID W. ALTCHEK, MD;

N=41, f/u: 4 years

**Arthroscopic treatment of type II superior labral ant
(SLAP) lesions in a younger population: minimum 2
similar between SLAP repair and biceps tenodesis**

Kevin F. Dunne[1,2] ·
Cynthia A. Kahlenb
iederman[1]

N=20, f/u: 3 years

Return to Play After Biceps Tenodesis for Isolated SLAP Tears in Overhead Athletes

Nathan A. Lorentz,* BS, I
Danielle H. Markus,* BA
Christopher A. Colasanti,* MD
mpbell,* MD,
Eric J. Strauss,* MD, and Laith M. Jazrawi,* MD
Investigation performed at New York University Langone Health, New York City, New York, USA

N=44, f/u: 4 years

Open Subpectoral Biceps Tenodesi
Alternative to Arthroscopic Repair fo
Patients Under 30

Eoghan T. Hurley,
Nathan A. Lorentz,
Eric J. Strauss, M.D., Bogdan A. Matache, M.D., C.M., F.R.C.S.C., and
Laith M. Jazrawi, M.D.
olasanti, M.D.,
l J. Alaia, M.D.,

N=29, f/u: 5 years

Biceps Tenodesis Is a Viable Option for Management of Proximal Biceps Injuries in Patients Less Than 25 Years of Age

Justin W. Griffin, M
Timothy S. Leroux, I
Brian J. Cole, M.D., Gregory P. Nicholson, M.D., Nikhil N. Verma, M.D., and
Anthony A. Romeo, M.D.
Jae Kim, M.S.,
l R. Bach, M.D.,

N=45, f/u: 3 years

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Purpose

- Young patient with SLAP tear = treatment dilemma
  - Repair? Tenodese?

- Military population: relatively young, relatively high shoulder demand

- What are the utilization trends, long-term outcomes, and implications of open biceps tenodesis (OBT) in a 30-year-old and younger active-duty military population?

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Materials & Methods

- Military Data Repository (MDR) query for CPT 24340 (open biceps tenodesis) from 2010-2015
- Exclusion: concomitant shoulder instability, rotator cuff tear, distal clavicle arthrosis
- Retrospective chart review of patients with >1 year follow-up
  - Demographics, complications, return to duty
  - Additional post-operative shoulder care
  - Presence of additional post-operative shoulder radiographs

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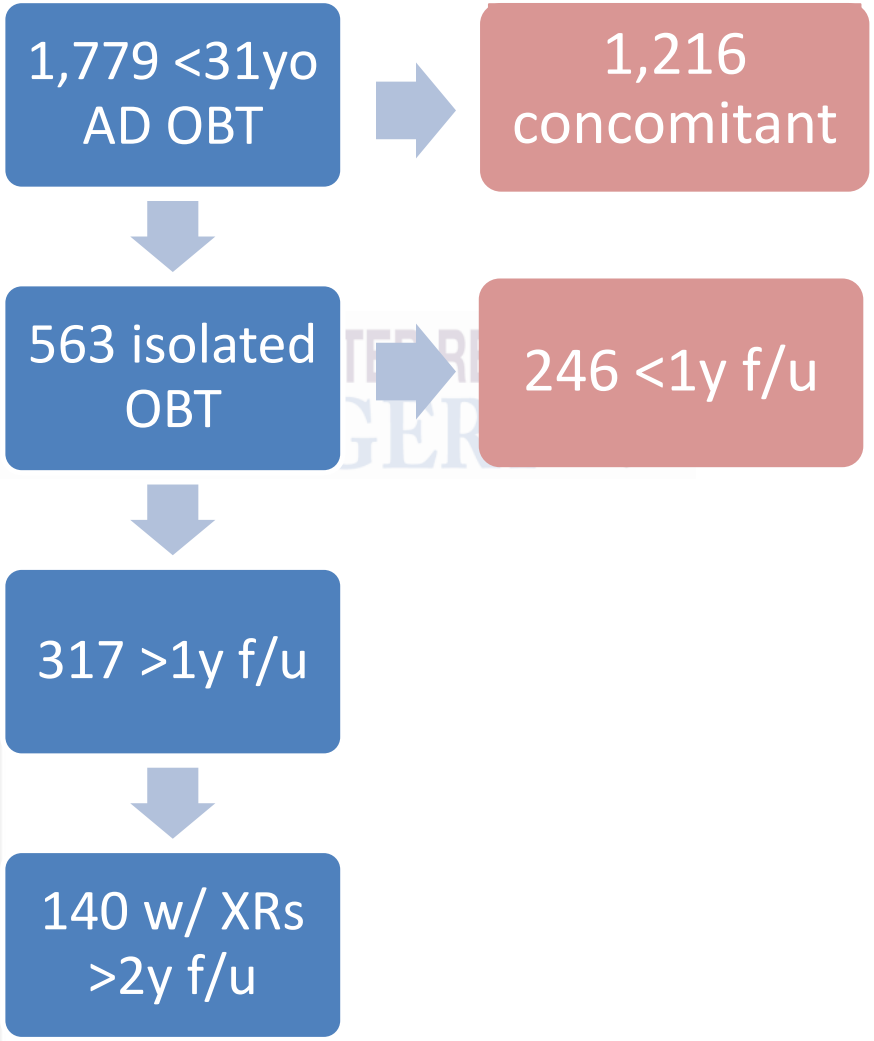
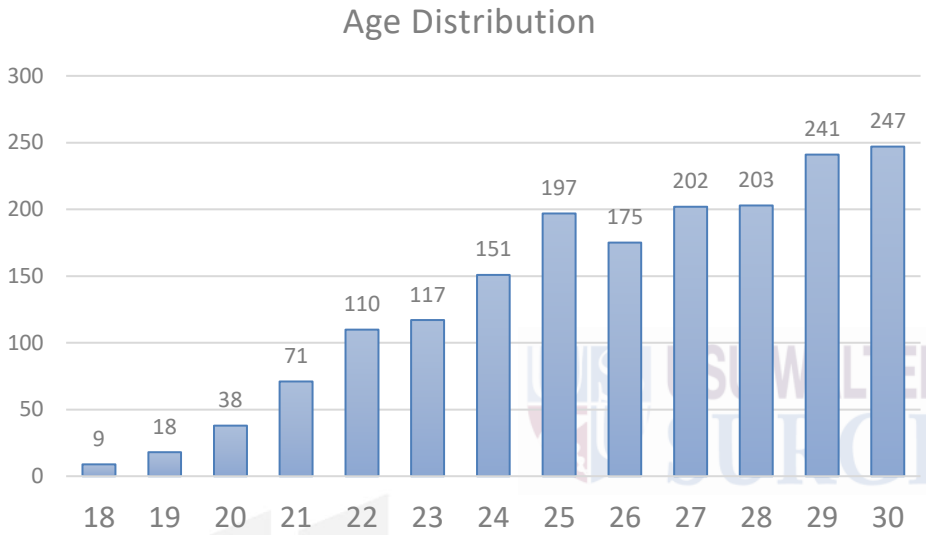
Methods

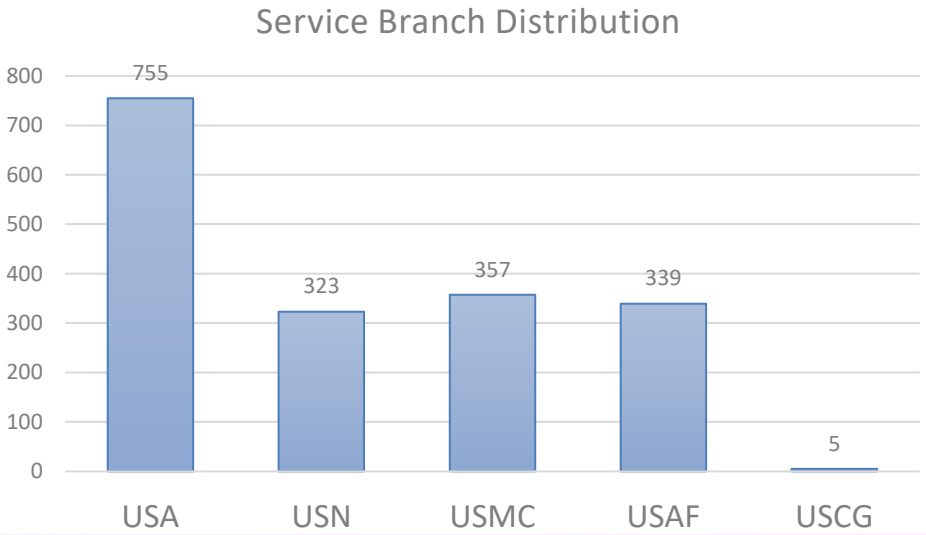


Results: OBT Demographics

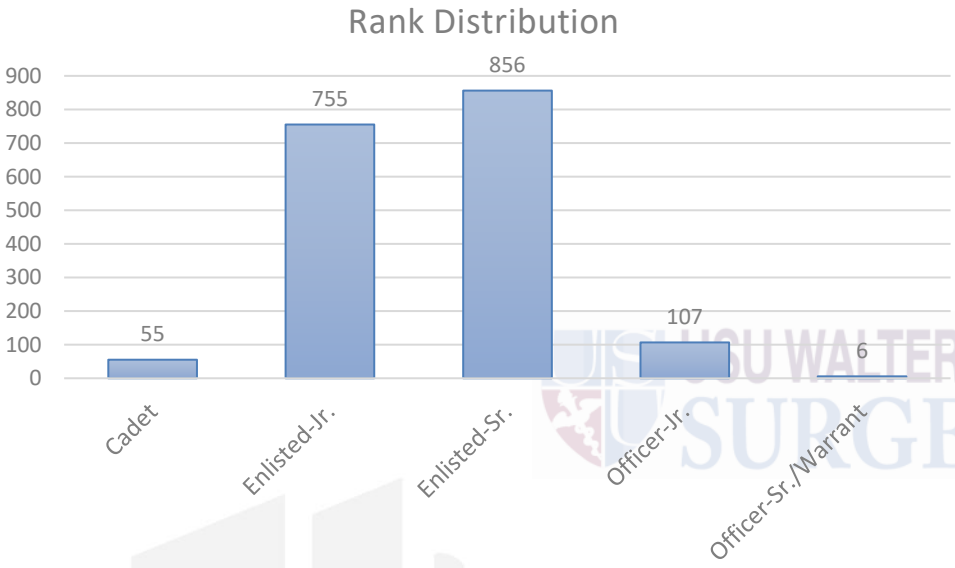


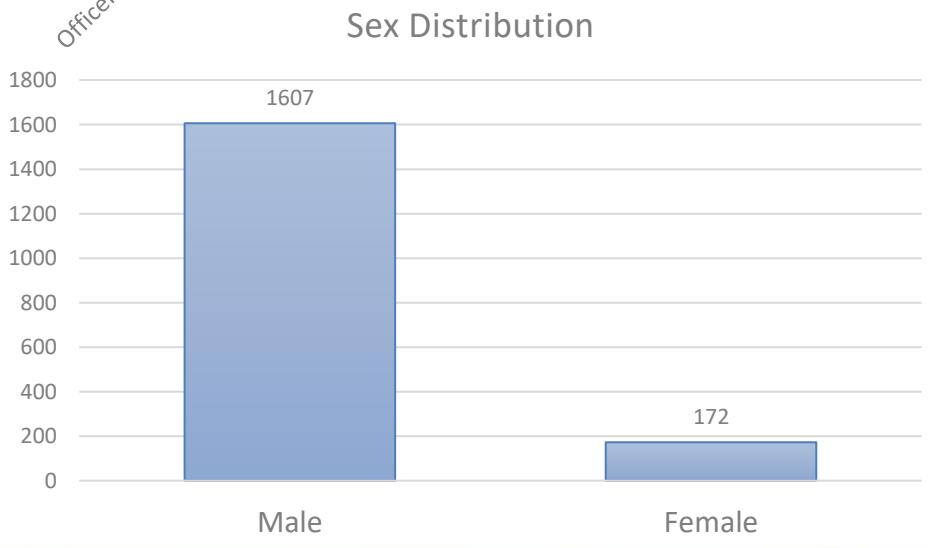
- Mean age: 26 (18-30)

- USA: 42%
- USN: 18%
- USMC: 20%
- USAF: 19%
- USCG: 0.3%



Results: OBT Demographics





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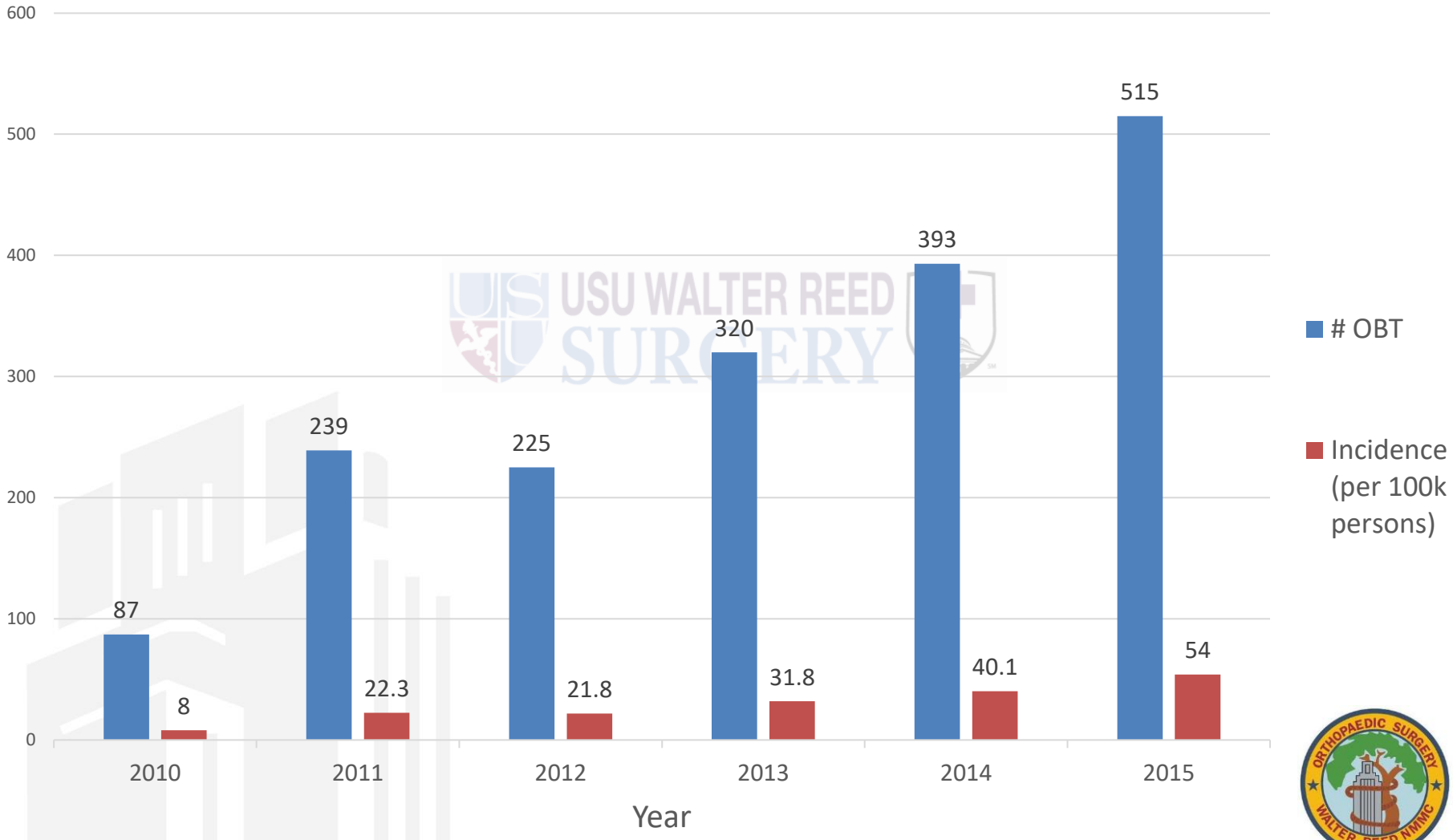
Results: OBT Trends



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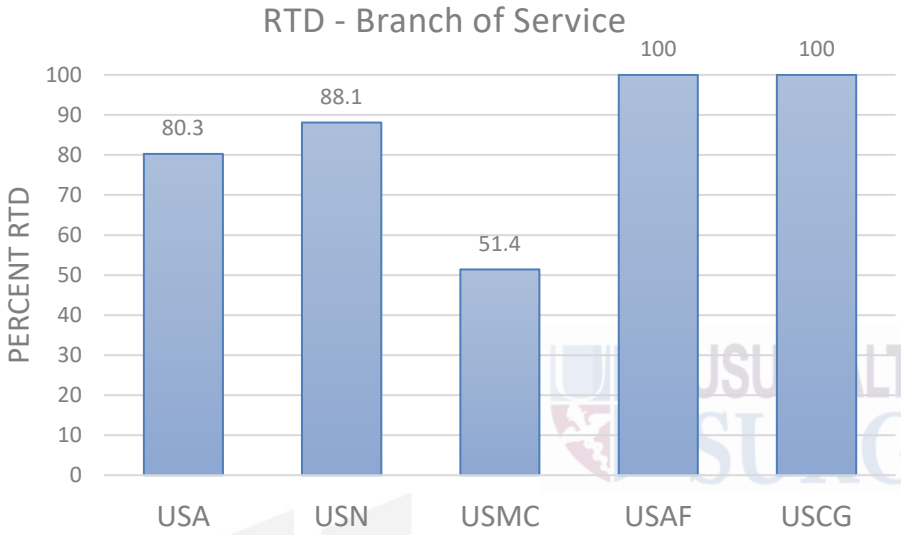
Results

- Acute complications (5.4%, 17/317):
  - Tenodesis failure: 7 (2.2%)
  - Superficial wound infection: 5 (1.6%)

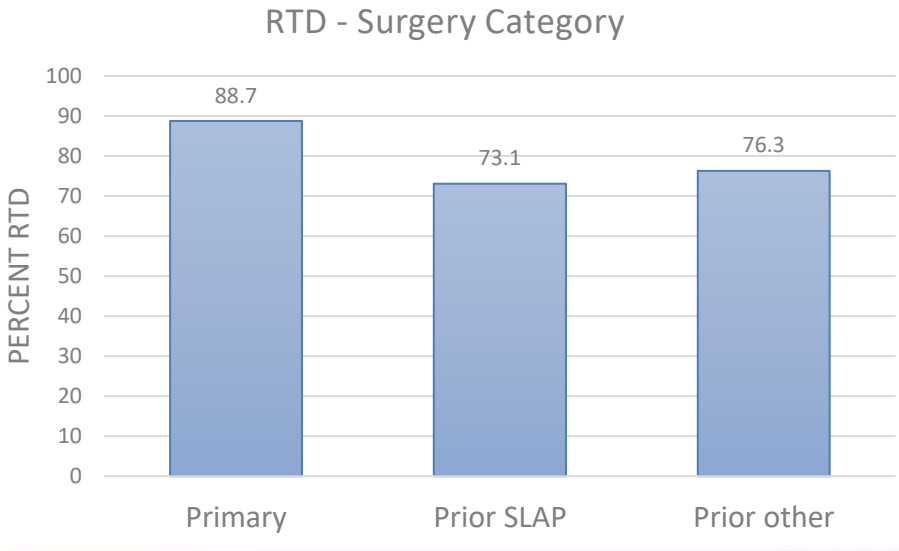
- Subsequent ipsilateral shoulder care at mean **9.7-year f/u** (IQR 8.6-11.0):
  - 57% (182/317) represented at least once with shoulder complaint (past 6-month f/u)
    - 43% (135/317) due to pain
      - 14% also had contralateral shoulder pain →
      - 29% "contralateral-adjusted" incidence of subsequent symptoms isolated to operative side
  - 21% subsequent injury
  - 13% additional surgery

Results: Return to Duty



- Mean RTD: 85%

- RTD lower after prior SLAP repair vs. primary OBT (*p*=.01)



Results: Radiographic

- N = 140 patients with radiographs >2y post-op
  - Mean: 6.3 years post-op
- Glenohumeral degenerative change (≥ mild): 16% (22/140)
  - 95% (21/22) of these patients had progression from pre-op
  - Acromioclavicular degenerative change in these pts: 9/22 →
- Isolated or higher grade glenohumeral degenerative change: 9% (13/140)

Limitations

- Variation in surgical technique
- Limited granularity on surgical indication
- Limited granularity on characteristics of subsequent shoulder symptoms

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Continuing Study

- Ongoing analysis of pre- and late post-operative radiographs
  - Quantifying glenohumeral joint migration and degenerative change

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Conclusions

- Open biceps tenodesis increasingly utilized in young military servicemembers
  - 6.8-fold incidence increase 2010-15
- Low acute complication rate
  - 2% tenodesis failure
- Relatively high RTD
  - 85% overall but lower with prior surgery (including SLAP repair) and in Marines
- Moderate rate of subsequent shoulder care
  - 57% with at least one visit past routine f/u
- Progression of glenohumeral OA in some
  - 9% ACJ-adjusted OA progression prevalence

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