

Beach Chair (BC) vs Lateral Decubitus (LD) Positioning for Arthroscopic Posterior Shoulder Stabilization

Bobby Yow, MD







Bobby Yow MD, Patrick Mescher MD, David Tennent MD, Lance LeClere MD, John-Paul Rue MD, Brett Owens MD, Michael Donohue MD, Kenneth Cameron PhD MPH ATC, Matthew Posner MD, Jonathan Dickens MD

Disclosures

The views expressed in this lecture are those of the authors and do not necessarily reflect the official policy or position of the Department of the Army, Department of Defense, nor the U.S. Government.





Posterior Shoulder Instability

Shoulder instability is common in the military or high demand population, posterior shoulder instability accounts for 2-24% of

diagnoses, ^{1,2,3} Recurrence rate ~10% ⁴

- Risk Factors for recurrence
 - modifiable risk factors are not well understood
 - Surgical position: Restoration of capsular tension (BC) vs better exposure vs better exposure (LD)?

No studies that directly examine the association between surgical position

(BC v LD) posterior and recurrent ir \Box





Purpose

The purpose was to compare the rates of recurrence after arthroscopic posterior stabilization (APS) performed in the BC vs LD position in a high demand population.





Methods

Retrospective review of 1415 active-duty service members who underwent arthroscopic stabilization for shoulder instability from 2005-2019 in the Military Healthcare System (MHS).

Inclusion

- ✓ Index surgery in MHS
- Posterior instability
- ✓ Preoperative MRI
- ✓ Minimum 1-year follow-up

Exclusion

- Prior stabilization procedure
- Multidirectional instability
- Lost to follow-up





Methods

Variables

- Patient demographic characteristics
- Postoperative imaging evaluation
- Index surgery anchor number
- Percent glenoid bone loss





Methods

Outcomes of interest:

- Recurrence (yes/no): Presence of a recurrent pain limiting activities with physical exam consistent with recurrent posterior instability per clinical notes in the electronic medical record
- Revision (yes/no): revision stabilization procedure (CPT)
- Final follow-up: Time from the index stabilization surgery to the patient's final encounter within the closed healthcare system





Statistical Analysis

- Rates of recurrence and revision were calculated among the full cohort among patients with available 1-year or 5-year follow up.
- Patient and procedure characteristics were compared by BC or LD group using univariate analysis (t-test, χ^2).











Overall Cohort: BC vs LD

Characteristic	Overall Cohort (N=147)	Beach Chair (N=86)	Lateral Decubitus (N=61)	P-Value
Age	22.64 ± 4.82	23.01 ± 5.61	22.12 ± 3.41	0.24
Gender (male)	139 (94.5%)	83 (96.5%)	56 (91.8%)	
Average GBL (%)	4.72 ± 5.83	5.01 ± 6.20	4.30 ± 5.29	0.45
Anchor Number	3.31 ± 1.52	3.10 ± 1.44	3.61 ± 1.58	0.05





Overall Cohort: BC vs LD

Characteristic	Overall Cohort (N=147)	Beach Chair (N=86)	Lateral Decubitus (N=61)	P-Value
Recurrence	16% (23/147)	14% (12/86)	18% (11/61)	0.50
Revision	12% (18/147)	10% (9/86)	15% (9/61)	0.43





Rates of Recurrence

Recurrence after arthroscopic stabilization in young and high

demand populations

- 16% of patients
- Average follow-up 8 years
- Average time to recurrence 3 years





Rates of Revision

Revision after arthroscopic stabilization in young and high

demand populations

- 12% of patients
- Average follow-up 7 years
- Average time to revision years 2 years
 - 78% of those that recurred went on to revision





Discussion

De Sa et al Meta-analysis of 25 studies comparing posterior stabilization BC vs LD⁵

- Mean age: 25
- Failure rates 0-9.4% BC, 0-29% LD (3-year follow-up)
- Marginally higher patient satisfaction and failure rates in LD but data inconclusive

Moeller et al systematic review³

- Mean age: 23.9
- Recurrence 4.4 % BC, vs 4.9% LD (3-year follow-up)
- No significant difference in the overall mean recurrent instability rate between the LD and BC groups





Discussion

In our current study

- Active-duty military service members
- Mean age: 22.6
- 16% recurrence, 12% revision (7-year follow-up)
- No significant difference in recurrence or revision rate BC vs LD





Limitations

In our current study

- Limited Data set
- Low event number
- Restricted more complex analyses





Conclusion

 Amongst fellowship-trained orthopaedic surgeons, there was no difference in rates of recurrent instability and revision surgery after performing arthroscopic stabilization for isolated posterior shoulder instability in a high demand population in either the BC or LD position.





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Thank you

Walter Reed National Military Medical Center

bobby.g.yow2.mil@health.mil





