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at Thomas Jefferson University

Return to Play Rates in Adolescent Baseball Players after SLAP Repair

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Disclosures

- **Sam Rao, MD**
 - I have no financial conflicts to disclose.
- **Hareindra Jeyamohan, MD**
 - I have no financial conflicts to disclose.
- **Robert A Jack II, MD**
 - I have no financial conflicts to disclose.
- **Taylor D'Amore, MD**
 - I have no financial conflicts to disclose.
- **Pankti Acharya, MPH**
 - I have no financial conflicts to disclose.
- **Steven B. Cohen, MD**
 - I am a paid consultant of Zimmer Biomet and receive royalties from Slack, INC.
- **Christopher C. Dodson, MD**
 - I am a paid consultant for Arthrex Inc.
- **Michael G. Ciccotti, MD**
 - I receive stock options from Venture MD and research support from Arthrex, Inc.



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SLAP Tears

- Superior labrum from anterior to posterior (SLAP) tears are common in the overhead throwing athlete
- Injury secondary to the throwing motion and the resulting strain placed on the biceps tendon and its attachment site at the labrum



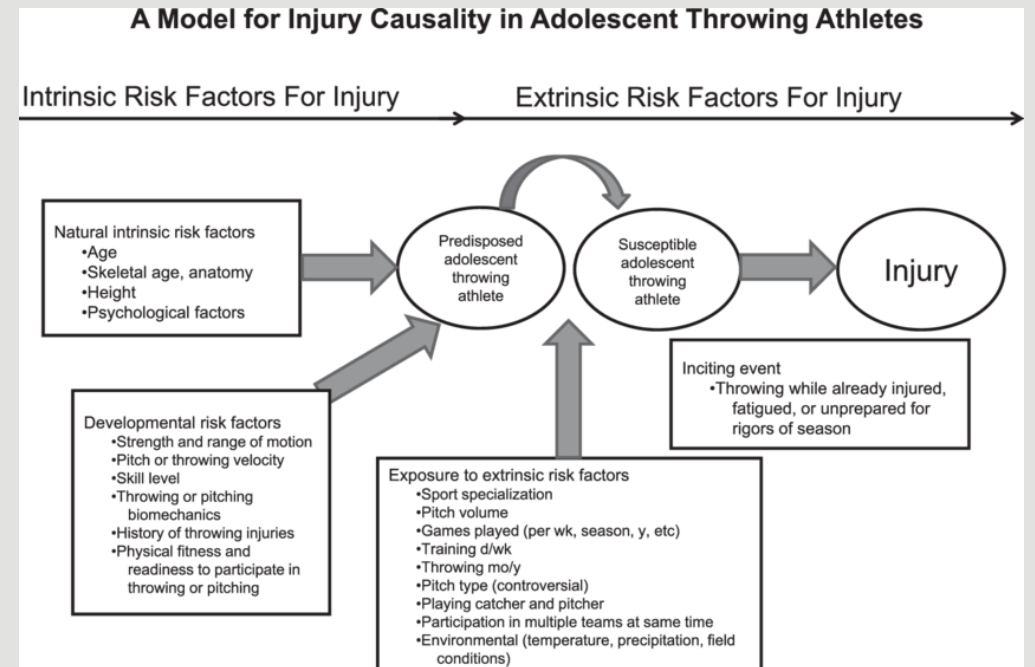
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SLAP Tears in Adolescents

- Dramatic increase in adolescent overhead throwing sports related shoulder/elbow injuries
 - Early Sports Specialization
 - Overall increase in adolescent sports participation
- SLAP tears in overhead athlete
 - Gilliam 2018 – 62% RTP
 - Sayde 2012 – 63% RTP
- Adolescent outcome data is lacking



Purpose/Hypothesis

- In adolescent baseball players following SLAP repair, to determine
 1. Patient Reported Outcomes (KJOC, WOSI, SF-12)
 2. Patient satisfaction
 3. Long-term progression of play and natural history of the injury
- The authors hypothesized that the cohort would demonstrate:
 1. High postoperative PROs
 2. Excellent patient satisfaction
 3. Progress to higher levels of play and have high RTP rates



Materials and Methods

- Inclusion:
 - Baseball athletes (age 10-19)
 - 2008-2018 (Minimum 2-year follow-up)
 - SLAP repair
- Patient Surveys:
 - Kerlan-Jobe Orthopaedic Clinic Shoulder and Elbow score (KJOC)
 - Western Ontario Shoulder Instability (WOSI) Index
 - Short Form 12 (SF-12) survey
 - Custom return to play questionnaire



Cohort Demographics

- 59 patients met inclusion criteria and 45 (76.3%) available for follow-up
- All male baseball athletes
- Mean age: 15.8 (11-19) years
- 17 pitchers and 28 position players
- 2 MS, 29 HS, 13 College
- Mean follow-up: 5.3 years (2.1-12.1)



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Results – RTP

- Return to play (RTP) rate: 75.6% (34/45)
 - 6 MS/HS and 1 college player switched positions to RTP
 - 71.0 HS/MS RTP rate and 85.7% college RTP rate
 - No difference in RTP rates between pitchers v. position players
- Time to return to throwing: 5.9+/-2.0 months
- Time to return to play: 11.3+/-3.5 months



Results – Progression of Play

- 12 players who returned to play who eventually progressed to the next level of competition
 - All those who progressed were HS->College
 - No one in our cohort was able to play professionally
- The mean competitive postoperative career length of the cohort was 2.9+/-1.9 years
- At final follow-up 32/45 players had stopped playing baseball for various reasons:
 - 12 (37.5%) not recruited to next level, 10 (31.3%) lost desire to continue to play, 10 (31.3%) reported their shoulder prevented them from playing



Results – PROs and Performance

- Overall Cohort
 - KJOC – 60.0+/-27.4
 - WOSI – 21.0+/-20.6%
 - SF-12 PCS|MCS – 55.2+/-3.9|55.2+/-5.6
- No difference in PROs between pitchers v. position players
- Pitchers subjectively reported returning to play significantly worse than position players (p=0.013)

	Pitchers (n=17)	Position Players (n=28)	P value
KJOC	49.5+/-22.8	61.5+/-29.4	0.153
WOSI	23.2+/-21.4%	19.5+/-20.3%	0.366
MCS	55.0+/-4.7	55.3+/-3.5	0.935
PCS	55.6+/-6.5	54.9+/-5.1	0.367
SANE	76.4+/-25.3	83.0+/-19.5	0.228
Satisfaction Score	83.2+/-33.3	83.3+/-29.3	0.483



Results – Satisfaction/Complications

- Overall satisfaction was 83.2%
- 39 (86.7%) players said that given the opportunity they would undergo the surgery again
- No major postoperative complications
- Postoperative injuries
 - 3 reported having another labral injury requiring revision at an average of 14 months
 - 2 patients reported having a shoulder dislocation reduced non-operatively
 - 1 patient reported sustaining a rotator cuff injury 24 months postoperatively



Limitations

- Retrospective study
 - Recall bias
 - Selection bias
- Small sample size
- Lack of performance metrics
 - Difficult to determine real return to prior performance



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Conclusion

- In adolescent baseball players following SLAP repair demonstrate:
 1. PROs similar to what has been reported in the literature
 2. RTP rates slightly higher than what has been previously reported in older populations
 3. Relatively high satisfaction ratings and a willingness to repeat the procedure in the long-term
 4. Progress to subsequent levels of play at a moderate rate





THANK YOU.



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