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Best Practice Recommendations

A series of evidenced-based guidelines to improve your patient care, provided by the developers of ATGenius.com.

Shoulder Dislocations

Each Best Practice Recommendation includes key elements to evaluating or treating the condition, a Strength of Recommendation (SOR) grade based on research quality, and supporting evidence.

Best Practice Recommendation #1: RISK FACTORS FOR RECURRENCE

Younger, male patients and those with a soft tissue or bony Bankart lesion, large or medial located Hill-Sachs lesion, glenoid bone loss, joint laxity or a positive apprehension sign have a higher re-dislocation rate (SOR:B)

- Younger patients have a higher re-dislocation rate. Those who suffer a traumatic dislocation between the ages of 10-20 have a 94% re-dislocation rate; those between 20 and 30 years old have a 79% re-dislocation rate.[1]

- Age at first dislocation is related to recurrence: <30 years old: 47-89%, 30-39 years old 17-35%, 40 years and older: 10-22%.[2]

- Patients with glenoid cavity bone loss >20-25%, a Hill-Sachs lesion extending medially or >5/8 of the humeral head radius, hypermobility, a Bankart lesion or a positive anterior apprehension test are at higher risk for recurrent instability.[2]

- Male patients and younger patients (<19 years old) are at a higher risk for recurrence.[3]

- Overall recurrent instability among first-time adult shoulder dislocations is 39%. Risk factors include age (<40), male sex and hyperlaxity.[4]

- After a period of immobilization and rehabilitation (6 weeks), the apprehension test has an odds ratio of 4.3, specificity of 86% and a sensitivity of 43% in categorizing patients at either high or low risk for recurrent dislocation.[5]

- A Hill-Sachs lesion located medial to the glenoid track increases the likelihood of engagement and recurrent instability.[6]

- Risk factors for recurrence following shoulder dislocation in adult patients include ages 40 years or younger (13x more likely), men (3x more likely), and hyperlaxity (3x more likely).[4]

Best Practice Recommendation #2: IMMOBILIZATION

Immobilization length of time or method does not affect re-dislocation recurrence, chronic instability or patient outcomes. (SOR:B)

- Immobilization in external rotation (vs internal rotation) does not have an effect on re-dislocation or chronic instability.[7]

- Duration of sling immobilization ranges from 1-6 weeks depending on patient symptoms.[8]

- 1-3 weeks of immobilization is generally recommended following dislocation for patient comfort, however there is no significant evidence indicating immobilization decreases recurrent instability, especially among younger, athletic patients.[2]

- At 2, 5, 10 and 25-year follow-up, younger age affected recurrent dislocation rates but not length of immobilization.[9-12]

- In patients <30 years old, no significant difference in recurrence occurred between those immobilized for 1 week or less (41%) compared to those immobilized 3 weeks or longer (37%). However, those who refrain from sports and full activities longer (≤ 6 weeks vs ≥ 6 weeks) have greater satisfactory results.[13-14]

- Immobilization decreases the risk of recurrent stability at 1-year follow-up but length of immobilization time is not associated with recurrent instability risk.[15]

Best Practice Recommendation #3: LOWER RECURRENCE RATES

Patients with an open humeral physis or patients who sustain a greater tuberosity fracture associated with a dislocation have a lower re-dislocation rate. (SOR:C)

- Individuals with an open humeral physis (<14 years old) have a lower risk of recurrence compared to those with a closed physis and can be managed conservatively.[8]

- Skeletally immature patients age 13 or below have a 33% recurrent dislocation rate compared to 90% ages 14-17. Labrocapsular elasticity in a skeletally immature individual protects the patient from permanent damage to these structures and results in lower instability recurrence.[16]

- A greater tuberosity fracture decreases the risk (7x less likely) due to resulting decreased external rotation range of motion.[4]

Best Practice Recommendation #4: INCIDENCE

Among adults, males in their 20s and 30s who play contact sports have the highest incidence of shoulder dislocation; the highest rate of shoulder dislocation in pediatric patients occurs at age 16. (SOR:B)

- The overall shoulder dislocation incidence ranges from 11.2 to 23.9 per 100,000 injuries.[14,17]

- Among pediatric patients, the highest incidence of dislocation is among 16 year-old males while the incidence is lowest among 10-12 year-olds. Re-dislocation rates are highest in 14-16 year-old patients and lowest between 10-13 year-olds.[18]

- Most adult patients are men in their second or third decades who suffer the injury while playing contact sports.[19]

- 10% of NFL combine athletes over a 13-year period have a history of shoulder instability.[20]

Best Practice Recommendation #5: MANAGEMENT

Some patients can be managed conservatively and return the same season but may have a high rate of recurrent dislocation or chronic instability. The common soft tissue Bankart lesion or other labral lesion, bony Bankart, or an engaging Hill-Sachs lesion indicates surgical management is best for optimal patient outcomes. (SOR:B)

- A Bankart lesion occurs in 89-100% and a Hill-Sachs lesion in 58-90% of the cases of first-time dislocations.[2]

- High school and collegiate athletes who suffer a shoulder subluxation or dislocation can be managed conservatively with physical therapy and bracing, and return the same season in an average of 10 days. However approximately 40% will suffer an additional instability episode during the season.[21]

- Injuries such as bony or soft tissue Bankart lesion, glenoid labral articular disruption, anterior labro-ligamentous periosteal sleeve avulsion, or an engaging Hill-Sachs lesion warrant surgical management.[8]

- A bony Bankart lesion results in a 3.65 Odds Ratio (95% CI 1.05-12.70, p=.04) for recurrence.[15]

- Labrum repair is more effective than non-surgical treatment in preventing re-dislocation at 2-year follow-up.[7]

Best Practice Recommendation #6: EXAMINATION

Clinicians should use multiple examination tests to evaluate for shoulder instability; the surprise test is the most valuable (SOR:B)

- A combination of a positive apprehension test, relocation test and surprise test (release of Jobe relocation test) has positive predictive value of 94% and a negative predictive value of 72% for prediction of anterior instability.[22]

- The surprise test has the highest sensitivity (85-92%) and specificity (87-89%) for clinically diagnosing anterior shoulder instability compared to other common tests such as the apprehension, relocation, anterior drawer and anterior load tests.[23]

Information researched and provided by Casey Christy, DAT, ATC, CSCS, Co-Developer, ATGenius.com. Treatment decisions should be made based on the best available evidence, patient preference, and clinician expertise, in consultation with, and at the direction of a physician.

See our other best practice documents:

- **Acromioclavicular Joint Injuries**
- **ACL Injuries**
- **Abdominal Injuries**

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