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Comparison of Rehabilitation Programs Following a Latarjet Procedure: A Level 3 Case Study

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OBJECTIVE

Anterior shoulder dislocations cause chronic disability, often requiring surgery. Latarjet procedures are considered when the anterior glenoid fractures during shoulder dislocation. Latarjet procedures show positive outcomes with low dislocation recurrence rates, although rehabilitation guidelines are not well established. This Level-3 CASE report will compare two rehabilitation protocols.

MEDICAL HISTORY

A 15-year-old, male, high school football player, with a history of shoulder dislocation treated with an anterior inferior capsulolabral repair and rehabilitation just 11 months prior, presented to the athletic trainer during practice with an anterior and internally rotated left humeral head indicative of an anterior shoulder dislocation. Onsite reduction by the athletic trainer failed, so the patient was referred to the team physician.

DIFFERENTIAL DIAGNOSIS

Anterior shoulder instability, shoulder dislocation, Hill-Sach's lesion, labral tear, glenoid fracture

TREATMENT

The physician successfully relocated the shoulder. X-rays were negative for fractures, so the physician prescribed a twelve-day Prednisone taper, 30 days of Naprosyn, and aggressive rehabilitation. After three weeks of therapy, the patient's pain and overhead movement apprehension had not improved. Therefore, the physician suggested arthroscopy and Latarjet procedure. Arthroscopy revealed a glenoid fracture fragment in the anterior joint capsule,

explaining the patient's continued disability. The physician performed the Latarjet procedure by relocating the coracoid process to the anterior inferior glenoid, at the fracture site. The physician, physical therapist, and athletic trainer designed the rehabilitation protocol. Weeks 1-3 focused on wrist and elbow AAROM and PROM, progressed to shoulder PROM, and scapular isometrics. After week 3 the patient's sling use was tapered. Weeks 4-9 included: shoulder joint mobilization; shoulder AAROM and AROM exercise; shoulder internal rotation, external rotation strengthening, as well as scapular movement, strength, and rhythmic stabilization. Weeks 10-15 incorporated shoulder strength training below 90° of shoulder flexion. Weeks 16-20 continued strength gains and introduced plyometrics, sports related activity, and team lifting.

RELATED LITERATURE

Murphy et al. showed promising results with their Latarjet rehabilitation protocol. Key differences between Murphy et al.'s 8-week protocol and the case report patient's protocol include immobilization timeframe, early integration of shoulder isometric exercises, and X-rays to determine progression. Murphy et al. discontinued immobilization after 1 week and progressed to elbow and shoulder isometrics, core training, low intensity running, and kicking drills in week 2. At week 6, X-rays of the glenoid fracture site demonstrated full bony fusion, therefore Murphy et al. assumed shoulder stability and progressed the patient to overhead loading and contract drills. During week 8, the patient began full

practice participation 3 days a week and was cleared for 50% game participation. The patient was fully cleared in week 10.

UNIQUENESS

Our patient's progress was significantly delayed compared to Murphy et al.'s patient. Although they had similar strength and ROM deficits in week 2, our patient required an additional 15 weeks to make similar gains. Also, our patient did not begin aggressive overhead activity until 10 weeks after Murphy et al.'s patient. Murphy et al.'s patient returned to limited participation in week 8 and full participation in week 10, while our patient did not return to limited participation until week 16.

CONCLUSIONS

Murphy et al. argue the longer the patient is immobilized post-Latarjet, the greater the muscle atrophy and ROM loss. Therefore, they propose a shorter immobilization period to allow for earlier exercise and the use of bony fusion status to determine progression. The patient in this case report exemplifies how longer immobilization and lack of imaging can delay return to play. To allow for earlier participation, clinicians should consider implementing early mobilization and using imaging to inform rehabilitation progression.

KEY WORDS: *Immobilization, Shoulder Dislocation, Imaging*