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Posttraumatic persistent shoulder pain: Superior labrum anterior-posterior (SLAP) lesions

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
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Patient: Male, 57
Final Diagnosis: Typ 2 Superior labrum anterior-posterior lesion
Symptoms: Shoulder pain after trauma
Medication: —
Clinical Procedure: —
Specialty: Orthopedics and Traumatology • Emergency Medicine

Objective: Rare disease

Background: Due to the anatomical and biomechanical characteristics of the shoulder, traumatic soft-tissue lesions are more common than osseous lesions. Superior labrum anterior-posterior (SLAP) lesions are an uncommon cause of shoulder pain. SLAP is injury or separation of the glenoid labrum superior where the long head of biceps adheres. SLAP lesions are usually not seen on plain direct radiographs. Shoulder MRI and magnetic resonance arthrography are useful for diagnosis.

Case Report: A 57-year-old man was admitted to the emergency department due to a low fall on his shoulder. In physical examination, active and passive shoulder motion was normal except for painful extension. Anterior-posterior shoulder x-ray imaging was normal. The patient required orthopedics consultation in the emergency observation unit due to persistent shoulder pain. In shoulder MRI, performed for diagnosis, type II lesion SLAP was detected. The patient was referred to a tertiary hospital due to lack of arthroscopy in our hospital.

Conclusions: Shoulder traumas are usually soft-tissue injuries with no findings in x-rays. SLAP lesion is an uncommon cause of traumatic shoulder pain. For this reason, we recommend orthopedic consultation in post-traumatic persistent shoulder pain.

Key words: trauma • shoulder pain • superior labrum anterior posterior lesions

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Background

The shoulder has a great range of motion in the body, with complete global movement that allows positioning the arm anywhere in space. Due to the high degree of motion capability of the shoulder complex, it is highly sensitive to any type of trauma. Traumatic soft-tissue lesions are more common than osseous lesions due to the characteristic anatomical and biomechanical properties of the shoulder. There are various causes of shoulder pain, often related with rotator cuff (RC) injuries. These problems usually occur with repetitive micro-traumas [1,2]. Superior labrum anterior-posterior (SLAP) lesions are uncommon as a cause of shoulder pain after trauma. SLAP is injury or separation of the glenoid labrum superior where the long head of the biceps adheres [3].

We emphasize the need to consider the diagnosis of SLAP lesions in post-traumatic shoulder pain in emergency department patients.

Case Report

A 57-year-old man was admitted to our emergency department due to a low fall on his shoulder. In physical examination, active and passive shoulder motion was normal except for painful extension. Anterior-posterior shoulder x-ray imaging was normal (Figure 1). A type 2 SLAP lesion was detected in fat-suppressed axial T2-weighted MRI sequences (Figure 2A, 2B). The patient was referred to a tertiary hospital due to lack of arthroscopy in our hospital.

Figure 1. Anterior-posterior shoulder X-ray.

Figure 2. (A) Axial T2-weighted fat-suppressed MR. (B) Coronal T2-weighted fat-suppressed MR.

Discussion

SLAP lesion of the shoulder is generally related with a fall during the abduction of the arm. This rare injury causes persistent pain in the shoulder. Synder et al defined 4 types of lesions and Mohana-Borges et al defined 10 types of SLAP lesions [3,4]. We diagnosed a type 2 SLAP lesion in our patient. The clinical diagnosis of SLAP lesions is extremely challenging. History and physical examination is not sufficient for a definitive diagnosis. Although there are tests that are helpful in the diagnosis, physical examination and history are not useful for definitive diagnosis of a SLAP lesion. Reports in the literature describe at least

26 maneuvers as useful in helping to make the diagnosis of a SLAP lesion [5,6] Cook et al. [7] reported that the strongest positive predictive value and negative predictive value of these tests were provided by the Kim Test II and the Labral Tension test.

Plain radiographs are non-diagnostic for SLAP lesions. MRI and MRI arthrography of the shoulder are useful diagnostic tools. Arthroscopic examination is the current method of choice in undiagnosed patients [3,4].

SLAP lesions of the shoulder result in functional disorders, biomechanical limitations, and persistent shoulder pain. Surgical treatment is required in symptomatic patients. The arthroscopic method is sufficient in most patients. Undifferentiated form or bucket handle tears are debrided in the arthroscopic

method. Complete tears are fixed to the glenoid with anchors. Transplantation of biceps tendon to the intertubercular groove is recommended in multi-fragment degenerative tears [3,8]. Our case was referred to an arthroscopy center.

Conclusions

Shoulder injuries are generally related to soft-tissue injuries, and plain radiographs are not useful to evaluate soft-tissue injuries. SLAP lesions are a rare injury that causes persistent pain and functional disorders. In patients admitted to emergency departments with shoulder pain after trauma, a shoulder MRI should be performed to diagnosis SLAP lesions; otherwise, diagnosis can be easily missed.

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