

전간 발작과 관련된 견관절 전방 불안정성 환자에서 시행한 관절경적 Bankart봉합술 - 2예 보고 -

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Arthroscopic Bankart Repair for Post-seizure Anterior Instabilities of Shoulder - 2 Cases Report -

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Purpose: These case reports have been prepared to highlight the uncommon occurrence of anterior shoulder dislocation after an epileptic seizure, the recognition of which is important as this type of injury is associated with bony lesions and a high incidence of recurrence.

Materials and Methods: We report two cases of recurrent anterior dislocation of the shoulder due to grand mal epilepsy. These cases were treated as usual anterior dislocations of the shoulder, and were regularly followed to detect any recurrence of shoulder instability.

Results: Outcome of the surgery in the two cases was different because of the differences in seizure control. In the patient in whom seizures were well-controlled, there was no recurrence of instability, while the patient with poorly controlled seizures developed a recurrence of the dislocation following shoulder repair.

Conclusion: The authors emphasize the need to control seizures in order to prevent injury recurrence in this subset of patients.

Key Words: Shoulder, Anterior dislocation, Seizure, Recurrent, arthroscopic Bankart repair

We report our experience with 2 patients with grand mal epilepsy and recurrent anterior dislocations of the shoulder. After the arthro-

scopic Bankart reconstruction, no further dislocation was noticed in the patient whose seizures were well-controlled.

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Case 1

A twenty eight-year-old male patient who had suffered from grand mal epilepsy since 8 years of age presented to the physician with a painful right shoulder following a seizure. The patient had 2 episodes of dislocations per year for the first seven years and in the current year there were at least 5 episodes of dislocations in a week, even without a seizure. On examination of the affected shoulder, apprehension and anterior drawer tests were positive. There were no regional neurological deficits.

Radiographs(Fig. 1), magnetic resonance imaging(Fig. 2) and arthroscopic examination

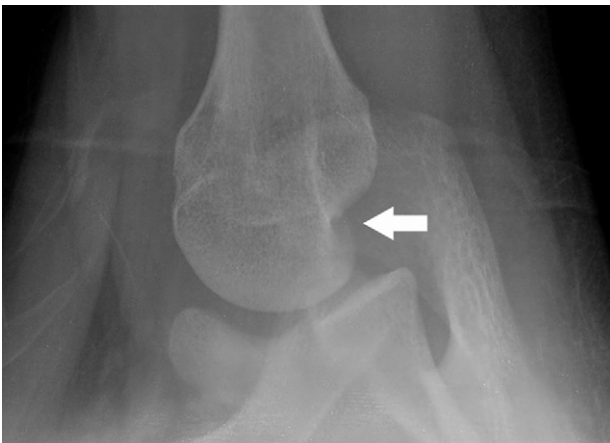


Fig. 1. The axillary view image reveals anteriorly subluxed glenohumeral joint with a huge Hill-Sachs lesion (arrow).

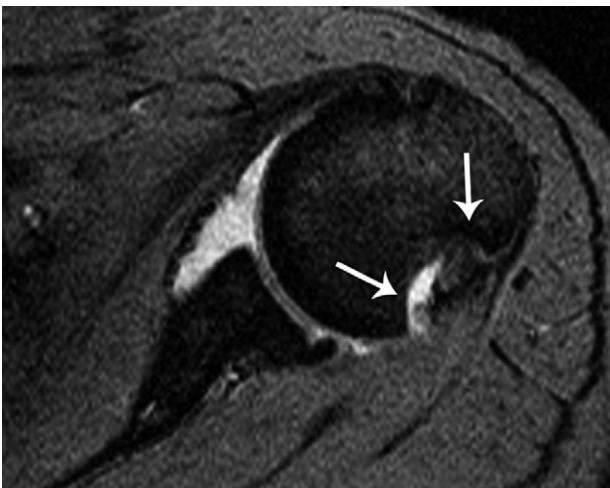


Fig. 2. The MR image revealing huge Hill-Sachs lesion (arrows) at the posterior aspect of humeral head.

(Fig. 3), revealed an anteriorly subluxed glenohumeral joint, Hill Sachs lesion and significant anterior glenoid rim erosions. The anterior shoulder instability was repaired under general anesthesia using an arthroscopic Bankart repair procedure and the arm was placed in a cuff and collar sling. Fourteen months after the surgery, the patient had a secure shoulder with 100 points on the Rowe shoulder scale (Fig. 4).

Case 2

A 19-year-old male patient who had suffered from grand mal epilepsy since 10 months presented to the physician with an unstable left

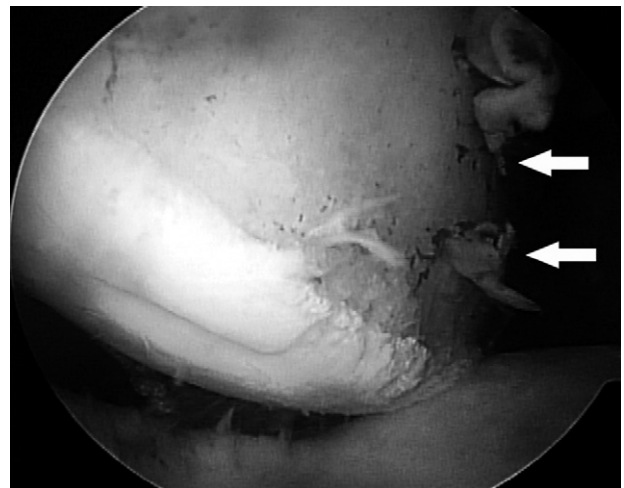


Fig. 3. The arthroscopic finding shows Hill-Sachs lesion (arrows) and glenoid rim erosion.



Fig. 4. Fourteen months after the Bankart repair simple radiographic image revealing a congruent glenohumeral joint.

shoulder following a seizure. The patient had 20 previous episodes of dislocations. On physical findings of the affected shoulder, the bony apprehension and anterior drawer tests were positive. There were no regional neurological deficits.

Radiographs, magnetic resonance imaging and arthroscopic examination revealed an anteriorly subluxed glenohumeral joint with significant anterior glenoid rim erosions and a Hill-Sachs lesion. The anterior shoulder instability was arthroscopically repaired under general anesthesia using 3 anchor screws. However, following the surgery the patient developed recurrence of the instability after four seizure episodes (Fig. 5).

Discussion

In patients with epilepsy, the most common type of shoulder dislocation following a seizure is the posterior type³⁾, but anterior dislocation is also seen^{1,5)}. Jacobs and Schultz⁴⁾ reported a series of 40 dislocations of the shoulder in 37 patients who had seizures: 25 were anterior. Dislocations occur as a result of external trauma secondary to a fall during a fit or from powerful uncoordinated muscle contractions around the shoulder. They are likely to recur because of the development of bony defects of



Fig. 5. Simple radiogram revealing loss of glenohumeral congruency in case 2 following 4 episodes of seizures after the arthroscopic Bankart repair.

the anterior rim of the glenoid and compression fractures of the humeral head caused by the very forceful dislocation²⁾.

Buhler et al.,¹⁾ in a study of 34 shoulders in 26 patients with an initial dislocation after a seizure, found that 13 patients had anterior instability of which 12 were recurrent as opposed to only 2 out of 13 patients who had posterior dislocations. Large bony lesions (Hill Sachs lesion and anterior glenoid rim fractures in anterior dislocations and reverse Hill Sachs lesion and posterior glenoid rim fractures in posterior dislocations) were the hallmark of shoulder instability after seizures. They also suggested that skeletal reconstruction should be done in patients with anterior instability to obtain clinical stability. The re-operation rates were 40% in these patients as opposed to 12% in those with posterior instability, indicating that anterior instability after a seizure was indeed a difficult problem to treat. For our two cases, we were able to obtain an excellent result with arthroscopic surgery only in the patient with well-controlled seizures. In the patient with poorly controlled seizures, we noticed treatment failure in the form of recurrence of dislocations.

In conclusion, seizures in patients with epilepsy can cause shoulder instability and the recognition of anterior shoulder instability is important. These case reports have been prepared to highlight the uncommon, but not rare, occurrence of anterior shoulder dislocation after an epileptic seizure, the high incidence of injury recurrence in these patients, the need to recognize bony lesions on the radiographs, and the need for secure reconstruction to obtain a functional shoulder. Finally, seizure control is the most important factor for preventing recurrences.

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초 록

목적: 본 증례 보고는 드물게 보고되고 있는 간질 발작과 동반된 견관절 전방 불안정성에서 발견되는 골병변을 기술하고 고빈도의 재발 요인을 파악하고자 하였다.

대상 및 방법: 저자들은 전간 발작과 동반된 2례의 재발성 전방 탈구를 경험하였으며 본 증례 통하여 일반적인 재발성 견관절 탈구에 준하여 치료하면서 정기적으로 경과를 관찰하였다.

결과: 본 두 증례에서 수술의 경과와 전간 발작의 조절 여부에 따라 경과가 결정됨을 알 수 있었다. 즉 간질 조절이 잘된 환자에서는 안정성을 유지할 수 있었으나 발작이 조절되지 않은 전방 불안정성의 경우 결국 재발성 탈구가 유발되게 되었다.

결론: 전간 발작과 동반된 견관절 불안정성에서 재발 방지를 위해서는 경련 조절이 필수적인 인자임을 인지하게 되었다.

색인 단어: 견관절, 전방 탈구, 발작, 재발성, 관절경하 방카트 봉합술