

# Recurrent anterior shoulder instability associated with coracoid fracture: An unusual presentation.

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## INTRODUCTION

Recurrent anterior shoulder instability following shoulder dislocation has an incidence as high as 68% among the younger population, however its association with coracoid fracture is extremely rare. Coracoid process fracture is uncommon, with an incidence between 3 and 13% of all scapular fractures. Majority of coracoid fractures reported earlier have been shown to be associated with seizure disorder. We report a case of displaced coracoid fracture associated with recurrent anterior instability in a patient with a history of seizure disorder.

## MATERIALS AND METHOD

A 33-year-old male, with a history of seizure disorder presented with complaints of two episodes of dislocation of his left shoulder within the last two weeks. Patient had a fall from standing height two weeks back, with presentation suggestive of anterior shoulder dislocation. He underwent closed reduction followed by immobilization at another institution. A second dislocation occurred the same day after abduction and external rotation of his shoulder, again managed with closed reduction. Ten years before index injury, he sustained another episode of traumatic dislocation which relocated spontaneously. Apprehension, anterior drawer, and relocation tests were positive. Radiographic evaluation revealed the presence of Hill–Sach’s lesion. MR imaging revealed the Bankart’s lesion, while pre-operative CT scan showed Hill-Sach’s lesion associated with coracoid process fracture.

## RESULTS

Patient was placed in a beach chair position. Deltopectoral approach was used and a coracoid fragment with attached conjoint tendon was identified. A Bristow procedure was performed, and the fractured coracoid tip was transferred to the anteroinferior glenoid neck and fixed using a 4.5 mm cannulated cancellous screw. The wound was closed in layers and arm was supported with shoulder immobilizer postoperatively for 1 week. Passive range of motion exercises were started after 1 week. Six weeks post-operatively, active assisted ranges of motion exercises were started followed by standard rehabilitation protocol. At 3-month follow up, the patient had no further episodes of shoulder dislocation and returned to his pre-injury activity level with full range of motion, with a Constant score of 85 and an Oxford Shoulder Instability Score of 50.

## DISCUSSION

Coracoid process fractures are easily missed, as the symptoms are non-specific and routine radiographs are unremarkable. Mechanism of coracoid fractures include avulsion by muscle pull of biceps and coracobrachialis, direct contact of dislocating humeral head, fatigue fractures, as a complication of fixation of acromioclavicular joint or from medial migration of humeral head from cuff arthropathy. Diagnosis is challenging and could be missed due to poor quality of the radiographs performed in the emergency room. CT scan with 3D reconstruction which can show associated injuries is the best imaging method. In our case, since the size of the coracoid fragment was sufficient, a Bristow procedure was performed to provide stability.

## CONCLUSIONS

This case highlights a rare injury pattern and emphasizes on good clinical and radiological examination supplemented by high index of suspicion needed to diagnose this unusual presentation. Patients with anterior shoulder instability and associated coracoid fracture can have good radiological and functional outcomes when choosing the most appropriate treatment.

Schneider MM, Balke M, Koenen P, Bouillon B, Banerjee M. Avulsion fracture of the coracoid process in a patient with chronic anterior shoulder instability treated with the Latarjet procedure: a case report. J Med Case Rep. 2014;8:394.



**Figures 1-3:** Preoperative x-ray and CT indicating coracoid fracture and Hill Sach’s lesion



**Figures 4-7:** Intraoperative picture of the Bristow procedure, postoperative x-ray, and full ROM at 3-month follow up.