

# Late Diagnosis of Locked Posterior Dislocation Of The Shoulder Associated With Lateral Clavicle Fracture

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## Abstract

This case report brings to our attention a rare instance of a missed posterior shoulder dislocation, along with a clavicular fracture on the same side. These dislocations have a high chance of being overlooked on their own and there are no previous reports of such an injury in combination with fracture of the clavicle on the same side. This article seeks to highlight the importance of having a high degree of suspicion and diligent examination of the patient.

## INTRODUCTION

Fractures of the distal clavicle are common injuries. Posterior dislocation of the shoulder is rare and accounts for approximately 2% of dislocations about the shoulder (3). The diagnosis of posterior dislocation of the shoulder is frequently missed (2). We are unaware of any previous reported cases of a combination of these injuries

## PRESENTATION

A 56 year old right hand dominant male had a collision on his mountain bike causing him to fall over the handle bars. He sustained an injury to his right shoulder and attended the Emergency Department.

His presenting complaint was pain around his right shoulder and a swelling over the lateral aspect of his clavicle. He sustained no other injuries and was noted to be distally neurovascularly intact.

An anterior posterior radiograph was performed minimally displaced fracture of the lateral aspect of the right clavicle was diagnosed. The patient was placed in a broad arm sling and referred to fracture clinic follow up.

At the first fracture clinic appointment (1 week post injury) the patient re-examined and radiographs reviewed. The diagnosis of a fracture of the lateral aspect of the right clavicle was confirmed. The patient remained in the broad arm sling and was advised to commence active mobilisation of the elbow and pendular exercises of the shoulder.

The patient was reviewed 4 weeks post injury. At this point

the patient complained of a stiff right shoulder. A repeat anterior posterior radiograph demonstrated callus formation at the clavicle fracture site. The patient was referred to physiotherapy for mobilisation. At 8 weeks post injury, the shoulder stiffness persisted and it was decided to persist with physiotherapy.

At 14 weeks post injury a further fracture clinic review occurred. The patient continued to complain of stiffness in the right shoulder. Examination revealed a loss of extension and abduction restricted to 45 degrees. Repeat radiograph demonstrated a united clavicle fracture and tentative diagnosis of a locked posterior dislocation was made. The patient was referred to the upper limb clinic.

22 weeks post injury; the patient was reviewed in the upper limb clinic. The diagnosis of united clavicle fracture and a locked posterior dislocation was confirmed. An MRI scan revealed an intact rotator cuff. The diagnosis was discussed with the patient and an open reduction and tuberosity transfer operation of the right shoulder performed.

The patient was assessed by means of a Constant score pre-operatively and at 6 and 12 months post-operatively. The Constant score assess pain, activities of daily living, range of movement and power. The maximum possible score is 100. Pre-operatively the patient achieved a score of 26; this had improved to 48 and 64 at 6 and 12 months post-operatively. The patient is currently satisfied and due for review at 24 months post-operation.

## OUTCOME MEASURES

Preoperative and Post operative Constant score.

**Figure 1**

		Pre-Op	6 month	12 month
<b>A</b>	PAIN	7	10	12
<b>B</b>	Handicap when at work	3	4	4
	Handicap when at leisure	0	1	3
	Handicap when sleeping	0	1	1
	Handicap associated with position of hand	6	8	8
<b>C</b>	Flexion	6	6	8
	Abduction	4	6	6
	External Rotation	0	6	6
	Internal Rotation	0	4	6
<b>D</b>	POWER	0	2	10
<b>E</b>	<b>Total</b>	<b>26</b>	<b>48</b>	<b>64</b>

## DISCUSSION

This case represents a rare dual injury, which to our knowledge has not previously been described. A locked posterior dislocation and contra-lateral clavicle fracture has

been reported before (1) but not an injury to the clavicle to the same side as a posterior shoulder dislocation.

Posterior dislocations of the shoulder are commonly associated with fits (1, 5) convulsions or electric shocks. Posterior dislocation can also be caused by a fall on the flexed, abducted arm; a direct blow to the front of the shoulder or a fall on the outstretched hand. A high index of suspicion must be maintained to detect these injuries even in the presence of other injuries.

We feel there are valuable lessons to be learned. Patients should be thoroughly evaluated at each stage of follow up and failure to progress as predicted should bring to mind the possibility of a different diagnosis. Adequate radiographic views must be obtained.

## CORRESPONDENCE TO

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