Published online: 2020-04-24

NUJHS Vol. 4, No.1, March 2014, ISSN 2249-7110
Nitte University Journal of Health Science

Case Report

SIMULTANEOUS BILATERAL ANTERIOR DISLOCATION OF THE SHOULDER WITH FRACTURES OF THE GREATER TUBEROSITY FOLLOWING TRAUMA- A CASE REPORT

Sanath Kumar Shetty[1], Lawrence J. Mathias[2], H. Ravindranath Rai[3], P. Nirmal Babu[4], Raj Sankar N.R.[5], Vinay Kumar C.[6]
[1]Assistant Professor, [2,3]Professors, [4,5,6] P.G. Residents, Department of Orthopaedics, K. S. Hegde Medical Academy, Nitte University, Mangalore, INDIA

Correspondence:
Sanath Kumar Shetty
Assistant Professor, Department of Orthopaedics, K.S. Hegde Medical Academy, Nitte University, Deralakatte, Mangalore- 575018
Mobile : +91 98450 69383, E-mail : sanathkumarshetty@hotmail.com

Abstract:
Simultaneous bilateral shoulder dislocations are usually posterior with anterior dislocations[1] being rare and simultaneous anterior shoulder dislocations with fractures of the greater tuberosity[5] being even more rare usually associated with trauma or seizures[2,3]. Here we present a rare case of simultaneous bilateral anterior dislocation of the shoulder with fractures of the greater tuberosity following an unusual injury mechanism which was treated surgically.

Keywords: Bilateral, anterior dislocation, shoulder, fracture, greater tuberosity.

Introduction:

Simultaneous bilateral anterior shoulder dislocation with fractures of the greater tuberosity are rare and are seen in middle aged patients and may be associated with neuro - vascular injuries[2]. Bilateral fractures of the greater tuberosity[4,5] may also result from an impaction injury also called as a shear injury.

Case report:

A 36 year old fisherman presented to our casualty 13 days after a road traffic accident with pain and restriction of movements in both the shoulders. 13 days back he was travelling in the back of a truck holding on to an overhead rod with both his hands when he was violently thrown forwards following a road traffic accident. He was taken to a local hospital where he was diagnosed to have sustained bilateral anterior shoulder dislocation. Both the dislocated shoulders were reduced and both the shoulders were immobilised in cuff and collar sling. He did not sustain head injury nor did he sustain any seizures.

Access this article online
Quick Response Code

On examination there was swelling over both shoulders with tenderness over both greater tuberosities. There were no external injuries. Bilaterally there was gross restriction of movements with 0-40^0 of abduction and flexion, 0-60^0 of internal rotation and 0-20^0 of external rotation. There were no peripheral motor, sensory and vascular deficits on both sides. Radiographic examination revealed bilateral avulsion fractures of the greater tuberosities with both well reduced shoulders. Both the greater tuberosity fragments were displaced, with 6mm displacement on the right side and 8mm on the left side.

The next day both the greater tuberosity avulsion fractures were treated with open reduction and internal fixation with 4 mm cannulated cancellous screws under general anaesthesia. During surgery communition of the greater tuberosity fragments on both sides was noticed. Both the shoulders were immobilised in cuff and collar sling and he was discharged on the third day post operative. After 10 days he was reviewed, both the surgical wounds had healed and the sutures were removed. Pendulum exercises with gentle active assisted movements were started with gradual progression of the range of movements.

He was reviewed at 4th week, both the surgical wounds had

healed well. Radiographs showed that both the fractures were healing. The shoulder movements were

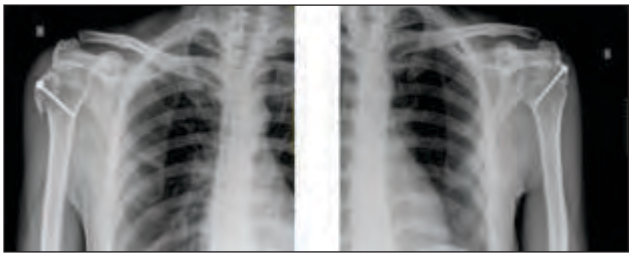
	Right side	Left side
Abduction	0-30^0	0-30^0
Flexion	0-40^0	0-20^0
Extension	0-20^0	0-10^0
Internal rotation	0-20^0	0-20^0

He was treated with active and active assisted mobilisation of both shoulders.He was reviewed again at 36 weeks post operative period. He had no complaints except for slight restriction of movements of both shoulders and he was able to carry out all his daily activities. On clinical examination the movements had improved to 0-110^0 of abduction, 0-90^0 of flexion, 0-70^0 of internal rotation and 0-45^0 of external rotation on both sides.

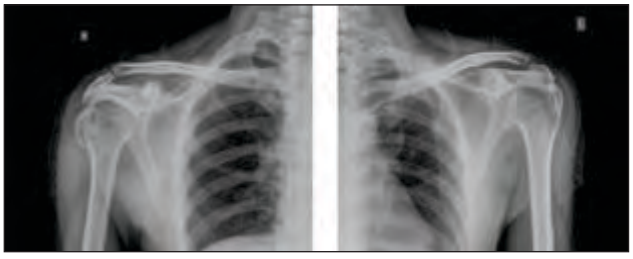
Radiographs showed that the fractures had healed on both the sides with slight mal union more on the left side with the screws in situ. Both the screws were removed under general anaesthesia. The sutures were removed on the ninth post operative day after both the surgical wounds had healed. He was discharged with advice to continue shoulder mobilisation exercises.

Discussion:

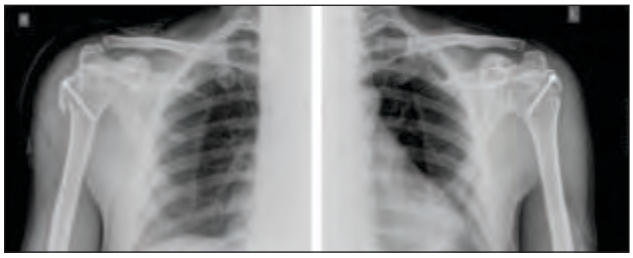
Simultaneous shoulder dislocations are rare entities and



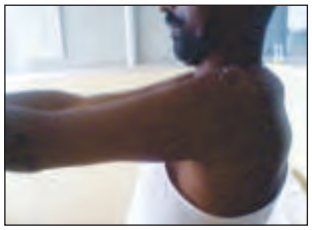
Greater tuberosity fractures with cancellous screws in situ



Healed fractures of the greater tuberosities



Healing fractures of the greater tuberosities with cancellous screws in situ



Flexion

Internal rotation

are usually posterior[6,7] with anterior dislocation being even more rare. Those with bilateral greater tuberosity fractures are still more rare with very few cases reported. These fractures are typically communited and associated with rotator cuff tear.

Our patient had communition of the fragments bilaterally with displacement of the fragments; 6mm on the right side and 8mm on the left side. There was no rotator cuff tear.

There is a current trend toward operative treatment when the greater tuberosity is displaced more than 5mm or those with associated rotator cuff or labral tears. Stiffness of the shoulder may be the result of secondary adhesive capsulitis or by persistent fracture displacement. Early shoulder mobilisation is critical to successful surgical treatment.

References:

1. Dinopoulos H T, Giannoudis P V, Smith R M, Mathews S J. Bilateral anterior shoulder fracture- dislocation. A case report and a review of the literature. Int Orthop 1999; 23: 128-30.
2. C Y Lin, S J Chen, C T Yu and I L Chang. Simultaneous bilateral anterior fracture dislocation of the shoulder with neurovascular injury: report of a case. Int Surg, 2007 92:
3. Aufranc O E, Jones W N, Turner R H. Bilateral shoulder fracture-dislocations. JAMA. 1966 Mar 28; 195(13); 1140-3.
4. Cottias P, le Bellec Y, Jeanrot C, Imbert P, Huten D, Masmejean E H. Fractured coracoid with anterior shoulder dislocation and greater tuberosity fracture-report of a bilateral case. Acta Orthop Scand.2000 Feb; 71(1): 95-7.
5. Chun J M, Groh G I, Rockwood C Jr. Two-part fractures of the proximal humerus. J Shoulder Elbow Surg 1994; 3: 273-87.
6. Brown R J. Bilateral dislocation of the shoulder. Injury 1984; 15: 267-73.
7. George Michael S. Fractures of the greater tuberosity of the humerus. J Am Acad Orthop Surg 2007; 15; 607-613.

Keywords : Bilateral, anterior dislocation, shoulder, fracture, greater tuberosity. - Sanath Kumar Shetty