



ISSN (P): 2521-3466
ISSN (E): 2521-3474
© Clinical Orthopaedics
www.orthoresearchjournal.com
2018; 2(3): 15-16
Received: 01-05-2018
Accepted: 02-06-2018

Dr. Raghavendra
MS Senior Resident,
Department of Orthopaedics,
CIMS, Chamarajanagar,
Karnataka, India

Study of effectiveness of coracoclavicular screw fixation in management of acromioclavicular joint dislocations

Dr. Raghavendra

Abstract

Back Ground & Objectives: Operative management of acromioclavicular joint dislocations can be with plate or with coracoclavicular screw fixation. As the coracoclavicular screw fixation can be done without opening acromioclavicular joint, they preserve the acromioclavicular joint ligaments, providing early healing and low infection rates. It achieves sufficient stability providing early mobilization of the neighboring joints.

In this study we have tried to analyze the outcome in terms of time for healing, functional results and complications of acromioclavicular joint dislocations managed with coracoclavicular screw fixation.

Methods: 20 adult patients with acromioclavicular joint dislocations were treated with coracoclavicular screw fixation. Under brachial plexus block all the dislocations were fixed using a vertical incision at lateral 1/3rd of clavicle under image intensifier assistance using a 4 mm cannulated cancellous screw across clavicle and coracoid. There were 15 males and 5 females with an average age of 35.75 years (21-60 years). All the patients were followed over a period of 2 years and results were analyzed.

Results: 17 (85%) dislocations healed within an average time of 8 weeks, in 3 (15%) dislocations screw back out occurred. Functional results were excellent in 16 (80%), moderate in 4 (20%) due to shoulder stiffness.

Conclusion: Coracoclavicular screw fixation offers a safe and reliable method of fixing acromioclavicular joint dislocations, with early healing. It provides early rehabilitation and reduces the hospital stay.

Keywords: Coracoclavicular screw fixation, management, acromioclavicular joint dislocations

Introduction

Acromioclavicular joint is one of the commonly injured joints of upper limb. It is mainly stabilised by acromioclavicular ligaments. When there is an injury to this joint occurs due to fall on outstretched hand or due to direct blow to shoulder or due to violent pulling of upper limb, the ligaments are injured and this leads to subluxation or dislocation of joint depending on the number of ligaments injured. Combined injury to acromioclavicular and coracoclavicular ligaments leads to gross displacement of clavicle leading to visible deformity, pain and reduced shoulder movements. Operative management of acromioclavicular joint dislocations can be with plate or with coracoclavicular screw fixation. The later method uses smaller incision and less postop morbidity. Hence we did this study to observe the effectiveness of coracoclavicular screw fixation in management of acromioclavicular joint dislocations

Aims of Study

1. To study effectiveness of coracoclavicular screw fixation in management of acromioclavicular joint dislocations
2. To study the functional outcome of the shoulder movements

Materials and methods

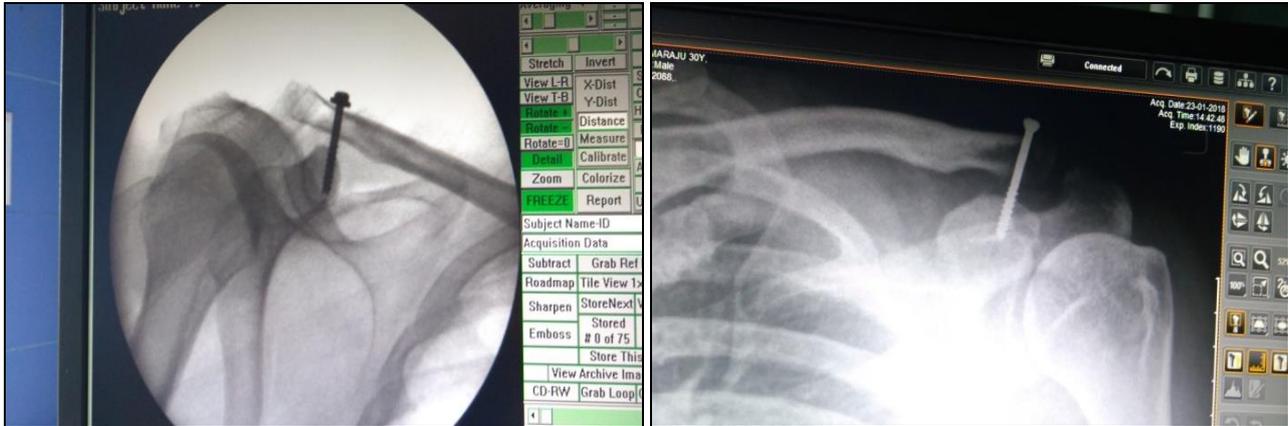
20 adult patients with acromioclavicular joint dislocations were selected. Under brachial plexus block patients were put in supine position and surgical site painted and draped, a vertical incision at lateral 1/3rd of clavicle was used. Deeper dissection done to visualize superior surface of clavicle. All the dislocations were fixed under image intensifier assistance using a 4mm cannulated cancellous screw across clavicle and coracoids.

Correspondence
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MS Senior Resident,
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A washer was used to prevent undue stress. All patients were immobilized for one week post operatively with sling and later gradual mobilization started. Shoulder function and stability of fixation assessed at monthly intervals for 6 months and then at 6monthly interval for 2 years

Results

1. **Age:** average age of patients was 35.75 years (21-60 years).
2. **Sex distribution:** There were 15 males and 5 females
3. Average time of healing: 8 weeks
4. **Shoulder function:** excellent in 16 (80%), moderate in 4 (20%) due to shoulder stiffness.
5. **Complications:** screw back out occurred in 3cases,1 case of post op infection



Post op radiographs

Conclusion

1. Coracoclavicular screw fixation is a reliable method of fixing acromioclavicular joint dislocations
2. it gives good shoulder function

Drawbacks of study

1. Only observational study
2. Sample size is less

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