



Recent Trends in Mangement of Acromio-clavicular Joint Injuries

Essay

*submitted in partial fulfillment for Master degree of
Orthopaedic surgery*

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2015



الطرق الحديثه في علاج اصابات مفصل الأخزمي الترقوي

رسالة

توطئة للحصول على درجة الماجستير لجراحه العظام

مقدمة من

الطبيب / مصطفى سمير حافظ

بكالوريوس الطب والجراحة

جامعة عين شمس 2010

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2015

Acknowledgement

First, I Thank **Allah**, The Beneficent and the Merciful. Then I would like to give a lot of thanks to **Department of Orthopaedic Surgery** in **Ain shams university** for their cooperation with me .

I would like to direct great and special thanks to **Prof. Dr. Mahmoud Mohamed fayed**, Professor of Orthopaedic surgery, Faculty of medicine, Ain Shams University, whom I am greatly indebted for his great support and encouragement he gave me throughout this work. It's my pleasure to work under his supervision.

I would like to thank **Dr. Mohamed Mokhtar Abdullah**, Lecturer of Orthopaedic surgery, Faculty of medicine, Ain Shams university, for taking a lot of his time to guide and review my work , trying to make it as complete and comprehensive as possible .

Last but not least, I would also like to thank **Prof. Dr. Rashed Emam, Prof. Dr. Maged Sami** and my family for their cooperation and help.

CONTENTS

	Page
List of Figures	I
List of Tables.....	VI
List of Abbreviation	VII
Introduction	1
REVIEW OF LITERATURE	
Anatomy and biomechanics	6
Classification and mechanism of injury.....	16
Management	
Diagnosis.....	27
Treatment.....	56
SUMMARY	107
REFERENCES	112
ARABIC SUMMARY	-

LIST OF FIGURES

Fig. No.	Title	Page
1.	Anterior view of the normal shoulder	6
2.	AC inclination	8
3.	Anterior view Shows the acromioclavicular joint and its 5 supporting ligamentous structures	10
4.	Lateral view of coracoacromial ligament and deltoid fascia attachment on anterior acromion	13
5.	Acromioclavicular joint injuries are the result of a fall on the superior aspect of the shoulder	17
6.	Rockwood's Classification of acromioclavicular joint injuries	20
7.	Normal anatomy unchanged with type I injury	20
8.	Rockwood Type II injury with rupture of the AC ligament	21
9.	Rockwood Type III injury with rupture of the AC and coracoclavicular ligaments	23
10.	Rockwood Type IV injury with posterior displacement of the distal clavicle	24
11.	Rockwood Type V injury with superior displacement of the distal clavicle	25
12.	Rockwood Type VI injury with inferior displacement of the distal clavicle	25
13.	The cross-over adduction test	28
14.	Type III Injury. The shoulder complex is depressed when compared with the normal shoulder	30

Fig. No.	Title	Page
15.	Type V Injury	31
16.	Axillary view	33
17.	The axillary lateral view x-ray	33
18.	Axillary radiograph shows posterior displacement of the distal clavicle (type IV injury)	34
19.	Positioning of the patient for the Velpeau axillary lateral x-ray.	34
20.	The Zanca view of the AC joint.	36
21.	Non-weight-bearing vs. weight-bearing view.	37
22.	Imaging of the AC joint.	38
23.	Cross arm adduction view	39
24.	MRI anatomy of the AC joint.	41
25.	Anteroposterior (AP) view of a grade 1 separation.	43
26.	MRI of the left shoulder in a patient with a grade I AC separation.	44
27.	AP view of a grade 2 separation.	45
28.	Type II acromioclavicular joint injury.	45
29.	AP view of a grade 3 separation.	47
30.	MRI Type III acromioclavicular joint injury.	48

Fig. No.	Title	Page
31.	MRI Type III acromioclavicular joint injury.	48
32.	MRI Type III acromioclavicular joint injury.	49
33.	Grade 4 separation. Axillary view of the left AC joint.	50
34.	MRI Type IV acromioclavicular joint injury.	50
35.	MRI Type IV acromioclavicular joint injury.	51
36.	Floating clavicle.	52
37.	AP view of a grade 5 separation.	54
38.	MRI Type V acromioclavicular joint injury.	54
39.	MRI Type V acromioclavicular joint injury.	55
40.	MRI Type V acromioclavicular joint injury.	55
41.	MRI Type V acromioclavicular joint injury.	56
42.	Postoperative radiograph showing well reduction of acromioclavicular joint with Kirschner wire fixation	67
43.	Radiograph demonstrates migration into the spinal canal of a Steinman pin used in treatment of an acromioclavicular separation.	67
44.	Radiograph shows a chronic acromioclavicular joint dislocation augmented with a temporary hook-plate.	68
45.	Hook-plate.	68
46.	Surgical Technique of the use of hook plates	69

Fig. No.	Title	Page
	(Incision)	
47.	Surgical Technique of the use of hook plates (Insertion)	70
48.	Surgical Technique of the use of hook plates (Fixation)	71
49.	A modified Weaver-Dunn procedure is shown with transfer of the coracoacromial ligament augmented with tendon grafts, suture anchors, coracoclavicular screws, or sutures loops	72
50.	AP view of the left shoulder following hook plate and screw fixation repair of an AC separation. A modified Weaver–Dunn procedure was also performed in conjunction with the hook plate repair.	72
51.	Intraoperative radiograph of modified weaver dunn.	73
52.	Modified Weaver–Dunn procedure	75-76
53.	Coracoclavicular fixation using acoracoclavicular screw	77
54.	Treatment of acromioclavicular separations is shown with Arthrex tight rope devices	78
55.	The Twin Tail TightRope	79
56.	Type IV acute AC separation two weeks post injury	79
57.	Twin TailTightRope	79
58.	Acromioclavicular reconstruction is using a tendon graft	80

Fig. No.	Title	Page
59.	Acromioclavicular reconstruction that uses a hamstring graft and interference screws that recreates the superior acromioclavicular ligament and capsule as well as the coracoclavicular ligaments.	81
60.	Modified Dewar procedure illustrating the tip of the coracoid process fixed by a screw.	83
61.	Anteroposterior radiographs showing an acromioclavicular joint dislocation preoperatively and its treatment using the modified Dewar procedure.	83
62.	Technique of Arthroscopic Stabilization of Acromioclavicular Joint Dislocation using the AC GraftRope System.	86-90
63.	Dog Bone Button Technology.	91-93
64.	Type III AC joint injury. MR image shows fracture of coracoid process.	95
65.	Radiograph shows coracoclavicular ligamentous ossification from previous acromioclavicular dislocation.	100
66.	MRI shows ossification of trapezoid and conoid ligaments due to previous acromioclavicular joint injury.	101
67.	Osteolysis of the distal clavicle.	106

LIST OF TABLES

Table. No.	Title	Page
(1)	Treatment for AC separations by grade	62
(2)	Biomechanical comparison of different repair techniques of AC joint	107

LIST OF ABBREVIATION

AC	Acromioclavicular
CC	Coracoclavicular
CA	Coracoacromial
AP	Antero-posterior

INTRODUCTION

The acromioclavicular (AC) joint is a diarthrodial joint formed by the distal clavicle and the medial facet of the acromion. Traumatic injuries of the acromioclavicular joint frequently occur in persons participating in contact and collision sports such as football, weightlifting or those suffering a fall into the shoulder. Several ligaments stabilize the clavicle to the scapula. The anterior, posterior, inferior and superior acromioclavicular ligaments stabilize the clavicle to the acromion with the superior ligament being most important. The coracoclavicular ligaments, the conoid and trapezoid are strong ligaments which stabilize the clavicle to the coracoid process of the scapula.¹ Acromioclavicular joint dislocations represent 12% of all dislocations of the shoulder girdle and 8% of all joint dislocations in the body.²

Separations are divided into 6 types, and treatment is decided upon the basis of the type of separation. A type I separation is a sprain of the acromioclavicular ligaments with no subluxation of the clavicle, and a type II is a partial superior subluxation of the clavicle with a sprain of the coracoclavicular ligaments. These 2 types are treated nonoperatively. Type III separations involve 100% displacement of the clavicle with complete tears of the coracoclavicular ligaments. These separations are subdivided into acute and chronic. Most surgeons agree that acute tears and asymptomatic chronic tears do not require surgical intervention. Symptomatic chronic type III separations do require surgery to stabilize the clavicle. In a type

IV separation, the clavicle is posteriorly subluxed. Type V is a 200% to 300% superiorly subluxed clavicle in which the deltotrapezial fascia is torn. Type VI is an inferiorly subluxed clavicle in which the clavicle is locked under the coracoid process. Types IV-VI are treated surgically in an acute setting .³ When acromioclavicular joint injury is suspected the patient should be examined whenever possible in the standing or sitting position .⁴ Good quality radiographs of the acromioclavicular joint require one-third to one-half the x-ray penetration required for the denser glenohumeral joint.⁵

Several operations have been reported to stabilize the clavicle. The most commonly used procedure is the modified Weaver-Dunn. The end of the clavicle is excised and the coracoacromial ligament is released from the undersurface of the acromion. Sutures are sewn into the ligament, and the ligament is then secured into the end of the clavicle, where the sutures are tied over a bone bridge. This operation has yielded satisfactory results, but several methods of augmentation have been used to strengthen the construct. These have included cerclage wires, suture anchors, screws, synthetic grafts, and, more recently, allograft tendons. Recently, there has been renewed interest in reconstruction of the acromioclavicular joint separations. Several biomechanical studies have been performed to evaluate the load that triggers the failure of native ligaments and to compare different repair techniques. The new attention is the anatomic reconstruction of the coracoclavicular ligaments using tendon grafts. These grafts are looped around the coracoid process and then are placed through or

around the clavicle, and are secured by either suturing the graft to itself or by interference screws.⁶

Currently, a wide range of procedures aiming at a permanent reduction of AC joint dislocations exists. However, non of these has been shown to be the overall gold standard. Open and arthroscopically assisted procedures are currently known.⁷

Procedures are separated into open and arthroscopically assisted procedures. Representative for each, an anatomic and non-anatomic technique are described. General consensus exists that a diagnostic glenohumeral arthroscopy should be performed previous to either arthroscopic or open reconstruction techniques to address possible concomitant intra-articular lesions.⁸

Aim of the study

The aim of this study is to give a review about causes of acromioclavicular joint injuries and its different types and discussing the recent methods of their management.