

CASE REPORT

Surgical reconstruction of acromioclavicular joint dislocation (Rockwood Type III)

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Introduction: The management of acute acromioclavicular joint (ACJ) injuries especially of type III is still controversial. **Methods:** In this study the results of ACJ reconstructions using modified weaver Dunn procedure along with post-operative physiotherapy was analysed. Overall, the patient was evaluated clinically and radiographically over the course of 3 months (range). The patient underwent a modified Weaver Dunn method with additional coracoacromial ligament transposition and resection of distal clavicle. (Coracoacromial ligament release from acromion and attached at distal clavicle. **Results:** In terms of the degree of ACJ-reduction, the number of complications, and patient satisfaction, a comparison of the overall findings demonstrated a much better surgical management outcome. **Conclusion:** Our findings show that surgical reconstruction of type III ACJ injuries avoids the poor clinical outcomes in contrast with non-surgical methods.

KEY WORDS: Acromioclavicular dislocation, modified Weaver-Dunn, Rockwood III

INTRODUCTION

Rockwood classified acromioclavicular joint (ACJ) dislocations into grades I to VI based on the direction and amount of clavicular displacement. Grade I and II lesions are generally thought to be benign and can be treated conservatively.^[1] There is also widespread agreement that class IV to VI injuries should be operated on. Nonetheless, the discussion over whether to treat type III ACJ injuries with conservative or surgical treatment is still ongoing. The incidence of complications varies depending on the desired surgical treatment for type III injuries, and can sometimes result in a loss of shoulder function. In contrast to

that a conservative management may result in an excellent and painless shoulder function. However, failures after conservative treatment, still suffering from chronic instability and pain, may require surgical repair because of an inferior clinical outcome.^[1]

CASE REPORT

A 28 year old male patient presented in outpatient department with complain of inability to lift heavy objects and pain on/off in left shoulder joint with history of trauma to left shoulder due to fall from bike 1 month back. Patient was then managed outside conservatively with arm pouch sling and oral medications including anti-inflammatory, analgesics but not relieved and presented in RMCH for further management. On physical examination deformity was present at acromioclavicular (AC) junction and range of motion was normal at shoulder joint. Patient's blood investigations were within normal limits, on radiological X-rays suggestive of Rockwood type 3 AC post dislocation Figure 2a and hence planned for surgical reduction

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as Open reduction and internal fixation with modified Weaver Dunn technique with distal clavicle resection of 8 mm Figure 1 and post op X-ray Figure 2b and physiotherapy was required. Expected outcome was deformity correction, reduction of AC disruption and strengthening of the shoulder joint. After 3 months of follow up it was observed that patient started lifting weight with less effort and pain as earlier and is further improving and strengthening the shoulder joint.

DISCUSSION

The optimum treatment for acute AC dislocation is still a point of contention. The best outcome may only be achieved if the AC joint is repaired anatomically as accurately as possible, according to proponents of operational treatment. This is because, following conservative treatment, the remaining dislocation may cause prolonged discomfort.^[2-4] These concerns are countered

by the good results that have been recorded in recent years after conservative treatment.^[5-7] These authors noted that, while conservative treatment can yield equivalent results, it does not expose the patient to the hazards associated with surgery. In their meta-analysis of the matter, Phillips *et al.*^[8] eventually advocated against surgical treatment. The absence of utilization of the Rockwood classification of AC joint injuries in terms of selective criteria is a key shortcoming in the ongoing topic of AC dislocation treatment.^[5-9] Even if all of the injuries in issue are classed as Tossy type III, the informative value of the results of a study on this topic is significantly reduced if several types of Rockwood injuries are included in the comparative study groups. As a result, we focused solely on Rockwood type III injuries. Although it is possible to evaluate different surgical approaches, it should be noted that when using meta-analysis to compare surgical treatment to conservative treatment, conclusions must be stated with caution. The stated results, the concept, the benefits, and the downsides of various

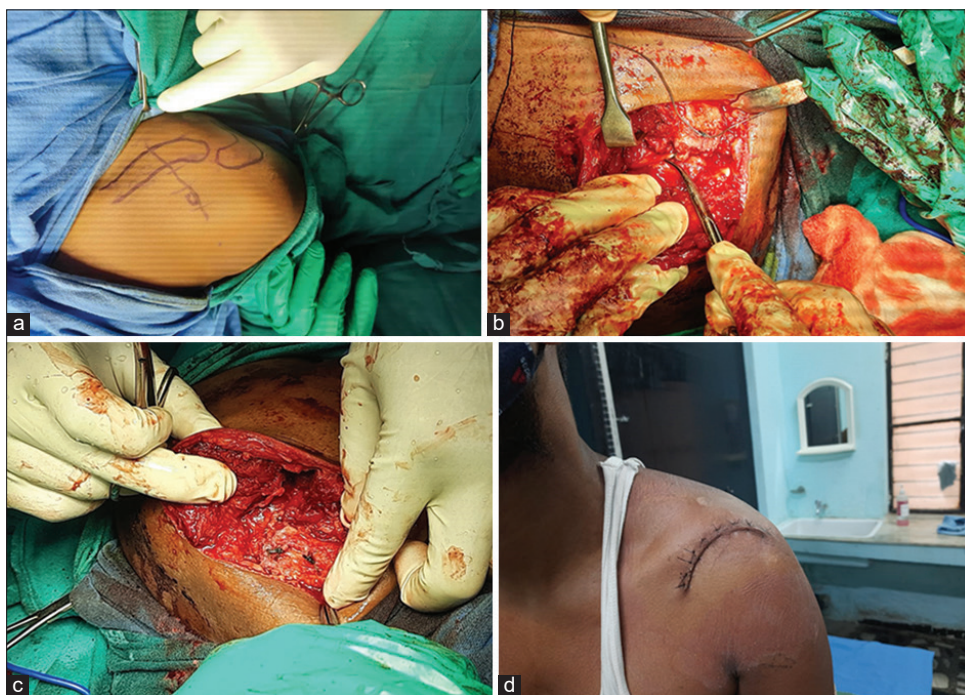


Figure 1: Intraoperative images (a-c) and postoperative stitch line (d)



Figure 2: Pre-operative X-ray AP view (a) and Post-operative X-ray AP view (b)

surgical methods differ significantly. As a result, things should not be thrown together at random. The need for a second procedure to remove the implant may be considered a disadvantage when compared to surgical techniques using polydioxanone bands for augmentation and reduction. The formation of stiff scar tissue is required for the healing of injured coracoclavicular ligaments. Because this is the most important aspect, a lack of mechanical stability in the coracoclavicular ligaments will result in long-term discomfort, regardless of treatment. Although it is known from the literature that a complete anatomic reduction is not required for restoring normal shoulder function, the degree of displacement in type III ACJ dislocations does not appear to have a significant impact on the end outcome.

CONCLUSION

To manage Rockwood type III ACJ dislocation, Modified weaver Dunn procedure accompanied with physiotherapy is a good option.

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