

Symptomatic Non-Union Distal Clavicle Fracture Treated With Clavicle Hook Plate

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INTRODUCTION:

Clavicle fractures often viewed as benign entity with high rate of healing and excellent functional outcome. Non-union rate has been reported 0.1-15% of all cases and could exhibit significant disability such as pain, altered shoulder mechanics and neurovascular compromise. Therefore, surgical intervention is necessary and current surgical procedures often result in frustrating functional outcome and increased rates of revision surgery.

CASE REPORT:

52-year-old housewife presented with complain of right shoulder pain for 4 months following road traffic accident. She sustained right distal clavicle fracture which was treated conservatively. Physical examination revealed bony prominence at the lateral end of right clavicle. Plain radiograph of right shoulder shows non-union distal clavicle. She underwent open reduction, hook plating right distal clavicle with autologous bone graft. Post operatively, arm sling is continued for 6 weeks and passive shoulder exercise started on day one

DISCUSSIONS:

Symptomatic non-union is rare but it may pose a difficult problem causing pain and functional impairment. Hence, this is considered as operative indication.

Historically, resection of lateral clavicle fragment was popular as a salvage surgery, but poor results had been reported. Martetschläger et al preferred compression plating in treating non-union with supplemental bone grafting. Der Tavitian et al had two patients with distal third clavicle fracture non-union treated with reconstruction plate across acromioclavicular joint with screw to coracoid process but the implant failed at acromioclavicular joint.

Up to date there is no literature regarding the usage of hook plate in treatment of distal clavicle fracture non-union. With limited number of literatures regarding distal third

clavicle fracture non-union, surgical making decision is to be made according to individual. Further study is required in determining fixation technique and implant of choice in treating distal clavicle fracture non-union with the best possible outcome.



Figure 1: Plain AP radiograph of right shoulder

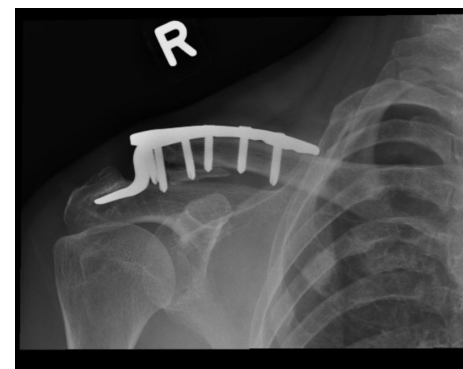


Figure 2: Post-operative x-ray

REFERENCES:

- Der Tavitian, J., Davison, & Dias, J. J. (2002). Clavicular fracture non-union surgical outcome and complications. *Injury*, 33(2), 135-143.
- Martetschläger, F., Gaskill, & Millett (2013). Management of clavicle nonunion and malunion. *Journal of shoulder and elbow surgery*, 22(6), 862-868.