

# CASE REPORT OF SINGLE PLATING CLAVICLE FAILURE TREATED WITH DUAL PLATING TECHNIQUE

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## INTRODUCTION:

Clavicle fracture being most common fracture in adult fracture is traditionally treated conservatively. However recent studies shows benefit in fixation of clavicle fracture in term of union rate, malunion rate and appearance dissatisfaction rate.

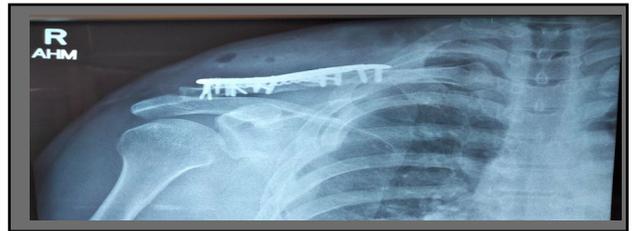
## REPORT:

Patient presented in this case report is a 44 year old male who is an active smoker and presented to us with close fracture of right midshaft clavicle. He was treated conservatively initially. Due to displacement of fracture he later proceed with surgical intervention of single clavicle plate. However 3 month post operation, patient sustained complication of implant failure and was reoperated with dual plating. Bony union is achieved after 1 month later.

A study by Suter et al. investigated the stability of dual plating at the lateral portion of the clavicle. Clavicle fracture was simulated on synthetic bone and treated either with one standard 2.7mm/ 3.5mm locking plate or with two 2.0mm locking plates. Noted the dual plating technique, a significantly higher maximum failure load along with lower stiffness of the construct was found. Especially at the medial and lateral parts of the clavicle, only limited points for plate fixation may be available. Besides these proven biomechanical advantages, dual plating offers the surgeon more choices when performing the procedure, especially in revision cases and in treatment of nonunion

**Figure 1: implant failure**

**Figure 2: replating with double plate**



## CONCLUSION:

Surgical implant options and techniques are continuously evolving. For optimal management of patient surgeons are required to keep up to date on current management of particular fracture or non-unions. Based on literature dual plating of acute midshaft clavicle fracture may lead to lower risk of reoperation but further well-designed randomized trials are needed to further investigate the findings.

## REFERENCES:

1. Suter C, Majewski M, Nowakowski AM. Comparison of 2 plating techniques for lateral clavicle fractures, using a new standardized biomechanical testing setup. J Appl Biomater Funct Mater 2018; 16: 107–112.