

## A Novel Approach Towards Malunion Of Clavicle Fracture

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### INTRODUCTION:

Malunion of clavicle is seen in two-thirds of all clavicle fractures when being treated conservatively. Shoulder ailment, pain and aesthetic issues can arise if malunion is severe. Surgical intervention is eventually needed to overcome these problems.

### REPORT:

21 years old Malay soldier with no known medical illness had an alleged MVA and sustained closed comminuted fracture of midshaft of right clavicle. Initially patient opted for conservative treatment but subsequently after 7 months post trauma he decided for operation as he experienced reduced strength and inability to achieve full function of his right shoulder.

On assessment, the right clavicular region was deformed with bony prominent, fracture site not mobile and non-tender, neurovascular was intact and reduction in abduction. Imaging's (x-ray, ct scan) done showed malunion midclavicular with shortening.

Osteoclasis and plating of right clavicle was planned. Surgery was done with the patient in supine position. Incision made by layers via anterior approach. The malunion is identified and line of osteotomy is marked perpendicularly to the deformity. Osteotomy done and clavicle is lengthened via translation and hold with a hintermann distractor. A wedge is made on the medial aspect of clavicle to reduce the bone prominence. Fixation was done using a superior clavicle plate with lateral

extension. Any void in the bone is filled with the removed bone from the wedge as graft.

The wound was completely healed at 2 weeks. He was put on arm sling for 1 month. Motion exercise commenced after 1 month. Patient reported satisfaction with the deformity correction and shoulder function at 6 months post-surgery. He has returned to active duty after 8 months.



Figure 1: X-ray showing pre and post fixation of clavicle



Figure 2: Osteotomy site with wedge, and lengthening done via translation

### CONCLUSION:

Malunion of the clavicle shouldn't be considered a taboo in our practice. A simple osteotomy can just be the cure to this problem. It is a safe and reproducible approach for malunited clavicle.

### REFERENCE:

12. McKee MD, Wild LM, Schemitsch EH. Midshaft malunions of the clavicle. *Surgical technique. J Bone Joint Surg Am* 2004; 86(Supp 1): 37-43.