

Tension Band Wiring (TBW) Of Distal End Clavicle : A Forgotten Technique : Simpler, Cheaper And Better

Zulfahrizzat S; Othman S; Ahmad AR

Orthopaedic Department, Hospital Tuanku Ja'afar, Negeri Sembilan

INTRODUCTION:

Clavicle fracture is a common injury, and can be classified into middle third, medial third, and distal third fractures. Only 10-15% of clavicle fracture occur in the distal third segment. Neer classified the distal clavicle fracture into five types ; type II and V are unstable and requiring fixation . Various common methods of stabilizations are introduced such as K-wiring , tension band fixation , plate fixation, osteosynthesis with hook plate and coracoclavicular srew however all those operative methods have their own advantages and disadvantages.

REPORT :

We presented a case of 21 years old male with left shoulder pain after motor vehicle accident . Examination revealed tenderness on his left shoulder , and radiograph showed fracture of distal end left clavicle Neer type II , requiring fixation . He was counselled for lateral extension clavicle locking plate but unable to pay due to financial constraint. The patient underwent open reduction and internal fixation using Kirschner wire with tension band fixation . The fracture was reduced and fixed with two 1.4 mm trans-acromial Kirschner wires then TBW is applied using stainless steel wire size 1.0. Sling immobilization is used for 2 weeks. Unrestricted tolerable shoulder motion is permitted. Stretched and exertional exercise is allowed after radiography shows osseous union and the implants are removed.

TBW is widely employed to treat limb fractures but seldomly used for distal clavicle. The advantages of TBW are higher antirotation and antibending force compared with that in K-wire fixation and lower profile compared with

the bone plate, which reduces tendon irritation and prominent implant.

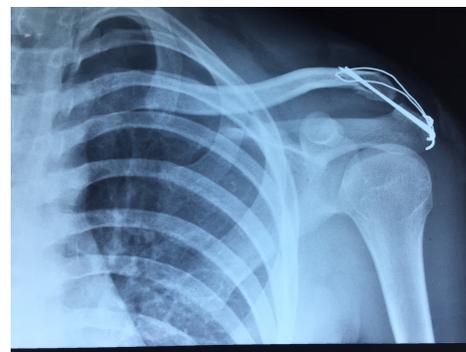


Figure 1: Xray day 1 post trauma

Figure 2: Xray post TBW fixation

CONCLUSION:

Surgical management is recommended for unstable distal clavicle fracture. TBW can be preferred because of the simplicity of the procedure, low cost, simple hardware, high union rate and easy availability of the implant.

REFERENCES:

1. Apoorva VD (2017) : Outcomes of fractures of lateral end of clavicle using different modalities of management ; Indian Journal of Orthopaedics Surgery 2017;3(1):54-58