

Corrective Osteotomy Of Metacarpal Rotational Deformity Under WALANT

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INTRODUCTION:

Rotational deformity happens in fingers due to incorrectly united phalanx and metacarpal fractures, especially spiral and obliques fracture which may result in the scissoring finding of the fingers, pain and stiffness due to joint line rotation, impaired soft tissue balance, and reduced grip strength. It is necessary to correct the functional and aesthetic problems caused by the deformity with surgical treatment.

REPORT:

The patient was a 35 years old gentleman, alleged sport injury sustained closed fracture neck of metacarpal bone (MCB) of left index finger. Patient done mini-plating with K-wire of the MCB. Check x-ray post operative reviewed and it was acceptable. Post-operatively patient underwent aggressive physiotherapy for hand function exercise. Two months post operatively, patient complaint of ulna deviation of left index finger upon full flexion. X-ray of metacarpal bone shown malunion MCB of left index finger.

Subsequently, patient underwent second operation for removal of previous implant with corrective osteotomy and replating of left MCB of index finger and replating using rotational correctional plate under WALANT.

The plate was applied to the bone from dorsal side of the MCB. A transverse osteotomy was performed perpendicular to the bone. The plate was fixed to the proximal fragment. The distal fragment was sufficiently rotated, the longitudinal line was checked. Under WALANT, correction of the deformity was checked by asking the patient to flex and extend the affected fingers. Sufficient improvement was achieved with only a minor rotation.



Table 1: Pre-operative



Table 2: Post-operative

CONCLUSION:

We believe corrective osteotomy of metacarpal rotational deformity under WALANT is effective and feasible in the treatment of metacarpal malunions with finger rotational deformities, given their ease of use, with possibility of actively testing joint range of motion and fracture stability intra-operatively.

REFERENCES:

1. Adiyeye L, Kibar B. In situ transverse osteotomy and locked mini plate for the correction of metacarpal rotational deformity. Eur Res J 2022;8(4):428-433. DOI: 10.18621/eurj.879908