CLOSED WEDGE OSTEOTOMY FOR TREATMENT OF POST TRAUMATIC EQUINUS DEFORMITY

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INTRODUCTION:

The closed wedge osteotomy has been used as a technique to correct ankle deformity. The indications for its use include clubfoot deformity, growth disturbance, pyseal injury and traumatic ankle deformity. The aims of this correction are to improve pain and to correct deformity.

REPORT:

We performed a closed wedge osteotomy (figure 1) to correct a post traumatic equinus deformity of the ankle. The ankle fixed in plantar flexion of 40 degree with concomitant pain, tip toe-ing ambulation and radiographic evidence of talus fused in equinus position. This is the third procedure for the patient, after the first and second one; External fixation and K-wire of ankle joint then fusion of right ankle talonavicular and calcaneocuboid joint. The osteotomy was stabilized by 3 half threaded screw sized 65mm x2 and 60mm x1, diameter of 7.3mm. Closed wedge has been chosen due to its best option to correct equinus deformity.

We shoot multiple views of ankle joint xray(s) to calculate its degree and whether to decide on Open vs Closed wedge osteotomy. Then the stabilization device was chosen which are 3 half threaded screws. Next step is to determine the The Center of rotation of angulation (CORA) (figure 2). CORA is located at the intersection of two lines which are the tibial anatomical axis and distal tibial articular surface. Closed wedge osteotomy at the level of the CORA would lead to complete realignment of the foot and ankle.

The outcome of the correction is to achieve 3 degree of dorsiflexion, 3 degree of external rotation and 3 degree of eversion of ankle joint.

FIGURE 1: CLOSE WEDGE OSTEOTOMY

FIGURE 1: Identifying CORA

CONCLUSION:

Closed wedge osteotomy is one of few techniques to correct ankle deformity especially in young adult. It is technically require a proper pre-operative preparation and understanding depend on patient condition. After all, it can improve patient quality of life now and in future.

REFERENCES:

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