

## Bone Lengthening With Illizarov External Fixator System In Chronic Osteomyelitis Of Tibia

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### INTRODUCTION:

Chronic osteomyelitis remains a big challenge in Orthopedics despite advancement in surgical techniques and modern antibiotics. Bone defect and limb shortening is the main culprit. Challenges that being faced during this procedure are being discussed.

### MATERIALS & METHODS:

This is a case of chronic osteomyelitis of tibia, being manage by bone correction and lengthening via traditional illizarof method.

### RESULTS:

Mr. A is a 17 years old gentleman sustained open fracture of right tibia which was subsequently manage by locking plate. Unfortunately, he developed chronic osteomyelitis and was treated with removal of implant, aggressively multiple debridement and sequestrectomy and antibiotic therapy via intravenous, oral and gentamicin infusion beads accordingly to culture and sensitivity. *Metylcillin Resistant Staphylococcus Aureus (MRSA)* was isolated. Area of osteomyelitis was 6 cm which was then resected and distraction osteogenesis was perform via illizarof technique. Good result of limb lengthening was achieved. Supplementary iliac bone graft and demineralized bone matrix was inserted during to enhance the consolidation phase. Currently, at 7 months post lengthening, he showed a good progress with callus consolidation.

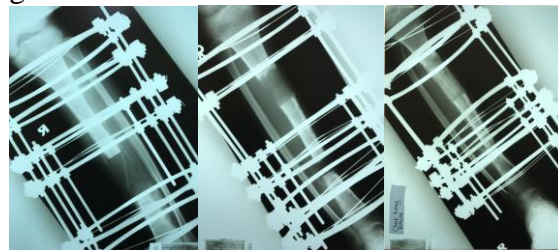
### DISCUSSIONS:

Chronic Osteomyelitis is main complication of any orthopedic fixation and a burden for both parties either the managing medical personal or patient itself. It cause significant morbidity and time-consuming procedure, and often the treatment is through course of antibiotic and multiple stage of operations to achieve a significant result. Limb defect and shortening is the main deformity that should be corrected.

**Figure 1:** Non union with osteomyelitis of right tibia post plating



**Figure 2:** Left-Tibia osteotomy with application of illizarof external fixator. Middle- Lengthening by distraction osteogenesis. Right- Supplementary bone graft inserted



**Figure 3:** Intra-operative process



### CONCLUSION:

Aggressive treatment with debridement, sequestrectomy and antibiotics are effective in managing chronic osteomyelitis. Managing the bone defect and limb shortening by illizarof external fixator remains the gold standard that demands full patient's commitment to produce excellence clinical outcome.

### REFERENCES:

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