

ILIZAROV EXTERNAL FIXATOR: TREATMENT OF NON-UNION TIBIA BY ACCORDION MANEUVER

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ABSTRACT

Background: Accordion is a mechanical technique in Ilizarov in which alternative compression and distraction induce neo-angiogenesis and activates osteoblasts for osteo-genesis in non-union site.

Objective: To assess the outcome of accordion Maneuver with Ilizarov frame in non-union of tibia.

Methods: All patients of aseptic non-union that underwent AM at Department of Orthopaedic Surgery & traumatology, Liaquat University of Medical & Health Sciences, Jamshoro Sindh Pakistan during 2016 to 2020 were included. A standard protocol of cycles in which weekly compression or distraction was followed to enhance the osteoblastic activity. Radiographs were done after every 4-weeks to assess the progress of callus formation.

Results: Twenty-two patients were selected, there were 17 males and 5 females. The mean age was 35.4years (range 17-54 years). Out of 22, interlocking intramedullary nail was done in 10 patients, uniplanar external fixation in 3 patients, DCP in 1 patient and 8 were managed non-operatively by Cast by surgeon or potter. Three cycles were repeated in 13 patients, 4 cycles in 6 patients and cycles in 3 patients. The mean union time was 6 ± 1.28 months.

Conclusions: AM is a simple closed technique safer than open surgical technique with bone graft. There is no blood loss, risk of infection, donor site pain and also financial burden and psychosocial trauma. However, a selection of patient is important for desired results.

Keywords: Nonunion Tibia, Accordion Maneuver, Ilizarov