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Clinical Medicine

Poster

## Bone and Joint Reconstruction Using Ilizarov Circular External Fixation Device

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**Introduction:** Ilizarov circular external fixation device is a versatile external fixation device which can be used for bone and joint reconstruction such as fracture fixation, bone transport, lengthening, shortening, and correction of deformity and contracture. It is a complex procedure and requires patients understanding, motivation, pin site care and rehabilitation to ensure successful treatment and avoiding complication. The aim of this study was to review cases of bone and joint reconstruction using Ilizarov external fixation device. **Materials and Methods:** From 2006 till 2018, 59 patients with the mean age of 34.8 (10-69) years old underwent these procedures. There were 49 tibias, three femurs, one humerus, three elbows, two knees and one ankle reconstruction. 18 open fractures, 16 non-union, seven tibial plateau fractures, 10 implant related infections, one valgus mal-union and one shortening. There were also 4 dislocations and two flexion contracture. The procedure that were done include 31 bone transport, 18 fracture fixation, three joint reduction, two correction of flexion contracture, two shortening of tibia and one each for lengthening, deformity correction and arthrodesis. **Results:** Forty seven (80%) patients achieved the objective of operation: 41 fractures united, three joints were reduced, two achieved knee extension and one deformity corrected. Five developed non-union, of which two not compliant to treatment, two had failed bone transport and one died during the treatment due to medical problem not related to the Ilizarov fixation. **Conclusion:** Ilizarov circular external fixation is an effective device for joint and bone reconstruction in majority of patients.