Complex foot deformity: Acute vs. gradual correction.

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INTRODUCTION:
Complex foot deformity is one of the most challenging conditions for foot ankle surgeons. Complex foot deformity is a multiplanar deformity with or without foot shortening. It also includes deformed feet with poor soft-tissue coverage, relapsed or neglected cases, osteomyelitis and nonunions.
Gradual correction of complex foot deformity using Ilizarov external fixator is commonly used for treatment of such cases. However, the long duration, complexity of the device and psychological impacts on patients should be considered.
Thus, we attempted to investigate the difference in the clinical and radiological outcome between acute and gradual correction in cases with complex foot deformity.
METHODS: This prospective study included 22 patients (14 males and 8 females) with complex foot deformity who were subjected to acute correction. The median age of patients was 23 years (IQR) 18-4. The outcome of the study group was assessed by American Orthopaedic Foot & Ankle Society (AOFAS) score and compared with the score of a control group that included 36 cases, previously managed by gradual correction using Ilizarov apparatus.
RESULTS:
Correction was obtained with complete bonny consolidation in the study group at a mean time of 13.6 weeks (11- 17). The mean AOFAS score was improved significantly in both the study group and the control group ($P<0.001$) after correction of the foot deformity. There was no significant difference between both groups regarding clinical and radiological parameters.
DISCUSSION AND CONCLUSION: Acute correction of complex foot deformity can obtain accepted correction with an outcome that is comparable to gradual correction by Ilizarov apparatus. However, it could save time and avoid complications of the long procedure of Ilizarov for correction of complex foot deformity.