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Management of relapsed clubfeet by soft tissue distraction using the Ilizarov method

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Introduction: Conventional surgical methods for management of congenital talipes equinovarus gives satisfactory results, but recurrence requiring further treatment may occur. Gradual soft tissue distraction using the Ilizarov method is an alternative treatment that allows multidirectional correction of all aspects of the deformity without the need for extensive soft tissue derangement, bony resection, or fusion. We present the results of the use of the Ilizarov method for relapsed clubfeet.

Patients and Methods: Patient younger than 8 years with no fixed bony deformities but relapsed clubfeet were treated by soft tissue distraction using the Ilizarov method. The pre-operative deformity was measured using a goniometer and expressed in degrees of equinus, hindfoot varus, forefoot adduction and supination. The amount of residual deformity was expressed as percentage of the initial deformity.

- Excellent = plantigrade foot or one with only trace of residual deformity (<5°).
- Good = foot with correction of more than 75% of the initial deformity.
- Fair = correction between 50% and 75% of the initial deformity.
- Poor = correction less than 50%.

Results: Nineteen feet (9 unilateral, 5 bilateral) with relapsed clubfeet in fourteen patients (10 boys, 4 girls) were studied. The average age at the time of surgery was 5.5 years (range, 3-8 years) with an average of three (range, 2-5) previous surgeries.

The time to achieve correction of the deformity was 4.5 weeks (range, 3-6 weeks). All children then spent additional 6 weeks in the frame. The time taken for correction of the deformity till frame removal was 10.5 weeks (range, 9-12 weeks) and the follow up period was 2.4 years (range, 1-4 years). Twelve feet (63.2%) were graded as excellent, 5 (26.3%) as good, and 2 (10.5%) as fair result.

Conclusion: The Ilizarov method is technically demanding but well tolerated and an effective method of treating relapsed club foot deformity.

Recent Publications

1. Korkmaz A, Ciftedemir M, Ozcan M, Copuroğlu C, Sandoğan K. The analysis of the variables, affecting outcome in surgically treated tibia pilon fractured patients. *Injury* 2013 Oct;44(10):1270–4.
2. Amorosa LF, Brown GD, Greisberg J. A surgical approach to posterior pilon fractures. *J Orthop Trauma* 2010 Mar;24(3):188–93.
3. Conroy J, Agarwal M, Giannoudis PV, Matthews SJ. Early internal fixation and soft tissue cover of severe open tibial pilon fractures. *Int Orthop* 2003;27:343–7.

Biography

Alham Qureshi is a junior doctor working in trauma and orthopaedics in the North West of England. She obtained her medical degree from the University of Glasgow in 2016. She is currently working at Royal Blackburn Hospital. Her interests include trauma, hand surgery, diversity and inclusivity and yoga.

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