

Recurrent & Untreated Clubfoot

Ilizarov correction using Ponseti principles

Soft tissue distraction using external fixation in untreated and recurrent clubfoot is an accepted modality. However, there is neither consensus nor clarity of thought on the mechanism of correction within the external fixator assembly. The author had corrected more than 60 untreated and recurrent clubfeet over 12 years with good to moderate results. After learning the Ponseti technique from Dr I.V. Ponseti of Univ of Iowa, USA and applying it in many babies with clubfeet; the author has designed a method for correction in older children and adults using the Ilizarov fixator with Ponseti's principles.



Dr. Milind Chaudhary with Dr. I.V. Ponseti at Iowa City in 2002



8 yr old with recurrent CTEV release showing severe deformity & inability to squat.



Initially, forefoot is supinated by a force couple action. Then the forefoot ring is abducted against a olive wire placed on the neck of the talus.

This abduction continues till 70°. At this point in time, the hindfoot ring is kept free and it allows the calcaneus to rotate out into abduction from under the talus.



Ilizarov fixator applied with 2 rings in tibia, 1 hindfoot ring and 1 fore-foot ring.



Now the hindfoot is ready to come out of Equinus. This is done by angling the motors from anterior to posterior to remain tangential to the talar dome. This way the ankle equinus corrects without either forcing the ankle out of the mortise or without over-distraction of cartilage or crushing of ankle and potential stiffness. Note excellent clinical and xray result with good ROM.

The Ilizarov fixator is most versatile. It is possible to apply variable forces in all 3 dimensions as well as change the direction of forces. It is thus ideal for the treatment of clubfoot using Ponseti principles. This modality of treatment has now been used in 36 feet with very good and reliable results. Major complications have not been seen. Mild recurrence was seen in 3 feet.