

# The recovery of length of great toe and deep medial crease in complex clubfeet – Poster Two



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## INTRODUCTION

A number of idiopathic clubfeet are refractory to classical Ponseti manipulation and casting. These feet are recognized as complex; they are considered stiffer, present with a rigid equinus, have a short hallux, a deep medial (plantar) as well as posterior crease .

## AIM

To study changes in hallux length and deep medial crease in atypical clubfeet with Ponseti technique

## MATERIAL and METHODS

The investigation was carried out at a CURE clubfoot clinic located in the suburb of a low income country and based on a retrospective review (2016-2018) of children with acquired complex clubfoot treated with modified Ponseti method.

11 patients (17 feet) were enrolled with atypical clubfeet treated with modified Ponsetti technique. Pirani score and clinical photographs were taken at start of treatment and at most recent follow up.

### Features of complex clubfoot (Figure 1)

For hallux length quantification, a grading similar to Pirani scoring system was used. The foot was kept flat on the couch with toes unfolded and observed from the top. The reference standard was kept as the adjoining 2nd toe. Anything shorter than 2nd toe was considered 1, an equal length as 0.5 and beyond (longer) was considered as 0.

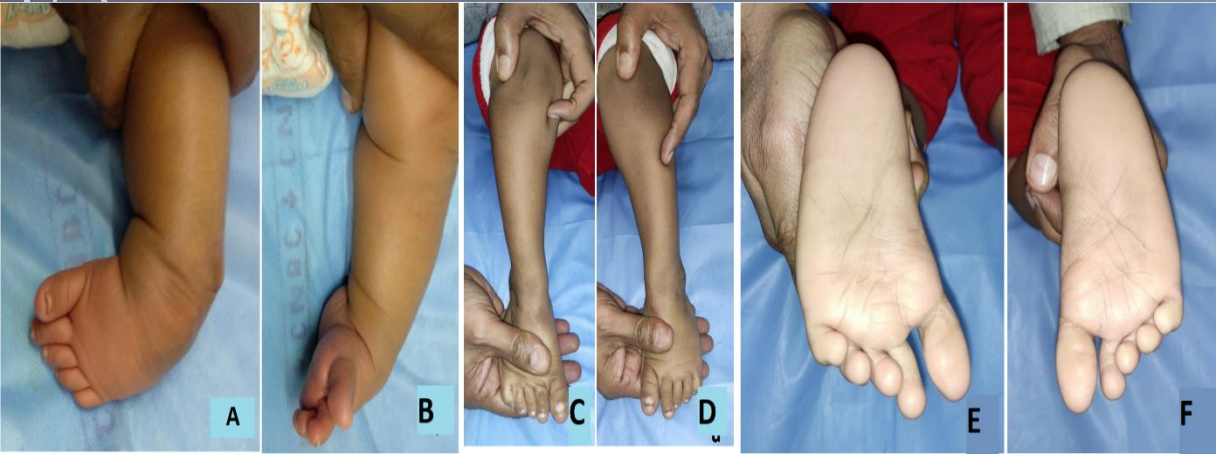


A – Short and Stubby foot, Short Hallux with hyperextended great toe

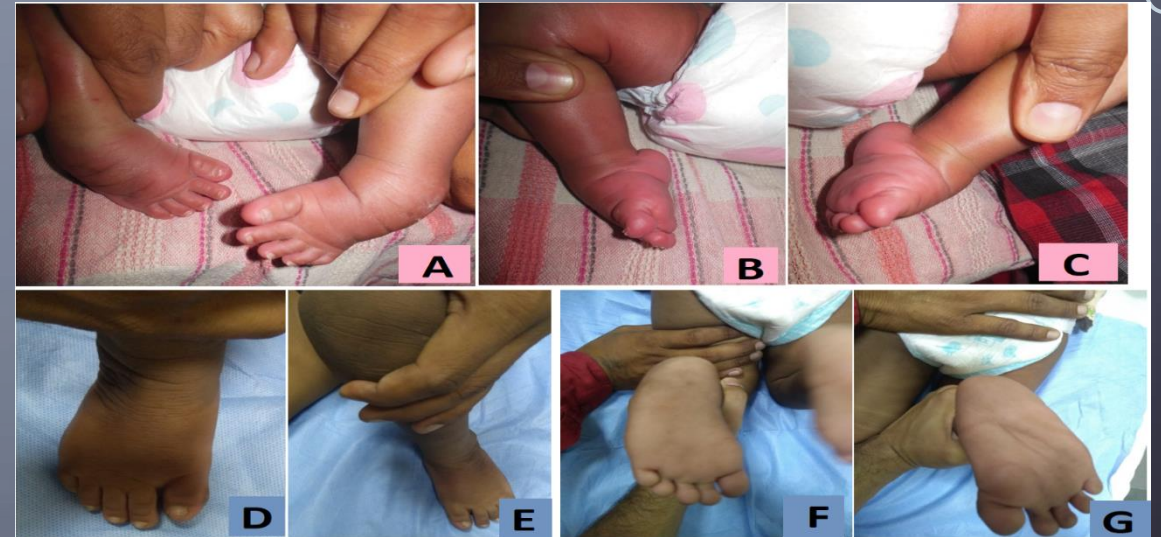
B – Rigid Equinus with Deep Medial Crease extending across the sole transversely with a deep posterior crease (Figure 1)

# RESULTS

Mean patient age at enrollment was 26.8 weeks. Average follow up was 22.6 months. Pre treatment and follow up Pirani score averaged 5.8 and 0.2 respectively. The average number of cast utilized was 7. Incomplete/ non correction of hallux was observed in 6 feet (35%), of which 4 suffered an equinus relapse. Deep medial crease corrected in all.

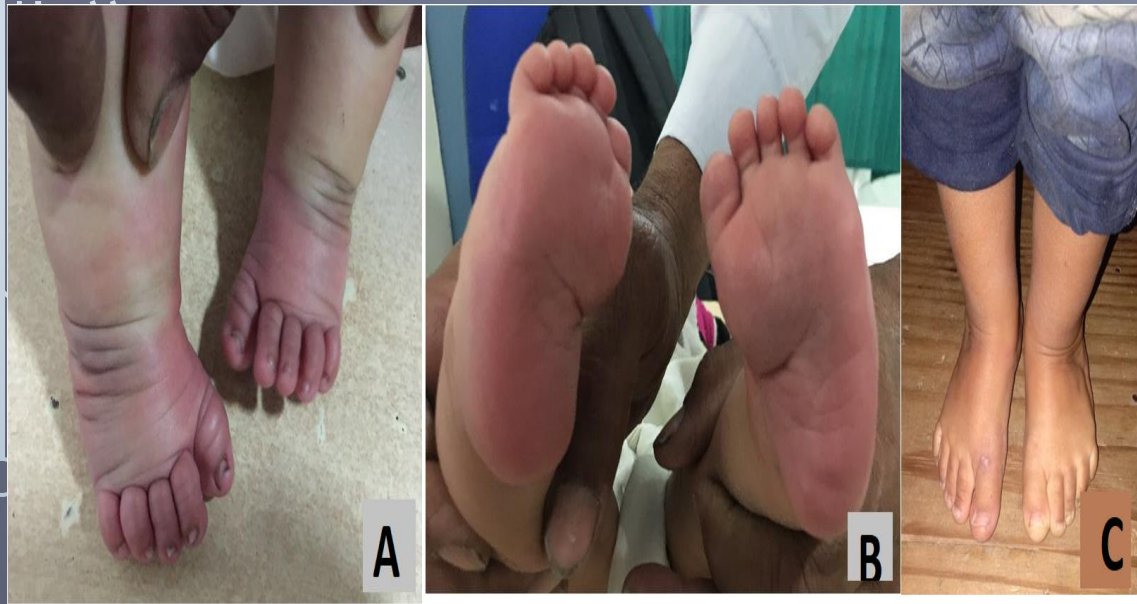


**Case Illustration 1 (Figure 2).** Delayed correction of hallux length in complex clubfeet. a,b. Pretreatment . The hallux was retracted and short on left side. A deep medial crease was also present d,e. At follow up of 25 months, hallux length is still not recovered (score 1) whereas medial crease has fully recovered c,f. Contralateral foot photographs with longer hallux length attached for comparison.



**Case Illustration 2 (Figure 3).** Incomplete correction of hallux in relapse. a,b,c. The child's (patient 7) complex clubfeet were treated using the modified Ponseti method. The child suffered a relapse in both feet at 58 weeks which was treated by recasting. d,e,f,g. At follow up, the hallux was still short on both sides. Medial crease however corrected fully in both feet.





**Case Illustration 3 (Figure 4).** Hallux recovery in complex clubfeet. a,b. Pretreatment. The hallux was retracted and short on both sides. A deep medial crease was also present c. At follow up of 24 months, both hallux length and medial crease have fully recovered bilaterally.



**Case Illustration 4 (Figure 5).** Hallux recovery in complex clubfeet. a,b. Pretreatment (patient 10). Bilateral short hallux and deep medial crease in a 28 week child. c,d,e,f. At follow up of 12 months, both hallux length and medial crease have fully recovered bilaterally.

## CONCLUSION

- The study describes a clinical method of **hallux length quantification** in complex clubfeet. **Medial crease recovered in all feet.** The recovery of hallux length was **delayed** in some patients and might indicate persistent **posteromedial soft tissue contracture/ fibrosis** in these feet. Careful observation and serial follow up is suggested in complex clubfeet with short hallux.