Introduction

Fibular hemimelia (FH) is a congenital deficiency of lower limb with hypoplastic, dysplastic or aplastic fibula.

The phenotype has a wide spectrum of pathology, ranging from mild to severe limb length discrepancy, ankle/foot deformities with or without subtalar coalition, midfoot coalitions and tibial defects.

FH has 5 main problems
1. limb length discrepancy (LLD)
2. foot and ankle deformities and deficiencies
3. tibial deformity, genu valgum
4. knee instability.

SUPER ankle is a recent ankle reconstruction procedure developed by Dror Paley which deals with all these problems in a sequential manner to achieve a functional plantigrade feet.

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One and half year old girl presented with following deformities:

- 1. Shortening of the leg segment LLD
- 2. Procurvatum deformity of the tibia
- 3. Equines contracture
- 4. Absent lateral rays
- 5. Absent fibula
- 6. Subtalar joint-normal

Further evaluation:

- Hip, Spine and Knee examination were WNL
- Mild instability in knee joint (Valgus)
- MRI of hip and Knee-normal
- Distal pulse-dorsalis pedis absent, posterior tibial present
Diagnosis and Treatment

Fibular hemimelia
According to Paley classification

It is Type 3 A

Treatment Strategy – Gradual correction with Ilizarov

Reconstructive Life Plan by Paley

- Stage 1 – super ankle procedure and lengthening (2 years)
- Stage 2 – lengthening (One year after removal of frame)
- Stage 3 – lengthening After 5 years
Planning and Execution

Step 1: Pre-operative planning

Step 2: Stage 1: Anlage excision

Step 3: Stage 2: Gradual correction with lengthening

Step 4: Outcome after ilizarov removal

Result:
Corrected the deformity and LLD, she needs staged lengthening at various intervals till skeletal maturity