

# **OLIGO DACTYLY FOOT WITH LESS RAYS**

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# SPOT THE DIFFERENCE



# Absent ray with normal development of the leg



# Katsan: 4 ray foot unilateral



# Katsan 4 ray foot unilateral



# Katsan 4 ray foot unilateral



# Katsan 4 ray foot unilateral



# four ray foot prenatal diagnosis



Migg 4 ray foot bilate



# Miggido 4 ray foot bilateral



## Migg 4 ray foot bilateral



# Savvid 4 ray foot unilateral LLD



# Absent ray foot complex



# Absent ray foot complex



# Absent ray of the foot

- Medial, lateral, central
- Development of tarsal bones
- Ball joint ankle
- Leg length discrepancy
  
- Examination of kidneys and heart

# Three ray foot





# Proximal deficiency with foot deformity

## moll and

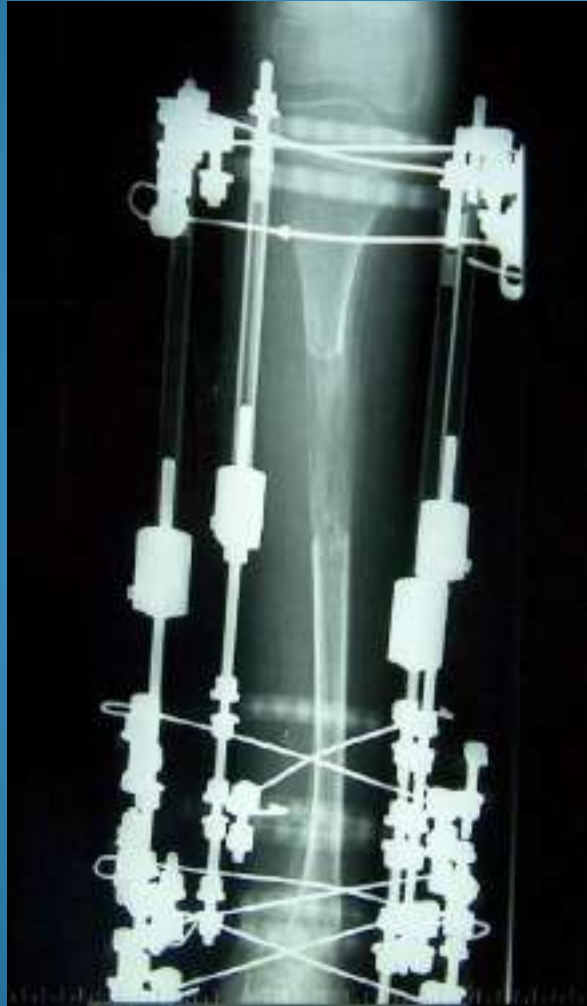


# Proximal deficiency with foot deformity

## moll and



# Fibular hemimelia treatment with Ilizarov Moll And



# Fibular hemimelia treatment with Ilizarov Moll And



# Fibular hemimelia treatment with Ilizarov Moll And



# Fibular hemimelia treatment with Ilizarov Moll And



Ntamp kal .



# Ntamp kal fibular deficiency



# Ntampn kal fibular deficiency



# Ntamp kal fibular deficiency



# Ntampn kal fibular deficiency



# four ray foot



# four ray foot



Skeletal Radiol. 2013 Mar;42(3):377-83.

## **Intermediate ray deficiency--a new type of lower limb hypoplasia.**

Koczewski P<sup>1</sup>, Shadi M, Kotwicki T, Tomaszewski M, Korbel K.

- One such form is absence of foot rays with leg shortening in the presence of an entire fibula. In these cases, foot morphology suggests that central foot rays, not lateral ones, are affected by the deficiency; thus justifying the hypothesis concerning the existence of a separate type of hypoplasia, which may be named "intermediate ray deficiency" (IRD).

J Pediatr Orthop. 2017 Jul/Aug;37(5):332-337

## **The Nature of Foot Ray Deficiency in Congenital Fibular Deficiency.**

Reyes BA<sup>1</sup>, Birch JG, Hootnick DR, Cherkashin AM, Samchukov ML.

- Twenty-six patients with 28 affected feet met radiographic criteria for inclusion in the study. All affected feet had a well-developed cuboid or calcaneocuboid coalition. The lateral-most ray of 25 patients with 26 affected feet articulated with the cuboid or calcaneocuboid coalition. One patient with bilateral fibular deficiency had bilateral partially deficient cuboids, and the lateral-most metatarsal articulated with the medial remnant of the deformed cuboids. Twenty-one of 28 feet with visible cuneiforms had 2 or 1 cuneiform.

# Longitudinal deficiency



# Tibial absence



# Tibial absence - hypoplasia

- Jones classification



# Embryology of congenital differences

Scott H Kozin

Shriners Hospital for Children Philadelphia

**J Pediatr Orthop 30: S 31 2010**

**signaling centers**

AER proximal distally

ZPA, anteroposterior pre – post axial

signaling molecule is the sonic

hedgehog protein

Wingless type center (Wnt)

dorsoventral development

Hox and T-box genes

# Constriction band syndrome



# Constriction band syndrome



# ABSENCE OF TIBIA HIP DISLOCATION



- [J Med Genet.](#) 2012 Jan;49(1):16-20.

**Identification of a novel DLX5 mutation in a family with autosomal recessive split hand and foot malformation.**

[Shamseldin HE](#)<sup>1</sup>, [Faden MA](#), [Alashram W](#), [Alkuraya FS](#).

- [J Appl Genet.](#) 2014 Feb;55(1):105-15.

**Split-hand/foot malformation - molecular cause and implications in genetic counseling.**

[Sowińska-Seidler A](#)<sup>1</sup>, [Socha M](#), [Jamsheer A](#).

- [Microarrays \(Basel\).](#) 2015 Dec 24;5(1).

**Identification of Critical Region Responsible for Split Hand/Foot Malformation Type 3 (SHFM3) Phenotype through Systematic Review of Literature and Mapping of Breakpoints Using Microarray Data.**

[Li CF](#)<sup>1</sup>, [Angione K](#)<sup>2</sup>, [Milunsky JM](#)<sup>3</sup>.

# oligodactyly

- Longitudinal or transverse
- Terminal intermediate
  
- Evaluation of the child
- Prediction of LLD
- PLANTIGRADE FOOT
  
- SHOE WEAR AESTHETIC

# oligodactyly

- Prenatal counseling

Merci bien

