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Title
A case study of bilateral congenital lower limp in a 29 month old congenital child

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Summary
The aim of this study is to create device like prosthesis for a 29 month year old child with bilateral lower limb congenital deformities to enable him to walk and Performance of proper functioning prosthesis for both lower limbs, to improve the gait pattern.

Introduction/ Basics
Congenital deformities in children are seen more often these days in Egypt. The challenge we usually face is how we can provide these children with a device that will help them practice a normal healthy upbringing without having to resort to surgery. Especially since the general shape of the lower limp that has this deformity has other injuries. And therefore we need a suitable way to redistribute the pressure points and the weigh on the lower limp.
The child was 29 month old girl .she was born with congenital absence of right ankle joint and underlying Subtaler bone .the right foot just has the Calcaneus bone present and in standing she weigh bearing on lateral side of Calcaneus with slight tendency to outgrowth in the tibia and fibula .the diameter of the terminal part of the right lower limb .was larger around the Calcaneus bone than the area above.
The left leg like lower limb amputation with a thin pointed part at the end of congenital and was shorter than the right.

Methods/ work process
Manufacturing details:A soft socket was first manufactured for both limbs using Polyform material 5mm. right side extra Polyform was placed on upper area of Calcaneus bone to fill any irregularities ,to allow right leg after wearing soft socket easily slip it into hard socket.outer part of Calcaneus bone has been raised (lateral wedge) this to reduce the external tendency (Varas) using cork material 2mm.Lift side using extra Poiyform was placed on thin pointed part at end

2 layers to be more softly on this area. And it was all smoothed to regularize the surface.Hard socket made of Resin material was then molded on top of soft sockets reaching patella to use patellar tendon bearing suspension.Using Pedilen foom hard material to compensate of length difference between left and right legFeet were then attached to bottom of both sockets (SACH feet) with the metal plate sole of feet and that by means of a wooden stick with a nut inside. In finally smoothed all it to finishing a Ex shape.

Implementation

The 29 month year old girl was at first able to stand unsupported using both prosthetics, by the second week she was able to walk supported with one hand. She is now after using them for one month’s is able to walk freely unsupported. Difficulties are present just when attempting to rise from sitting position on the floor to standing position.

Conclusion

Our challenge in this little girl was the absence of the bone of the right foot as well as the diameter and leg discrepancies present in both leg. The diameter increase around the right leg above area of Calcaneus, made it difficult to be able to our normal hard socket inside, so came the idea of using the principle of a soft total contact socket first that will closely take the shape of each individual limb and using a hard socket on top man use its advantage of patellar tendon bearing. Conclusion: There are no rules for different patients, each patient should be taken individually and device are tailored accordingly according to our biomechanical principles

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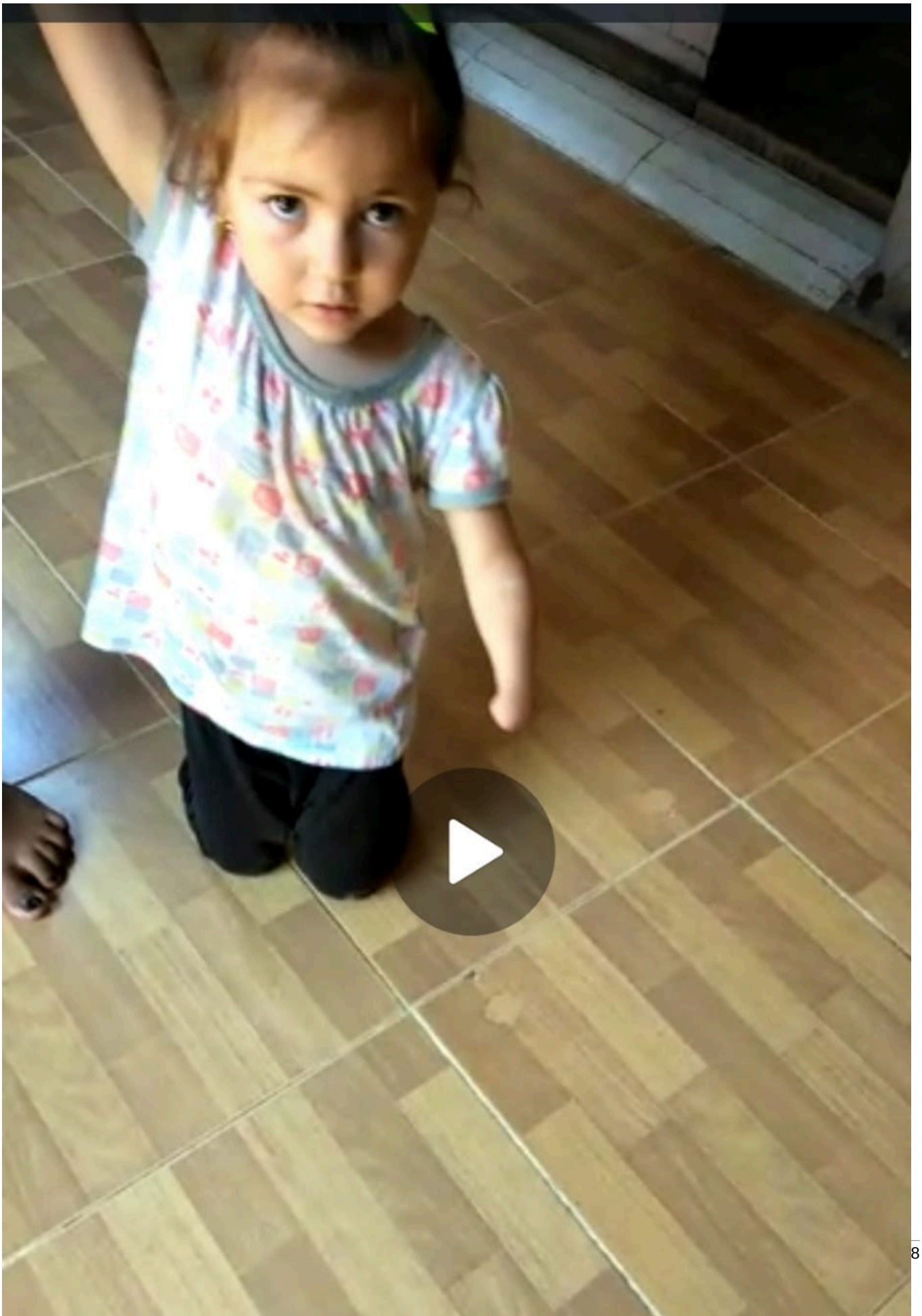

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