

APOA Foot & Ankle Council Presents..

Case of the Fortnight

15th February 2023



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Presented by:



Dr. Ho Man Kit

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Learning Points:

- © Treatment of symptomatic post-traumatic cavovarus foot is challenging
- © The goal of surgical treatment of a fixed cavovarus foot is to restore alignment and stability
- © Corrective osteotomy is a viable surgical option to achieve a painless plantigrade foot

Title:

**A case of Traumatic
Cavovarus Foot Reconstruction**

*Upcoming Case of the Fortnight
on 1st March 2023*

Presented by:

Dr. Thos Harnroongroj

Associate Professor Thos Harnroongroj, MD
Orthopaedic Department,
Faculty of Medicine Siriraj Hospital,
Mahidol University, Bangkok, Thailand



Title:

**Muller-Weiss Disease:
Key Concepts and Overview**

Want to present a case? Write to...



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A case of Traumatic Cavovarus Foot Reconstruction

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Case

A 60-year-old retired security guard was referred to us for chronic left foot pain. She had an episode of fall from height at age of 16, which resulted in open left foot and ankle fractures and osteomyelitis. She complained of left foot deformity and pain. She walked with a stick with an exercise tolerance of 30 minutes. There were multiple episodes of left lateral foot ulcer and cellulitis.

Physical examination (**Fig. 1-3**) showed the externally rotated left lower limb on standing, with weight bearing and standing on the lateral sole and painful callosities on the lateral side. Scars on the lateral and medial foot were noted. There were fixed foot and ankle deformities with varus hindfoot, supinated midfoot, adducted and varus forefoot. 1st MTPJ was fixed at 45 degree plantarflexion. The 5th toe was medially deviated and was overlapped by the 4th toe. The power of toe dorsiflexion and plantarflexion were 4+/5 on MRC grading. Distal pulses of the left foot were normal and the sensation was intact.



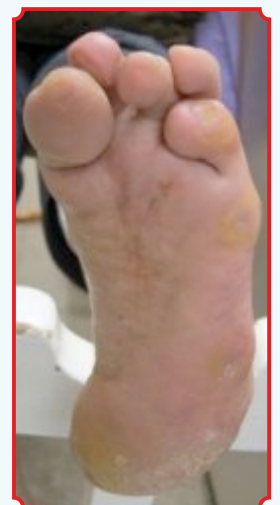
(Fig. 1)

Fig 1. Externally rotated left lower limb as assessed by patella position



(Fig. 2)

Left foot deformities



(Fig. 3)

Callosities over lateral plantar foot

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Xray of the left foot (**Fig. 4-5**) showed fusion of left ankle, subtalar and midtarsal joints with cavovarus deformity. CT scan with 3D reconstruction (**Fig. 6-7**) of the left foot showed ankylosis of the left ankle and hind foot with equinus deformity. Joint space in midfoot and forefoot were narrowed.



(Fig. 4)
Ankylosed left ankle joint



(Fig. 5)
Fusion of left ankle, subtalar and midtarsal joints



(Fig. 6)
Varus hindfoot deformity



(Fig. 7)
Cavovarus deformities of the forefoot and midfoot

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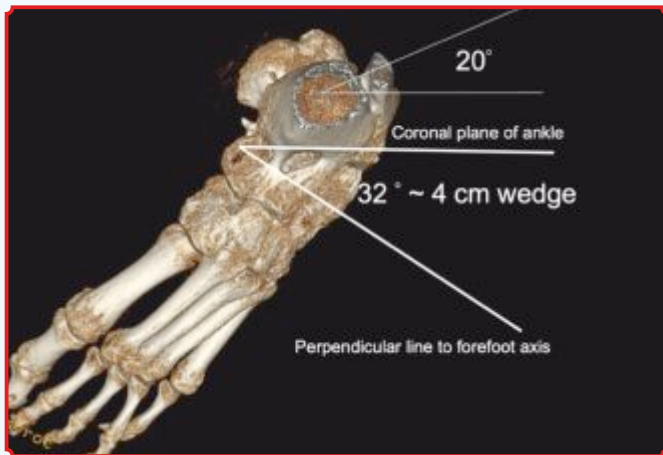
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The patient underwent reconstruction surgery of the left foot (**Fig. 8-10**). Corrective osteotomies at midfoot and hindfoot were performed. Lateral closing wedge osteotomies were done at the site of the calcaneocuboid joint and hindfoot to correct foot abduction, supination and varus heel. Moberg's osteotomy and release of 1st MTPJ contracture was performed to dorsiflex the big toe. Fusion of 5th toe DIP joint was done. Fusion of the 1st MTPJ was done for severe degeneration with pain 4 years later.



(Fig. 8)

Lateral closing wedge osteotomy (4cm) at fused calcaneocuboid joint region



(Fig. 9)

Lateral closing wedge osteotomy (3.2cm) at hindfoot



(Fig. 10)

Moberg's osteotomy of big toe and DIPJ fusion of 5th toe

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Postoperatively, she was treated with casting and non-weight bearing walking for 8 weeks, and then changed to an ankle brace for 4 weeks. Xray (**Fig. 11-12**) showed satisfactory correction of left foot, heel and toe deformities. She reported no pain in her left foot and ankle (**Fig. 13**). She was able to walk with a stick for hours.



(Fig. 11)
X-ray DP view
at post-op 11 years



(Fig. 12)
X-ray (lateral view) post-op 11 years



(Fig. 13)
(A) Pre-op and (B) post-op 11 years
X-rays left foot

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Contact: 201 AP-42-A, 03-2023
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