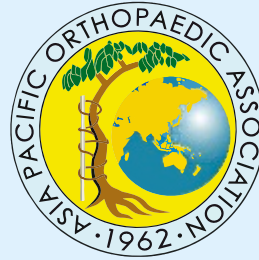


APOA Foot & Ankle Council Presents..

# Case of the Month

1st July 2023



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**Presented by:**



**Dr. Chan Chi Chiu, Dennis**

Associate Consultant, Department of  
Orthopaedics and Traumatology,  
Queen Elizabeth Hospital, Hong Kong SAR

## Learning Points:

- © Total ankle replacement is a feasible option in cases even with significant bone loss.
- © Total ankle replacements are becoming more prevalent compared to ankle fusion for treatment of end stage ankle arthritis.

**Title:**

**A case of Total Ankle Replacement in an End Stage Ankle Arthritis with Significant Talar Bone Loss**

*Upcoming Case  
on 1st August 2023*

**Presented by:**

**Dr. TANG Holmann**

Department of Orthopaedics and  
Traumatology, Princess Margaret Hospital  
Hong Kong, SAR



**Title:**

**Management of Avulsion Fracture of the Ossification in Insertional Achilles Tendinosis**

Want to present a case? Write to...



**Prof. Chayanin Anthong**  
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**Dr Kwai Ming Siu**  
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# Case of the Month

1st July 2023



## A case of total ankle replacement in an end stage ankle arthritis with significant talar bone loss

**Dr. Chan Chi Chiu, Dennis**

Associate Consultant, Department of Orthopaedics and Traumatology,  
Queen Elizabeth Hospital, Hong Kong SAR

### Case

A 75 years old gentleman, who is a retired professional football player, presented with long standing mechanical right ankle pain. He had a history of repeated bilateral ankle sprains during his football playing days. He walked unaided slowly with a limited walking tolerance. Physical examination showed right ankle swelling and ankle varus deformity, with minimal range of motion of the ankle joint. There was no neurovascular deficit. X-ray (**figure 1,2**) showed end stage ankle arthritis, especially over the right ankle,

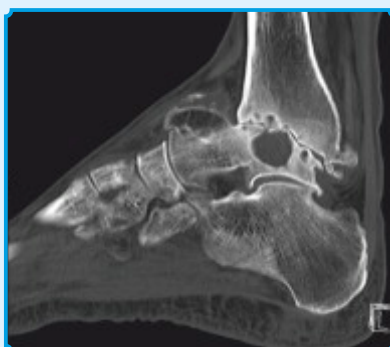


(Fig. 1)

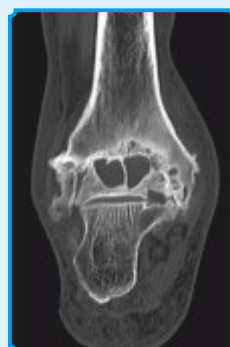


(Fig. 2)

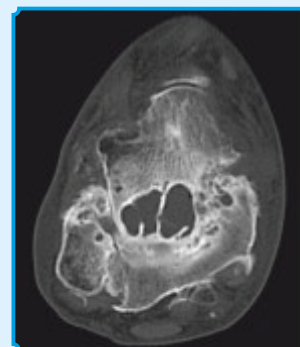
with a "flat-top" talus, and a large anterior ankle osteophyte. CT (**figure 3, 4, 5**) showed significant bone loss over both the tibia and talus side, with a large contained talar bone cyst of the ankle joint.



(Fig. 3)



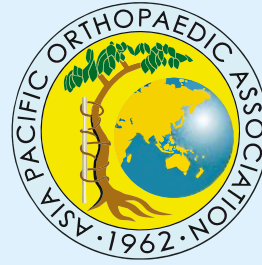
(Fig. 4)



(Fig. 5)

# Case of the Month

1st July 2023

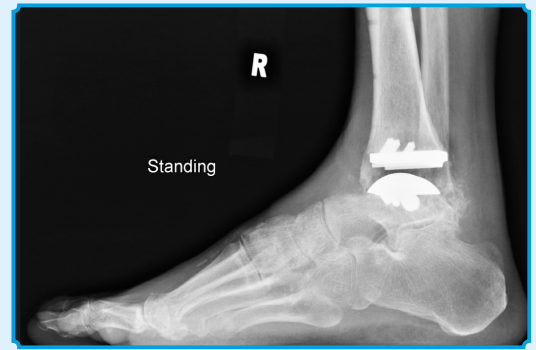


The gentleman underwent right total ankle replacement with INFINITY tibia component with INBONE-II talar component (Wright Medical, Memphis, TN, USA). Curettage of the talus bone cyst with impacted cancellous bone autograft from the osteotomies made during the surgery was done. The INBONE-II talar component was chosen because it required less bone stock for implantation.

Post-operative rehabilitation was 3 weeks of non-weight bearing walking and immobilization with a cast, then switch to a short leg walker orthosis with full weight bearing walking for 3 weeks, then off the orthosis at post-op 6 weeks. X-rays (**figure 6, 7**) showed satisfactory alignment with the talar



(Fig. 6)



(Fig. 7)



(Fig. 8)



(Fig. 9)

bone cyst defect filled with autograft. There is some heterotopic ossification noted, but he was not experiencing any impingement pain. The wound had healed well, and the ankle range of motion was 10 degrees in dorsiflexion and 25 degrees in plantarflexion (**figure 8, 9**). The right ankle was pain free at early post-op 3 months, and he was able to walk unaided with improved speed. He will be continued followed up to review his progress.

## Discussion

Continual developments are being made to total ankle replacement surgeries. More end stage ankle arthritis cases can now be tackled with the current total ankle replacement implants, such as in this case where bone loss is significant. A randomized controlled trial showed superiority in fixed-bearing total ankle replacement over ankle fusion in their post hoc analysis (1). Ankle arthritis is becoming more prevalent compared to ankle fusion for treatment of end stage ankle arthritis.

