



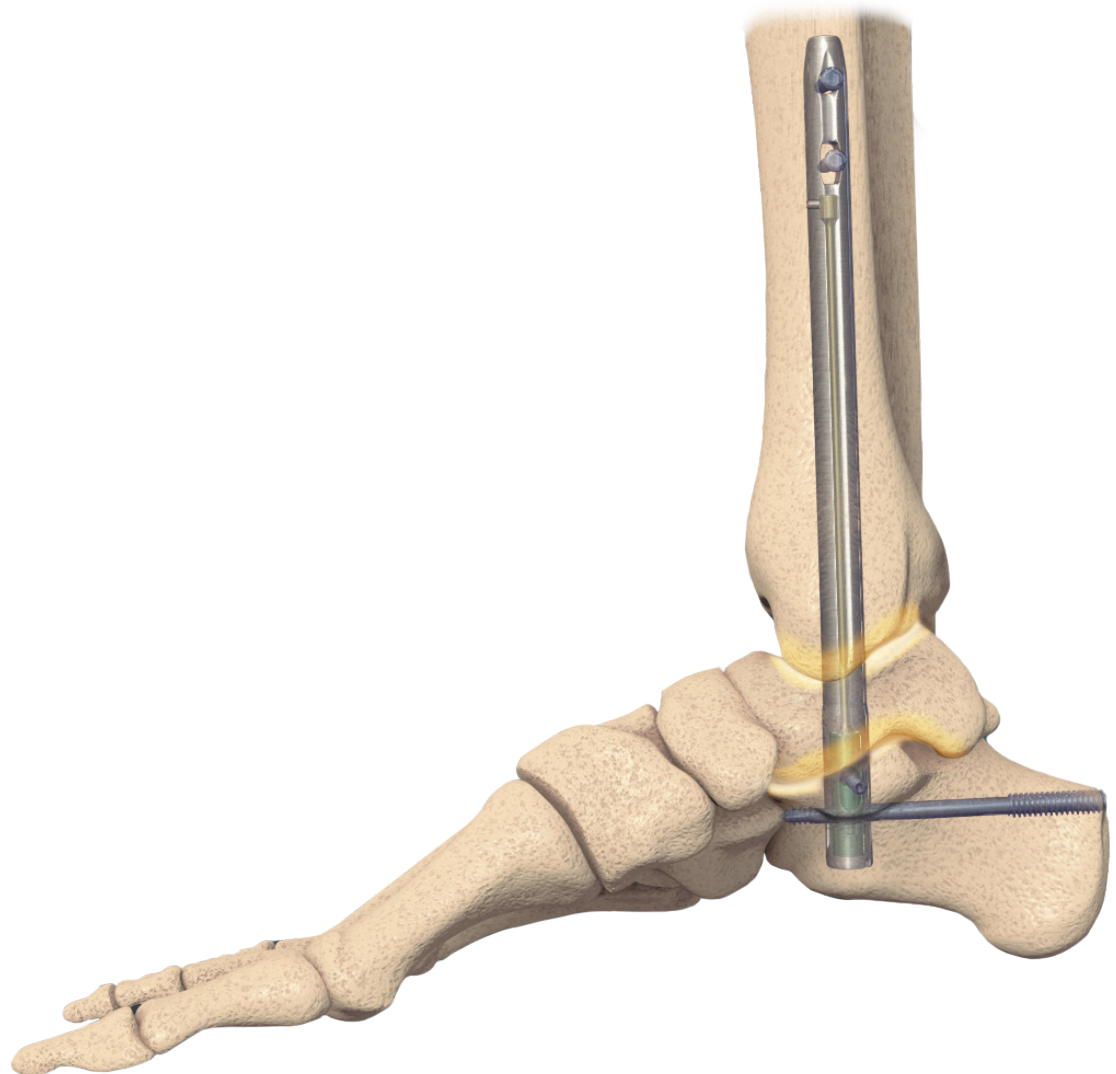
CASE
STUDY

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DYNANAIL[®]

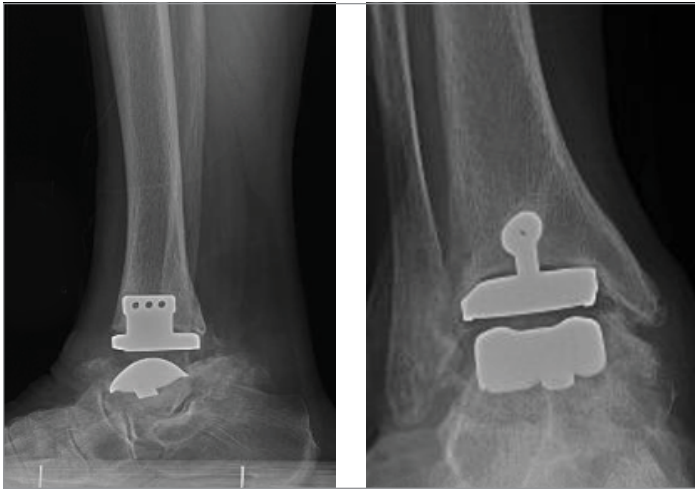
CAN A STRAIGHT SUSTAINED COMPRESSION IM NAIL
RESTORE NATIVE HINDFOOT VALGUS?

NAIL SYSTEM



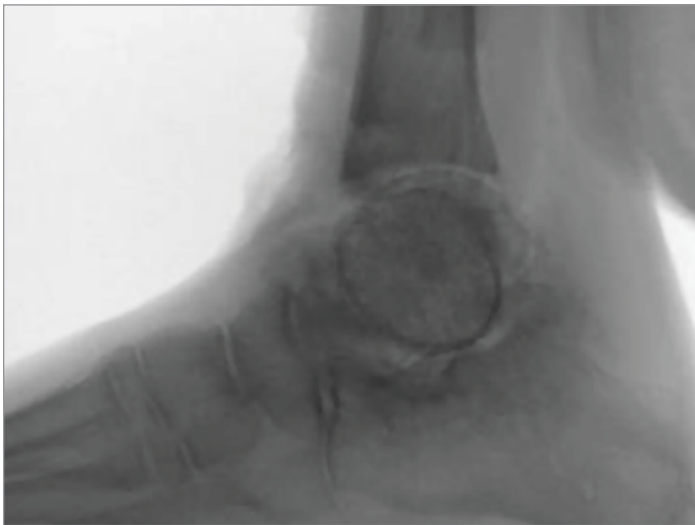
By David Ruta, MD

CASE 1



INITIAL PRESENTATION

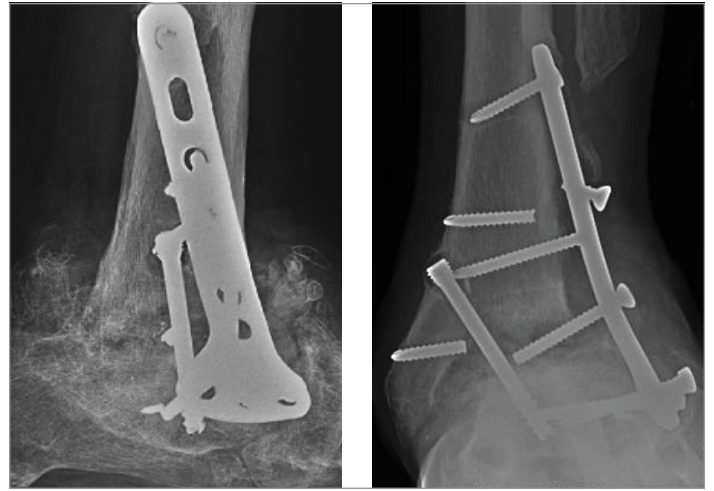
A 68-year-old female with a history of obesity and osteoporosis presented with increasing ankle and hindfoot pain. The patient had undergone a primary total ankle arthroplasty at another institution 2 years prior. Radiographs revealed subsidence of implant with severe subtalar degeneration and hindfoot valgus.



IMPLANT REMOVAL

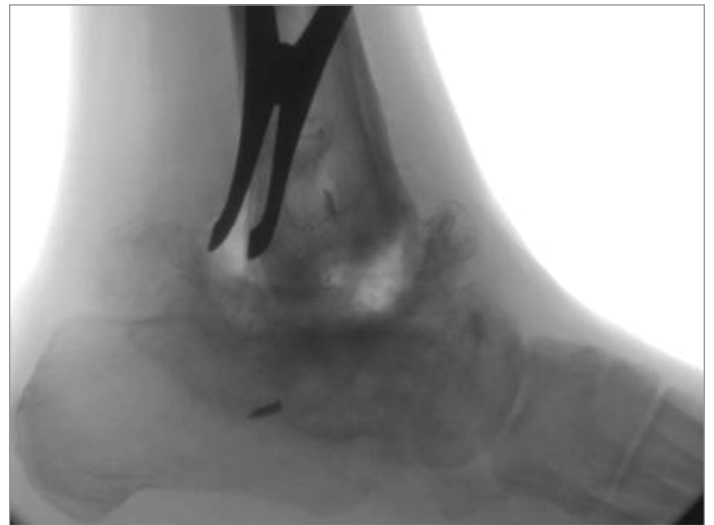
The total ankle implant was removed. A femoral head allograft was used to fill the defect and then augmented with femoral and fibular autograft and rhBMP-2.

CASE 2



INITIAL PRESENTATION

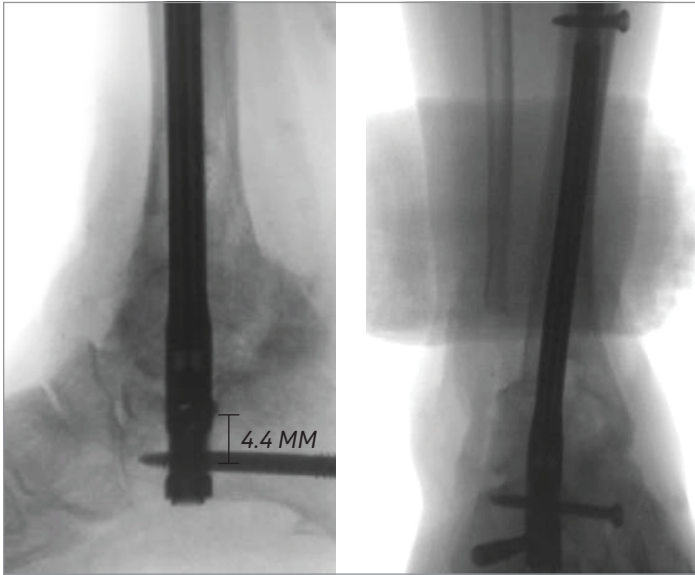
A 58-year-old male presented with a severe left ankle and hindfoot valgus deformity, failed hardware, and nonunion after undergoing 3 prior surgeries at other institutions. The patient was unable to walk without a boot and required high doses of narcotics to relieve pain.



IMPLANT REMOVAL

Hardware was removed, revealing significant talar bone loss and severe Charcot deformity.

CASE 1



REVISION SURGERY

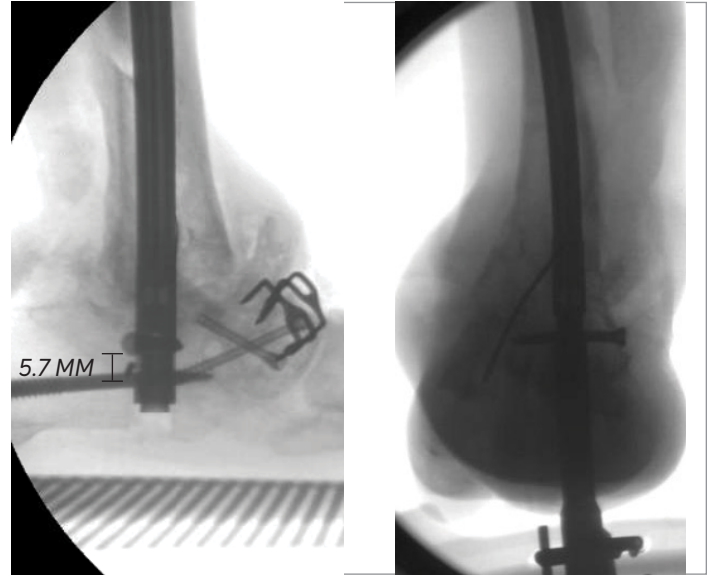
A tibiototalcalcaneal (TTC) arthrodesis was performed using the DynaNail®. The Quick Compress technique was employed to achieve tight apposition of the bone surfaces. This is noted on the above images by the 4.4 mm of compression remaining from the DynaNail's Compressive Element.



13 WEEKS POST-SURGERY

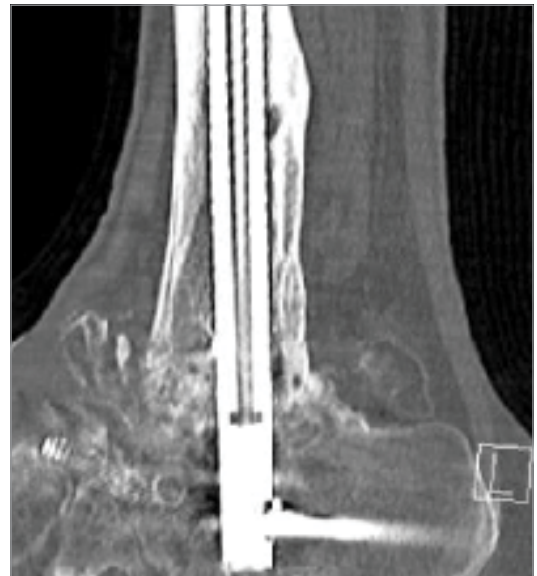
CT scans showed continuous bony bridging across both joints, confirming fusion. The patient then began partial weight-bearing in a pneumatic boot.

CASE 2



REVISION SURGERY

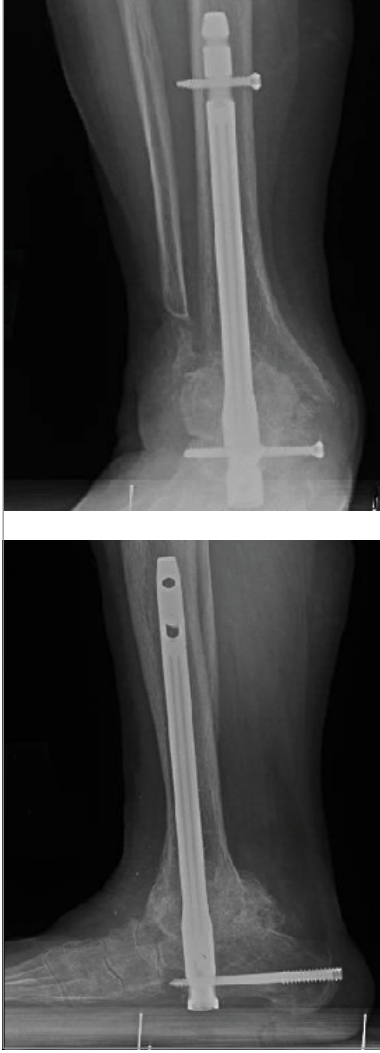
TTC arthrodesis was performed with the DynaNail, and augmented with proximal tibial autograft, rhPDGF-BB, and rhBMP-2. Talonavicular arthrodesis was also performed. The Quick Compress technique was performed to achieve tight bony apposition. The DynaNail's Compressive Element was holding 5.7 mm of compression at the end of surgery.



15 WEEKS POST-SURGERY

CT scans showed mature fusion across both joints. The patient then progressed to full weight-bearing in a pneumatic boot.

CASE 1



6 MONTHS POST-SURGERY

The patient was ambulating in rockerbottom shoe without a brace and without pain to her ankle and hindfoot. Radiographs show the hindfoot remaining in a physiologic valgus position.

CASE 2



6 MONTHS POST-SURGERY

The patient was ambulating in normal athletic footwear without a brace, reporting no pain and successfully weaning off narcotics. Radiographs revealed a physiologic hindfoot valgus position was still maintained and the DynaNail's Compressive Element was still holding 3.9 mm of compression.



David Ruta, MD, David Ruta, MD is a board-certified fellowship-trained orthopedic surgeon who practices with Bellin Health Tiletown Sports Medicine and Orthopedics in Green Bay, WI. He received his medical degree at Rush University Medical Center in Chicago, then completed his residency training at University of Michigan in Ann Arbor, MI, followed by a fellowship at Campbell Clinic in Memphis, TN. He is a member of the American Academy of Orthopaedic Surgeons and the American Orthopaedic Foot and Ankle Society. He has published multiple articles and has presented at regional and national meetings.

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T 800.495.2919 F 877.778.3864

Medshape, Inc.
1575 Northside Drive NW | Suite 440 | Atlanta, GA 30318 | U.S.A.
enovis.com/foot-and-ankle

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