Surgical repair of failed cavovarus foot reconstruction and concomitant varus ankle arthritis with nanocrystalline hydroxyapatite (NanoBone® Bone Graft)

Jeffrey E. McAlister, DPM, FACFAS

Scottsdale, Arizona

Clinical Presentation

Patient is a 43-year-old obese male with a history of prior foot surgery who presented with foot and ankle debilitating pain due to failed cavus foot reconstruction and continued ankle varus. Patient had been managed with NSAID medications, bracing, and injections, and his VAS was 8/10 with clinical examination and radiographs revealing significant left ankle arthritis with post-traumatic varus deformity. The patient was recommended to undergo hardware removal with left ankle and subtalar fusion surgery.

Surgical Procedure

Patient underwent surgical correction with a lateral approach ankle and subtalar joint arthrodesis utilizing intramedullary nail fixation and compression. During the procedure, 2.5mL of NanoBone SBX Putty was placed into the joint space and around the implant hardware to fill defects and facilitate fusion. The ankle and foot were appropriately aligned so the foot would be plantigrade and functional.

Postoperative

At 3-month follow-up, the patient reported significant pain relief with elimination of NSAID medication and a VAS score of 0/10. Fusion has occurred in the interface between the implants and the patient's native bone and the implants are well-positioned and intact. Initial bone remodeling is visible on postoperative X-rays (Fig. 2). The patient is doing well with relief of symptoms, minimal pain, and has returned to work with light activity. Even with the patient's condition upon presentation, NanoBone has facilitated rapid bone healing.

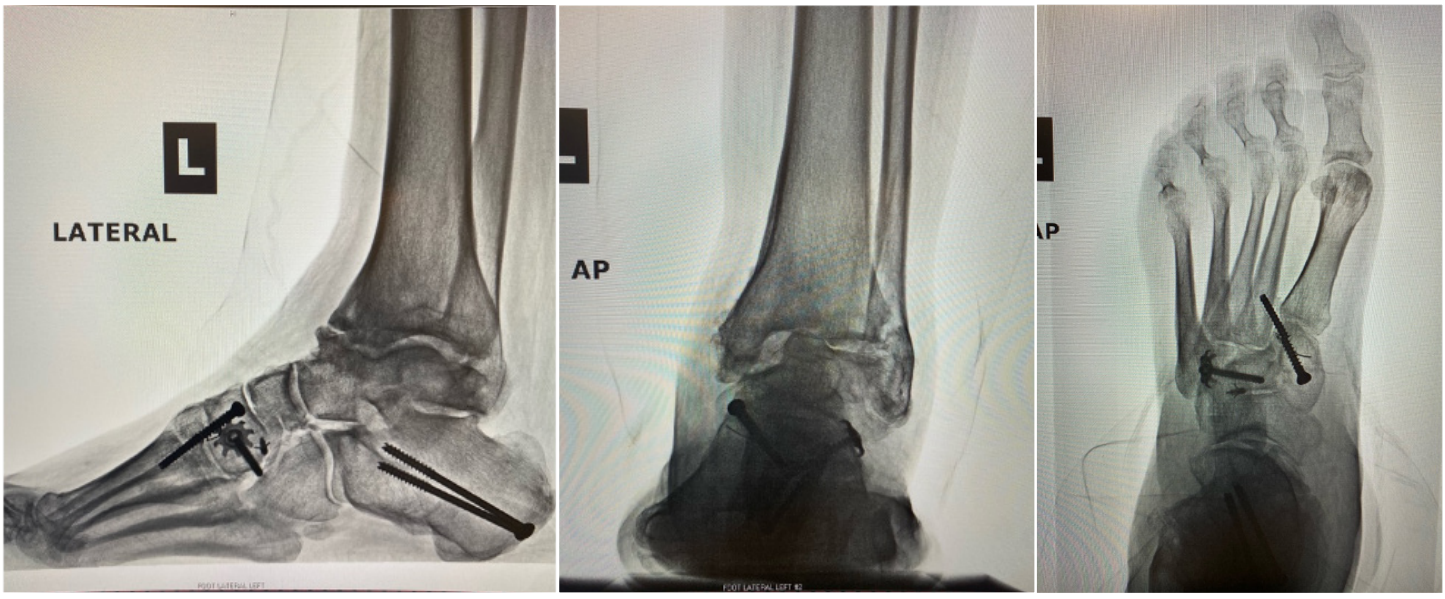

Fig. 1. Preoperative lateral, AP, and oblique radiographs demonstrating previous cavus foot reconstruction and arthritis

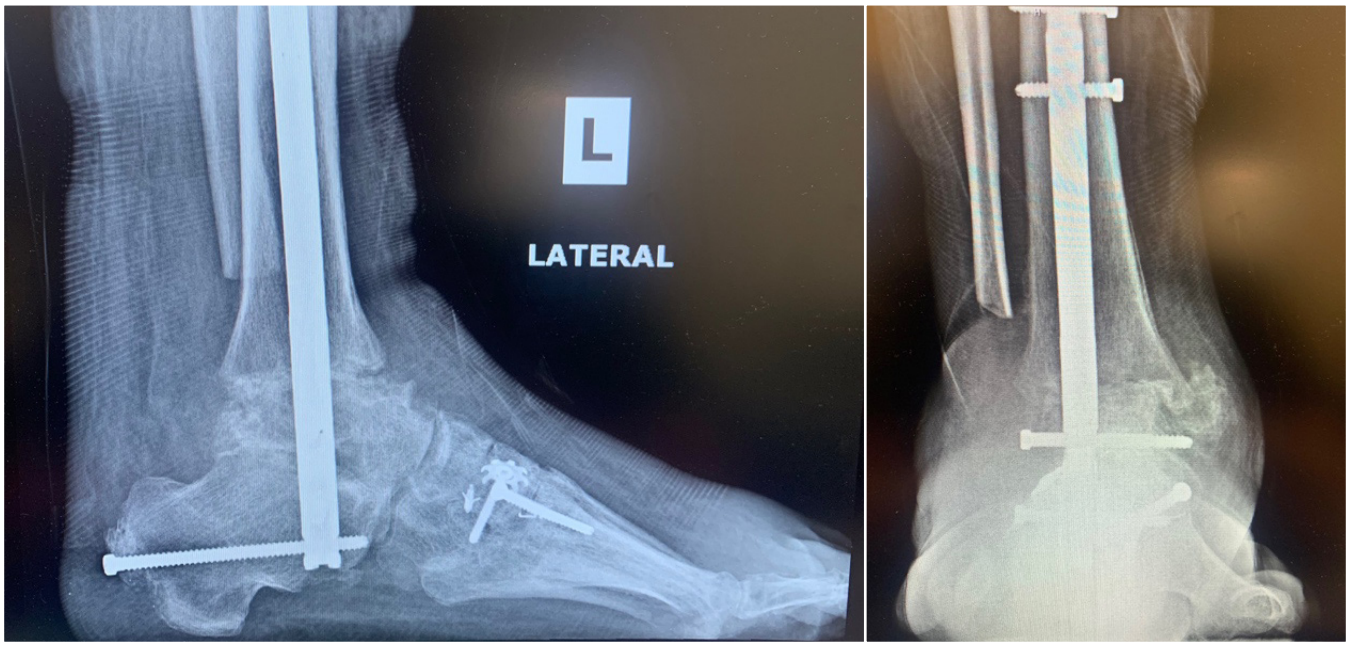

Fig. 2. 3-month postoperative lateral and AP X-rays demonstrating stable, intact implants with good initial fusion

Artoss Inc.
Rapid Osteogenesis™

Artoss, Inc.
425 E Saint Germain St, Ste 106
St. Cloud, MN 56304-0752

T: +1 320.259.4321
F: +1 320.961.2160
info@nanobone.us
www.nanobone.us

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