

CASE STUDY

Limb salvage of a Diabetic Charcot Arthropathy with Osteomyelitis using CERAMENT™, a bi-phasic ceramic bone substitute

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| PATIENT | 57 Year old male |
| DIAGNOSIS | <ul style="list-style-type: none"> • Neuropathic charcot deformity • Secondary mid-foot ulcer • Osteomyelitis |
| TREATMENT | <ul style="list-style-type: none"> • Application of an external fixator for stabilization, bone debridement followed by intravenous antibiotics and local wound care • At 6 weeks the wound had resolved, remaining instability of the ankle and mid-foot <p>Reconstruction divided into 2 separate surgical stages:</p> <p>Stage 1:</p> <ul style="list-style-type: none"> - Complete talectomy with application of an intramedullary retrograde nail - Talus bone replaced with allogenic bone and autologous blood - Lack of structural cancellous support within the void and residual gaps led to utilization of CERAMENT™ BONE VOID FILLER <p>Stage 2: 8 weeks after initial surgery to stabilize the mid-foot</p> <ul style="list-style-type: none"> - Bone resection and arthrodesis with a locking plate - Residual bone void was back filled with allogenic bone and autologous bone - To enhance bone integrity and fill residual gaps CERAMENT™ BONE VOID FILLER was utilized |
| OUTCOME | <ul style="list-style-type: none"> • Post operatively after each surgical procedure the patient was immobilized in a below knee cast for 2 months • 4 months after the second surgical procedure (mid-foot) the patient is full weight bearing • At 6 months the bone appears to be fully incorporated and mature |



Figure 1. Pre-op with exposed talar head and diabetic ulcer.



Figure 2. Figures #2-8 illustrate the pre-op deformity and instability and its associated cause of the diabetic foot ulcer.



Figure 3.



Figure 4.

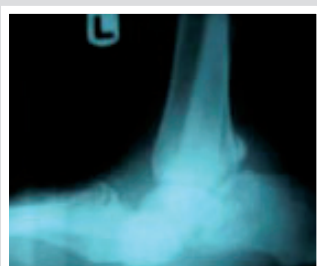


Figure 5.

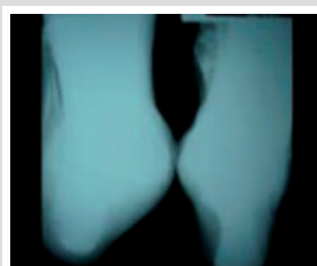


Figure 6.

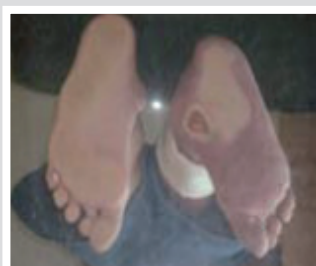


Figure 7.



Figure 8.



Figure 9. An intra-operative view demonstrating temporary stabilization via an external fixator.

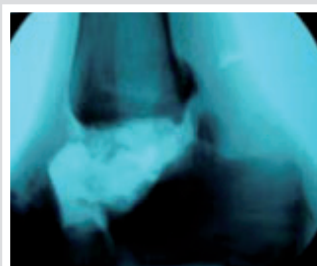


Figure 10. An intra-operative view demonstrating a complete talar neck resection.

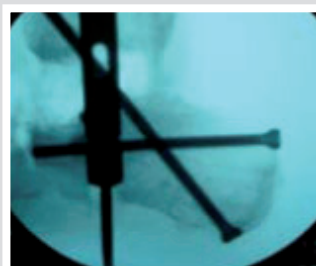


Figure 11. An intra-operative view demonstrating the retrograde intramedullary nail in place waiting for bone substitute.



Figure 12. An intra-operative view showing CERAMENT™ (dark color) and blood soaked allogenic bone (light color) filling the void.



Figure 13. An intra-operative view of the second stage mid-foot reconstruction prior to introduction of bone substitute.



Figure 14. An intra-operative view of the second stage mid-foot reconstruction with the introduction of CERAMENT™ (dark color) and blood soaked allogenic bone (light color).

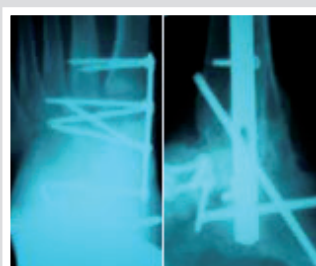


Figure 15 & 16. Six months clinical views demonstrating good bone incorporation at both ankle and mid-foot.



Figure 17. A clinical view post op six months demonstrating a successful plantar-grade foot.



OUR MISSION is to provide an injectable radiopaque bone substitute that has been proven to rapidly remodel into bone, with the potential to be combined with other substances, and is capable of being delivered percutaneously.

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