STIMULAN

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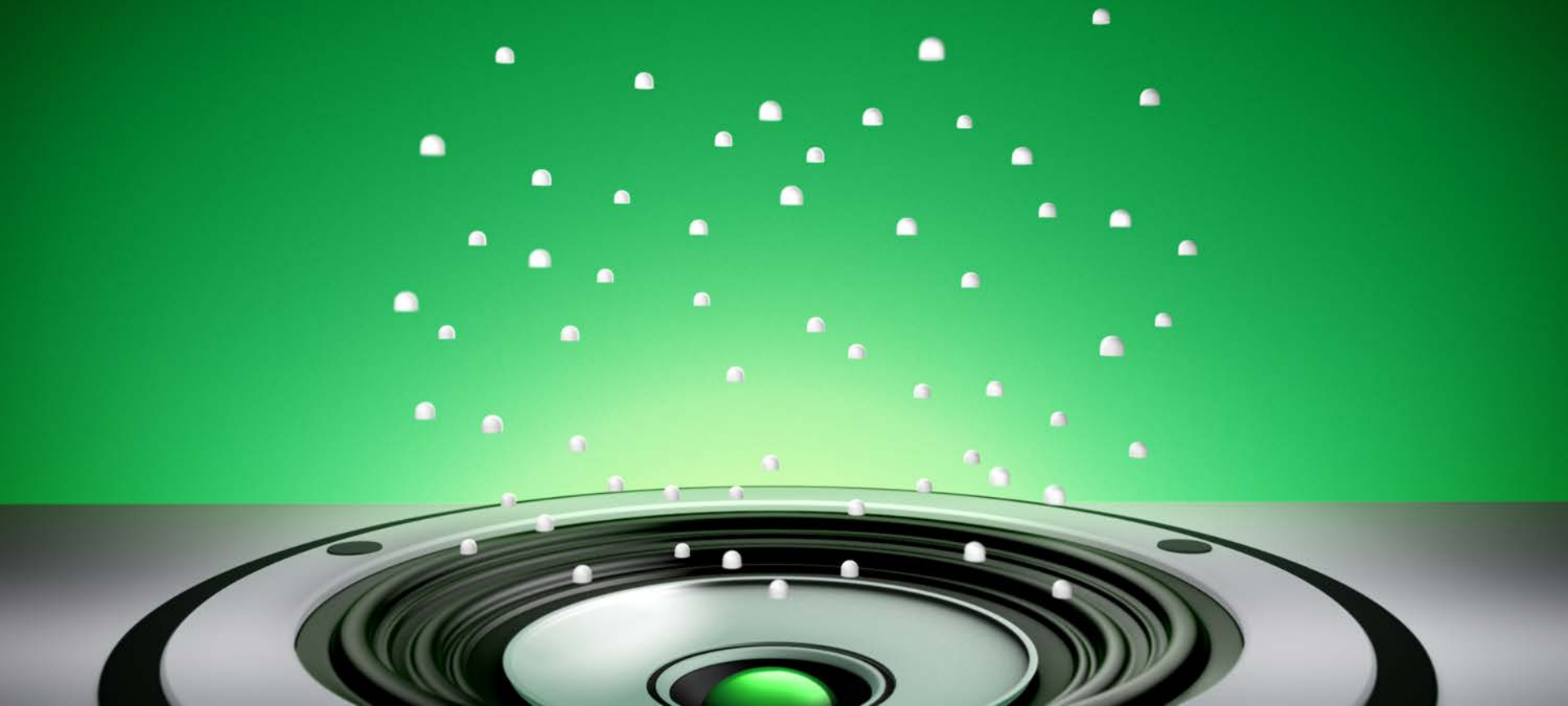
CASE STUDIES



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CASE STUDY
Courtesy of Dr. Daniel Schlatterer
Atlanta Medical Center, Atlanta, Georgia

Clinical particulars

73-year old female with osteomyelitis caused by group B *Streptococcus* and MRSA infection.

Presented with exposed hardware and post-operative drainage issues, 1 year after pilon fracture repair and subsequently 2 weeks after removal of all hardware.

Treatment

Hardware removal and repeat debridement on the medial side of the ankle resulted in a large dead space which was managed using STIMULAN paste.

Outcome

6 months after treatment the patient was free from infection, fully weight bearing and without restrictions on activity – with complete absorption of STIMULAN paste.

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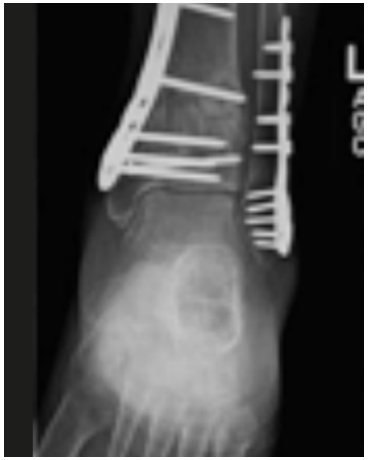
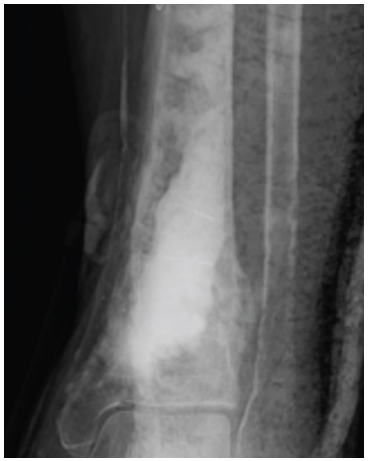
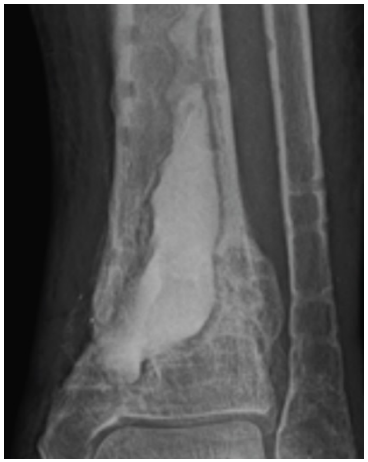


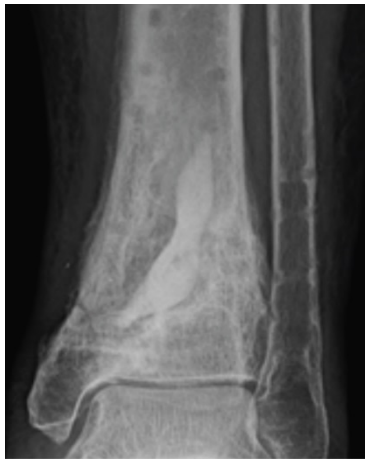
Presentation



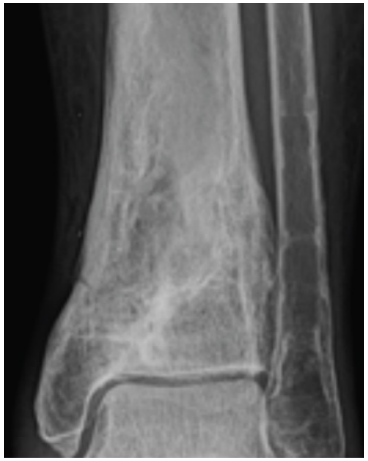
Post-operative



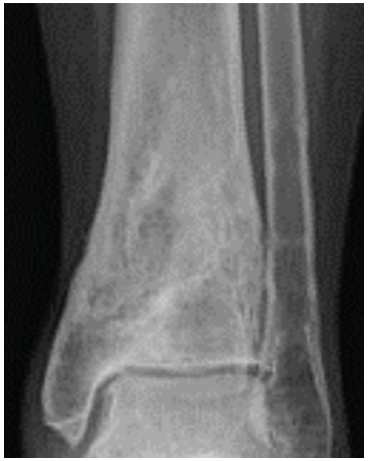
1 month



11 weeks



6 months



15 months

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CASE STUDY
Courtesy of Dr. Daniel Schlatterer
Atlanta Medical Center, Atlanta, Georgia

Clinical particulars

40-year old male sustained an open calcaneus fracture after a 20 foot fall. Initial surgery was an irrigation and debridement with definitive fixation 10 days after injury. 6 months later patient presented with an infected non-union and hardware failure. Cultures were positive for MRSA.

Treatment

Stage 1
Hardware removal, debridement of grossly infected bone and soft tissues. STIMULAN was used to fill the resulting dead space. I.V. antibiotics for 8 weeks.

Outcome

Infection eradicated, soft tissues healed, infectious lab studies normal (1 month after I.V. antibiotics completed). Foot suitable for correction of proximal migration of calcaneus (soft tissue releases) and subtalar fusion.

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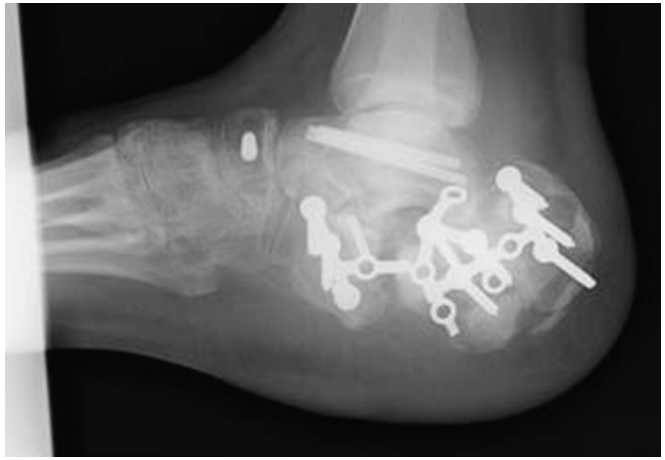
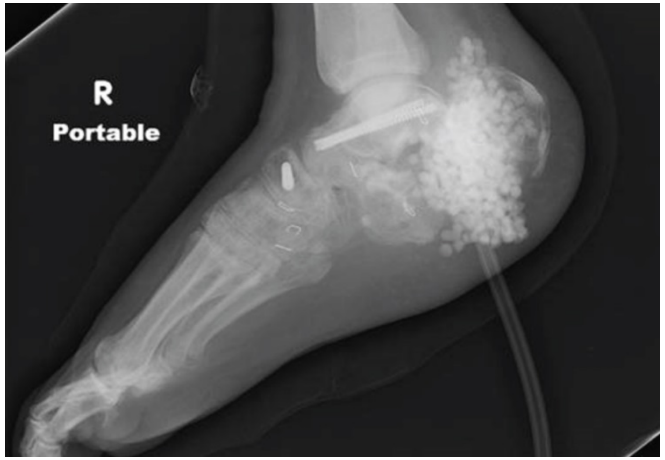
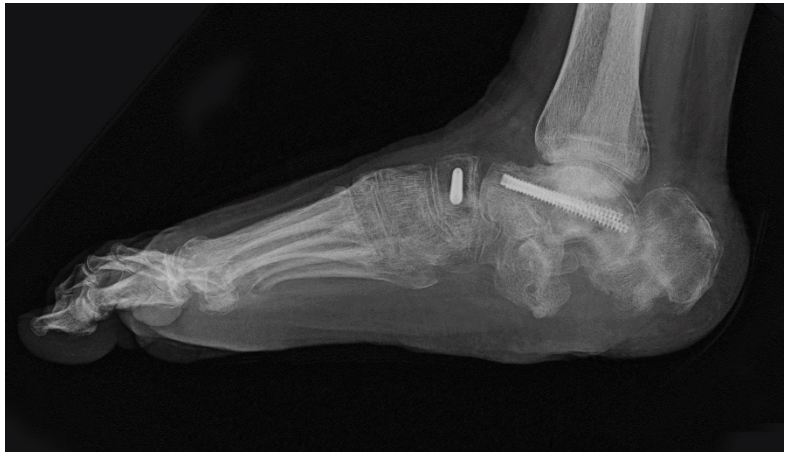


Presentation



Post-operative – Stage 1



4 months

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Treatment

Stage 2
Subtalar fusion procedure performed. STIMULAN was used again to fill the remaining dead space in and around the talus and calcaneus. I.V. antibiotics restarted as prophylaxis.

2 months later hardware removed again due to positive blood cultures. Calcaneus cultures were negative however the PICC line catheter tip was culture positive. A new PICC line was placed followed by another 8 weeks of I.V. antibiotics.

Outcome

This patient is now weight bearing as tolerated and clinically no signs of infection.

Infection in open calcaneus fractures is common and in some series amputation rates exceed 50%. For this patient a 2 stage approach was utilized to treat the infected non-union. Removal of hardware and aggressive debridement of the bone. The dead space was managed with STIMULAN.

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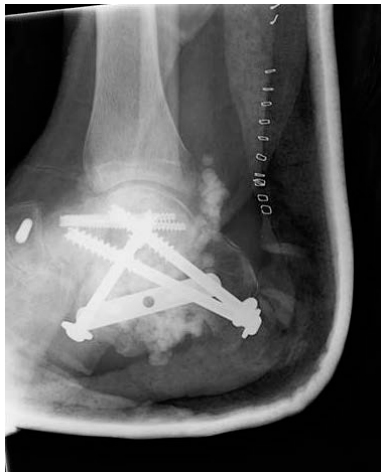
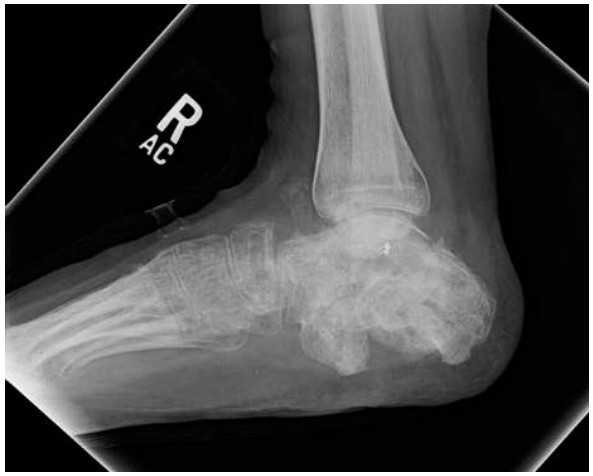
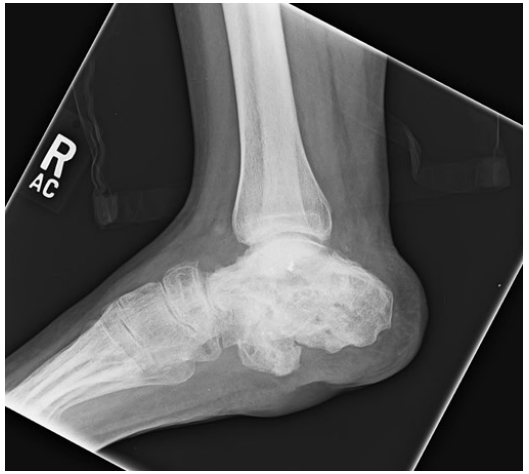


Post-operative - stage 2:
subtalar fusion



6 months after subtalar fusion,
4 months after hardware removal



13 months after subtalar fusion,
11 months after hardware removal

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CASE STUDY
Courtesy of Dr. Mangal Parihar
Mangal Anand Hospital, Mumbai, India

Clinical particulars

42-year old female presented with a recent history involving a closed fracture of the radius and ulna.

Open reduction and internal fixation had been carried out but by the second day an infection was present. Subsequent procedures to change the fixation and alter the antibiotic regimen failed to clear the infection.

Treatment

Debridement and excision of all dead bone was carried out until bleeding bone was found, stabilized with TENS nails and packed with STIMULAN. External support was given by a plastic slab.

Outcome

I.V. antibiotics were continued for 3 weeks only. The STIMULAN beads were absorbed within 3 months. The patient subsequently underwent reconstructive surgery and has bony union and full healing at 1 year.

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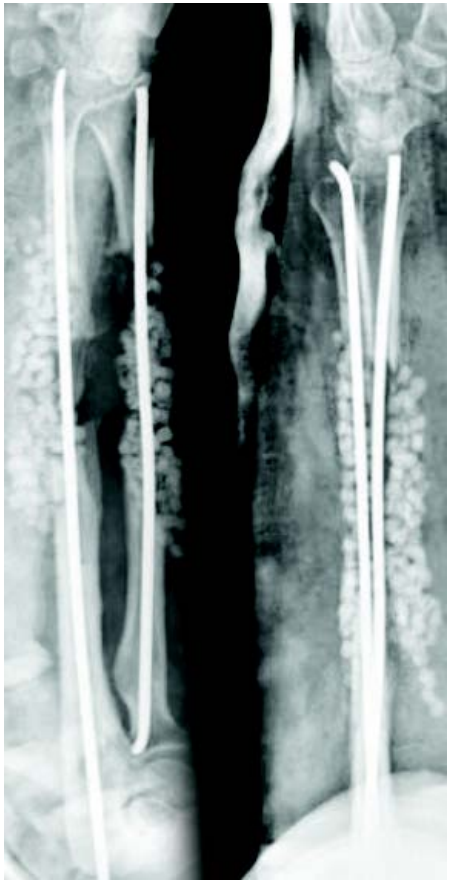
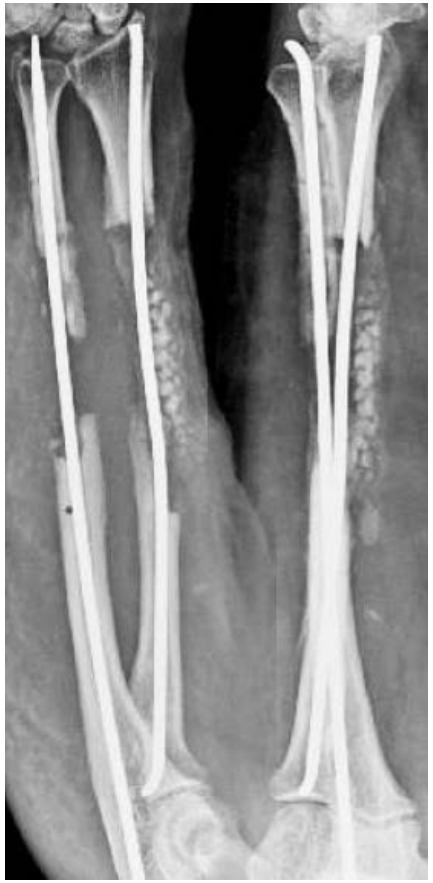
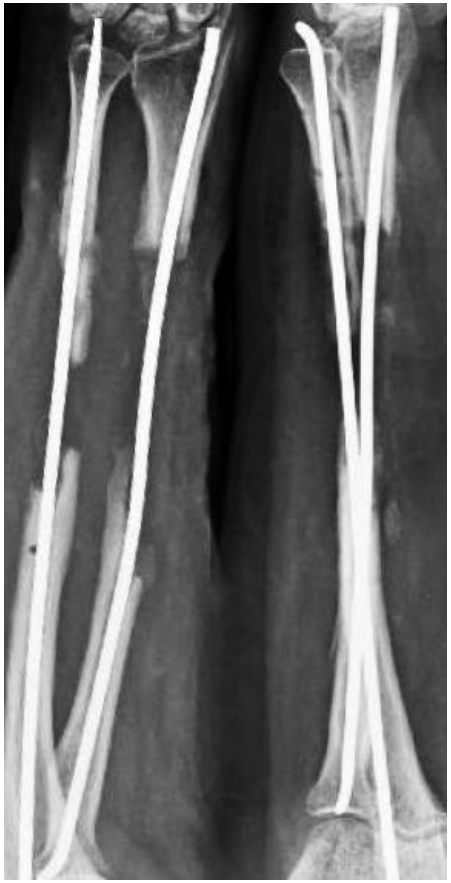


Post-operative



2 months



3 months

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CASE STUDY

Courtesy of Mr. Hemant K Sharma
Hull Royal Infirmary & Castle Hill Hospitals, England

Clinical particulars

A 35-year-old male involved in a road traffic accident, suffered multiple injuries and subtrochanteric fracture of left femur. This was nailed, however subsequently, he developed infection and drainage from both at proximal and distal locking screw area. He went to theatre multiple times and developed wound approx. 15cm on the proximal lateral thigh, which was treated with VAC.

He presented a year later with discharging wound proximally and distally.

Treatment

The femoral nail was removed followed by reaming of the femoral canal and wash-out procedure. 40cc STIMULAN beads were placed in the intramedullary canal. Cultures revealed infection to be *Staphylococcus aureus*.

Outcome

2.5 months post-operatively x-rays showed almost complete absorption of the STIMULAN beads and at 7 months there was complete healing of the non-union.

At 1 year follow-up the patient remains infection free, walking with no pain.

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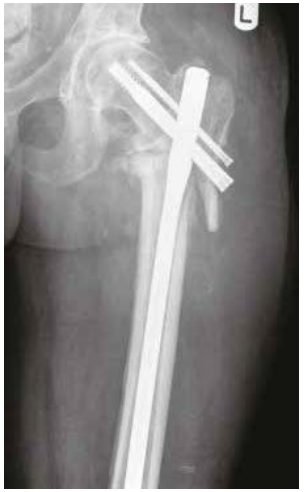

Pre-operative x-ray showing non-union

Post-operative x-ray and CT

2 months

2.5 months

1 year

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