arthrosis of the hindfoot.

ankle replacement for post-traumatic
undergone a triple arthrodesis with
replacement [Figure 1]. She had
/fixed-bearing primary total ankle
modular stem /fixed-bearing total ankle
insertion of the saddle-shaped total
ankle replacement system. Note the
massive cystic changes about the
talar neck and calcaneus.

Management of massive hindfoot osteolysis Secondary to Failed Modular Stem Fixed-bearing Total Ankle Replacement

A 56-year-old woman was referred for treatment of progressively enlarging, massive cystic changes of the talus and calcaneus 4-years following saddle-shaped talar component modular stem fixed-bearing total ankle replacement. [Figure 1]. She had undergone a triple arthrodesis with internal fixation 2-years prior to the total ankle replacement for post-traumatic arthrosis of the hindfoot.

Photograph prior to (A) and following (B) impaction cancellous allograft bone grafting of the cystic cavity. Lateral image intensification view following coupling of the sulcus-shaped talar component (C).

We performed revision total ankle replacement with removal of the saddle-shaped talar component with exchange to a sulcus-shaped talar component (Figure 2), extensive medial and lateral gutter débridement, polyethylene insert exchange and curettage of the cystic osteolysis (Figure 3) followed by impaction cancellous bone grafting supplemented with bone marrow aspirate concentrate [Figure 4]. Secondary to residual osseous defect, polymethylmethacrylate cement was utilized to support the anterior talar component surface [Figure 5]. After prolonged and structured recovery, the patient returned to ambulation with a stable, functional revision total ankle replacement and retained sagittal plane motion noted at 3-year follow-up (Figure 6).

Successful management of extensive osteolysis with conversion from saddle- to sulcus-shaped talar component modular stem fixed-bearing revision total ankle replacement was achieved. Curettage, impaction cancellous bone grafting and component conversion serves as a viable management option in the short-term for this complex problem.

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