

Antibiotic Coated Retrograde Intramedullary Nail for Treatment of Infected Ankle Fusion Nonunion and Arthrosis

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What was the question?

Treating infected ankle fusion nonunion and arthrosis in patients with neuropathy is considerably difficult and complications are frequently encountered. Therefore, eradication of infection as well as successful fusion is required to prevent amputation for the treatment of this group of patients. We sought to answer the following question – what is the outcome of treatment of infected ankle fusion nonunion and ankle arthrosis with Charcot neuropathy with retrograde antibiotic coated locked intramedullary nail?

How did you answer the question?

We describe treatment of 5 patients having Charcot's neuroarthropathy complicated with infected ankle fusion nonunion and ankle arthrosis. All patients were treated with an antibiotic coated locked intramedullary nail. The novel and easily reproducible surgical technique of coating a locked nail with antibiotic impregnated cement will also be discussed in detail.

What are the results?

The average age was 59 (range: 46 to 82) years. All patients were infected as shown by preoperative cultures and all of them had peripheral neuropathy. 4 patients had undergone previous surgeries. One patient had an infected nonunion following fracture proximal to the ankle fusion site and was treated by this technique. The average follow up period was 10 (range: 5 to 18) months. Bony union was achieved in all patients. In all patients there was no deformity and no recurrence of infection.

What are your conclusions?

Treatment with an antibiotic coated nail achieves both local antibiotic delivery as well as stable internal fixation. Since the IM nail is locked, it provides excellent stability and can be used to achieve bony union. Clinical outcomes were excellent for an otherwise difficult clinical problem.