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Case Report

Posterior Locking Nail Drop in Pantalar Arthrodesis: A Case Report

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Abstract: Pantalar arthrodesis is a common practice, especially in Charcot hindfoot. We present a case of hardware failure, which is probably more common in Charcot foot treatment. The approach of the lower locking nail is from posterior to anterior and went through the tuber calcaneus to the calcaneal anterior part, the posterior nail protrudes on both feet. Due to neuropathy and sensual disturbance, we suggest a close follow-up.
Keywords: Pantalar nail, locking screw, hardware failure, charcot foot.

Introduction

Pantalar nail is a common technique, the common indication for this procedure includes degenerative or inflammatory arthritis, posterior tibial tendon deficiency with resultant degenerative joint disease, posttraumatic osteoarthritis, developmental or acquired deformity of the foot, some cases of osteomyelitis, flaccid paralysis from neuromuscular conditions (poliomyelitis), cerebral palsy, and Charcot joint [1-3]. Since the introduction of the posterior to anterior locking nail, the success of this operation improved [1].

Usually, there are few approaches, we used the fibular osteotomy approach, which is the most common [4-6]. Prior to the operation, we must do a CT scan. This approach allows us to debride both the ankle and subtalar joint followed by the fusion process. It is approximately 2-3 hours procedure finished by locking the lowermost part of the nail. Following are 6-8 weeks of non-weight bearing, and one of the main advantages is to walk without the brace.

Patient information

We report a 53-year-old patient, a retired nurse, married with 2 children, and currently a smoker. She is suffering from peripheral neuropathy and Charcot hindfoot. Her medical records include a peripheral vein disease (PVD), chronic kidney disease, and unbalanced diabetes mellitus type 2.

Materials and Methods

Lately, we came across dropping out of this posterior nail in two operations the nail isn't engaged in the intramedullary nail which allows the locking regression. While supine, we used pantalar nail with 4 degrees of valgus position. The patient was on a non-weight bearing for 6 weeks so the foot was placed with the heel on the bed, and this may have caused pressure on the back of the heel. What is clear is that the skin was checked daily and since there was a breakage in the skin, we took out the nail.

Results

The outcome was good and uneventful. The surgery went as expected and without complication. The patient returns to walk and can stand on her feet. After a few weeks, there was a union in radiographic images. The patient is satisfied with her condition and reports improvement compared to her previous condition.

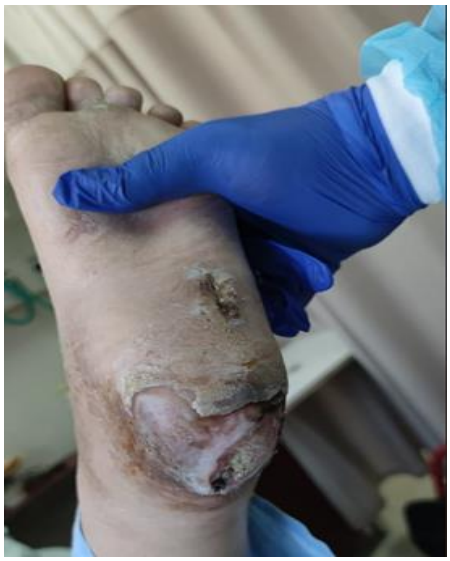

Figure 1. Protruded screw

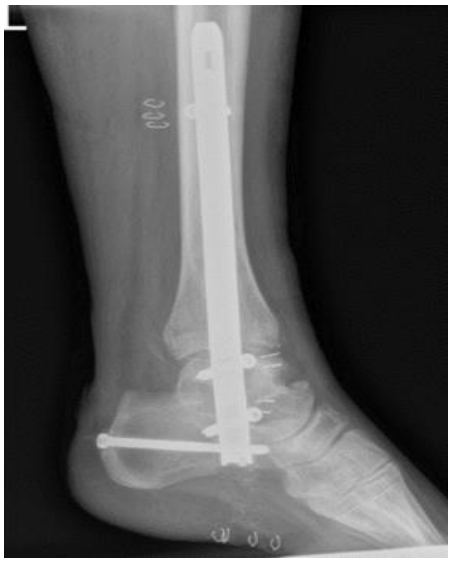

Figure 2. Protruded screw x-ray

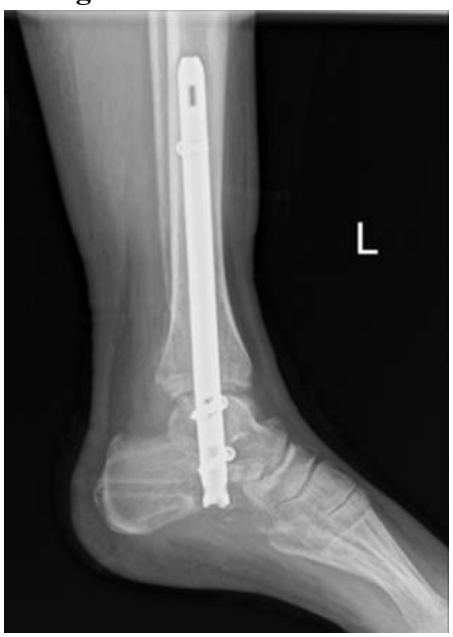

Figure 3. Removed Screw

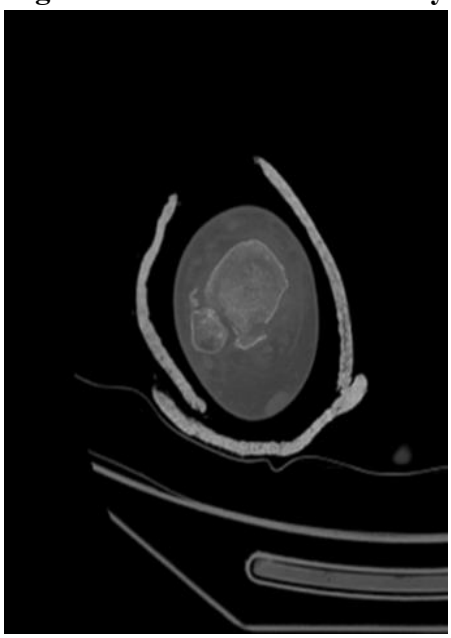

Figure 4. Charcot foot

Conclusions

We suggest close follow-up of this patient especially in the cases when the non-weight bearing is applied, supine position should include leg support.

Pantalar arthrodesis can be treated either by a retrograde nail or x-fix, the pantalar nail is easier for the patient, in terms of weight, size, and chance of getting hurt. But the pantalar nail technique of insertion is difficult and might lead to a hardware failure.

Declarations

Acknowledgments: Not applicable.

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Conflict of Interest: Authors declare no conflict of interest.
Informed Consent: Written informed consent was obtained from the patient to publish this case report and accompanying images.
Ethical Approval: Taken.
Author Contribution: All authors contributed equally.

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