



ELSEVIER

Case report

Limb salvage for spreading midfoot osteomyelitis following diabetic foot surgery

Javier Aragón-Sánchez^{a,*}, José L. Lázaro-Martínez^b,
Almudena Cecilia-Matilla^b, Yurena Quintana-Marrero^a,
María J. Hernández-Herrero^a

^a Diabetic Foot Unit, La Paloma Hospital, Las Palmas de Gran Canaria, Spain

^b Diabetic Foot Unit, Complutense University Clinic, Madrid, Spain

KEYWORDS

Diabetic foot;
Osteomyelitis;
Bone infection;
Diabetic foot
infection;
Foot ulcer

Abstract Osteomyelitis is a challenging problem when it appears in the feet of patients with diabetes. Although the most frequent port of entry for bacteria is an ulcer, surgical wounds also permit entry of bacteria into the foot. This surgical complication may become limb-threatening, and treatment is a challenge. Here we present two cases of patients with neuropathic feet and palpable distal pulses, who were previously treated with surgery, and who presented with spreading bone infection in the midfoot. Pictures and radiological studies are shown. In both cases, bone infection caused severe destruction of the architecture of the midfoot, and the limbs of both patients were threatened. Midfoot osteomyelitis is associated with a higher rate of major amputations than osteomyelitis of the forefoot. Furthermore, meticillin-resistant *Staphylococcus aureus* was isolated in one of the cases. Our successful limb salvage approach was based on three steps: 1) removing the infected bone; 2) culture-guided antibiotic treatment; and 3) stabilizing the infected foot by means of total contact casting with openings resulting in a stable foot. To the best of our knowledge, there are no reports of the use of a total contact cast to stabilize an unstable and infected foot. Eight years (Case 1) and four years (Case 2) after complete healing, there were no recurrences of infection.

© 2011 Tissue Viability Society. Published by Elsevier Ltd. All rights reserved.

Introduction

Osteomyelitis is one of the most common diabetic foot infections [1] and we have previously reported that 72.2% of infected patients had osteomyelitis [2]. While the most frequent point of entry for the bacteria is usually an ulcer, surgical wounds can

* Corresponding author. C/Eduardo 1,4^oD, 35002 Las Palmas de Gran Canaria, Canary Islands, Spain. Tel.: +34 928383161, +34 609569937(mobile); fax: +34 928242840.

E-mail addresses: javiaragon@telefonica.net, draragon@piediabetico.net (J. Aragón-Sánchez).

also serve as an entry point into the foot, with potentially limb-threatening consequences. In addition, although it has been reported that 82% of patients whose wounds did not heal in a surgical series later presented with osteomyelitis [3] few studies have been conducted dealing with complications associated with diabetic foot surgery. Here we present two limb-threatening cases of diabetes patients with palpable pulses and neuropathic feet, who developed osteomyelitis and severe destruction of the midfoot following surgery.

Case reports

From 1 April 1997 to 1 February 2010, 934 patients with diabetes and foot problems were treated in our specialized department. During this period we treated 561 patients with foot infection and 329 of them were diagnosed with osteomyelitis. Of the latter group, 20 patients presented midfoot osteomyelitis. We present here the only two cases of patients with spreading bone infections in this location following diabetic foot surgery. These patients gave informed, written consent to surgery and clinical photography, and for their case reports to be published anonymously.

Case 1

The patient was a 52-year-old male who was treated in our diabetic foot unit for recurrent chronic ulceration below the second metatarsal head (Fig. 1). The patient had undergone a third



Figure 1 Neuropathic plantar ulcer below the second metatarsal head. The patient had undergone previous toe amputations.

toe amputation 5 years previously and a hallux amputation 2 years previously. He had a history of type 2 diabetes mellitus that had been treated with insulin for the past 8 years. He also had peripheral neuropathy, hyperlipidaemia and hypertension. He admitted to excessive alcohol consumption during weekends. Both distal pulses were palpable. The patient could not feel a Semmes-Weinstein monofilament at any of the 10 points tested on his feet.

As the ulcer had recurred despite the use of tailored shoes and insoles, a second metatarsal head resection was recommended. The pre-operative X-ray is shown in Fig. 2. The surgical procedure was performed using a dorsal approach, without any intra-operative complications, and the surgical wound was closed using a monofilament suture. A post-operative X-ray was taken and is shown in Fig. 3. By the 7th day post-surgery, the patient's foot was observed to be swollen, and a surgical wound infection was diagnosed. Sutures were removed and pus was drained. *Staphylococcus aureus* was isolated from the wound and appropriate antibiotic treatment was administered. The patient was discharged from the hospital 27 days post-surgery, with the plantar ulcer completely healed and the dorsal surgical wound showing no signs of infection and healing satisfactorily. As the plantar ulcer had healed, weight bearing was permitted. However, 43 days after discharge from the hospital the patient returned with a very swollen, erythematous foot, with fluid discharge from the surgical wound. The patient was readmitted to our unit and



Figure 2 X-ray taken before the surgery.

Download English Version:

<https://daneshyari.com/en/article/2673961>

Download Persian Version:

<https://daneshyari.com/article/2673961>

[Daneshyari.com](https://daneshyari.com)