

# Primary Actinomycosis of the Foot: Case Report

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## Introduction

Primary infection by Actinomyces in the lower extremity is very uncommon, however, it can cause destructive changes in both the skin and adjacent tissues.

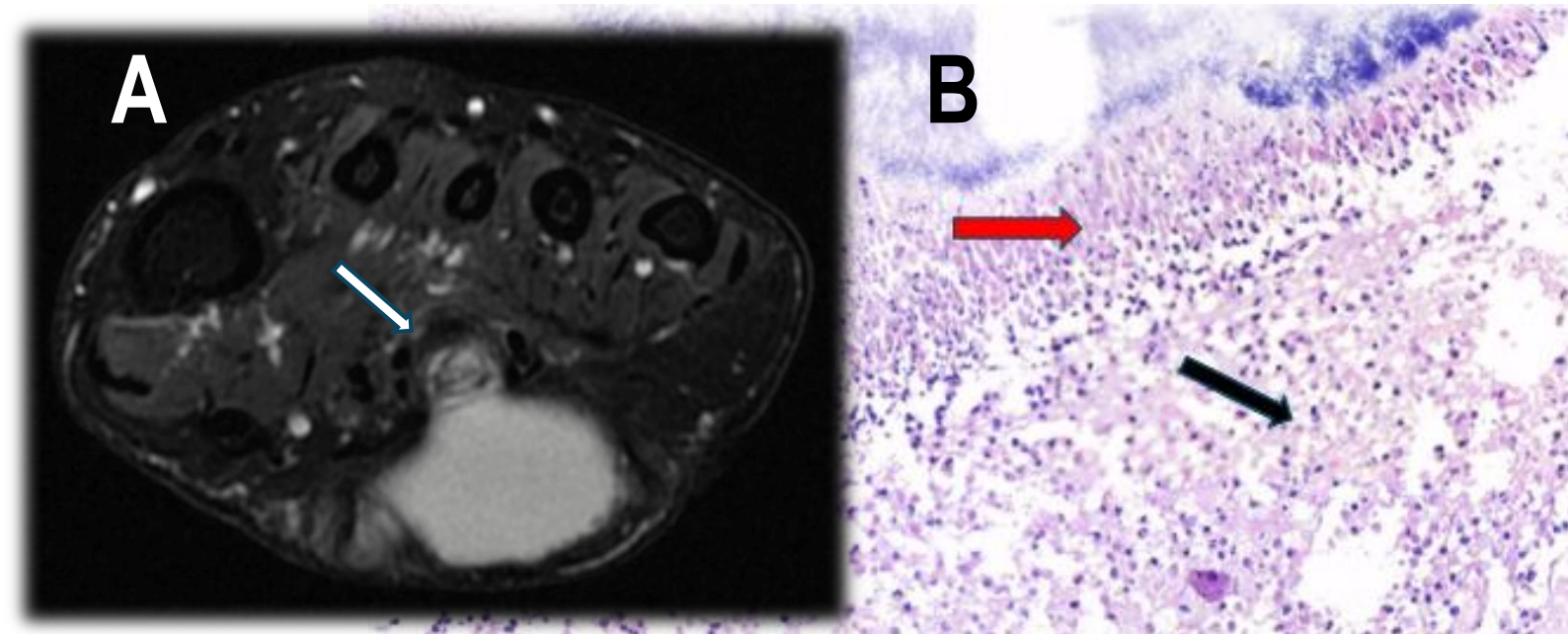
Although the definitive diagnosis is obtained through the demonstration of Actinomyces in cultures, these can be negative in up to 50% of cases.

Penicillin is the treatment of choice and may be combined with a surgical approach.

## Case Report

The patient presented with a complaint of a tumor on the plantar surface of the left foot, which had progressed slowly over the course of seven years. On examination, a mass was observed, with no local or systemic signs of infection. (fig 1A)

Magnetic resonance imaging demonstrated small hyperintense spherical lesions with a hypointense peripheral border and a small hypointense central focus - a “dot in a circle” sign. (fig 2A)



**Fig 2** : A. Dot in circle in MRI; B. Image of the anatomopathological examination demonstrating inflammatory cluster (black arrow) and presence of multifilamentous bacteria (red arrow).

During the procedure, meticulous dissection was necessary, preserving the subcutaneous tissue, so that there would be adequate evolution of the surgical wound. (fig1B) To aid healing, the patient was instructed not to put weight on the operated limb and to keep the dressing on, with weekly changes performed by the surgical team. There was no bacterial growth in the cultures, however, the anatomopathological examination showed the presence of multifilamentous bacteria, suggestive of Actinomyces sp. (fig 2B) Treatment was supplemented with oral penicillin and the patient evolved with adequate healing and complete improvement of the condition observed, after 3 years of follow-up. (fig1C)

## Discussion

Primary actinomycosis of the skin of the extremities is very uncommon and can be locally destructive. Rapid interventions minimize complications.

Care of the wound becomes essential, since it is common for the lesion to evolve into skin necrosis, both due to the characteristics of the infection and the superficiality of the incision. The case report reinforces the importance of care of the surgical wound for the adequate recovery of the patient.



**Fig 1**: A. Clinical presentation; B. Surgical removal; C. After 3 years of follow-up

*I have no conflict of interest*

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