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Short communication

Syphilis as osteomyelitis of the fifth metatarsal of the left foot: the great imitator hits once again

Valeria Gaspari[a], Liliana Mazza[b,*], Daniela Pinto[b], Beatrice Raone[a], Pietro Calogero[b], Annalisa Patrizi[a]

[a] Dermatology Unit, Head and Neck Department, S.Orsola-Malpighi University Hospital, Bologna, Italy
[b] Acute Geriatric Unit, S.Orsola-Malpighi University Hospital, Bologna, Italy

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ABSTRACT

Introduction: We report an unusual case of osteomyelitis of the left foot due to syphilitic bone involvement.
Case presentation: A 73-year-old man came to our attention with a four-month history of fever and a hypertrophic ulceration of the fifth metatarsal of the left foot. He had a history of syphilis treated years before. The CT scan showed an evident osteolytic area of the metatarsal phalangeal joint of the fifth left toe. The serological tests demonstrated a syphilitic reinfection. On suspicion of a bone localization of syphilis, an US-guided bone biopsy was performed. The histological examination with silver impregnation confirmed the diagnosis. The patient was treated with the traditional treatment of syphilis using penicillin, obtaining the complete resolution of the radiological and cutaneous alterations.
Conclusions: The aim of this work is to sensitize clinicians to suspect syphilis in case of osteolytic lesions in patients with a history of this disease.

1. Medical imagery

A 73-year-old man, pathologically obese, came to our attention with a four-month history of fever, oedema, erythema and a painful hypertrophic ulceration of the fifth metatarsal of the left foot (Fig. 1). The CT scan showed an evident osteolytic area of the metatarsal phalangeal joint of the fifth left toe. Blood exams highlighted leukocytosis, hyperglycemia, and increased inflammation indexes. The patient's history revealed hypertension, hypercolesterolemia, OSAS, COPD, past ulcerations of the left leg, self-cured.

He reported that he had previously been treated for syphilis, with negative non-treponemal tests. We therefore decided to repeat the treponemal and non-treponemal blood tests, which demonstrated a syphilitic reinfection, with positivity of both treponemal (TP-EIA positive, TP-HA 1/640) and non-treponemal tests (RPR 1:64). On suspicion of a bone localization of syphilis we performed a US-guided bone biopsy. The histological examination revealed widespread necrosis, chronic flogistic process with microgranuloma and aspects of chronic perivasculitis. Silver impregnation revealed some spirochaetes.

The clinical picture, combined with the radiological and histogical findings, led us to the diagnosis of secondary syphilis

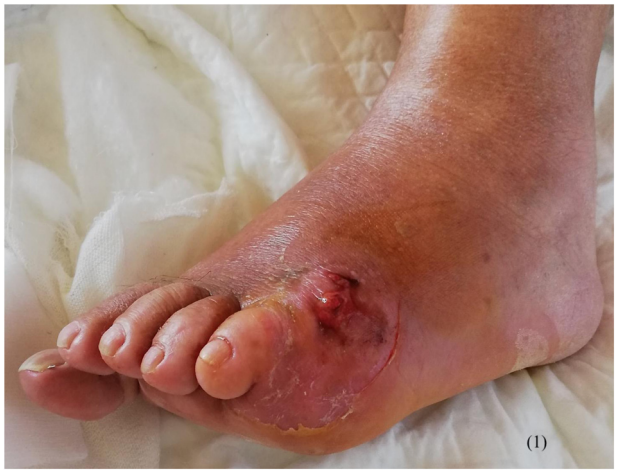

Fig. 1. Hypertrophic ulceration of the fifth metatarsal of the left foot due to syphilitic bone involvement.

* Corresponding author at: Policlinico Sant'Orsola-Malpighi, via Albertoni 15, 40138 Bologna, Italy.
E-mail address: liliana.mazza3@gmail.com (L. Mazza).

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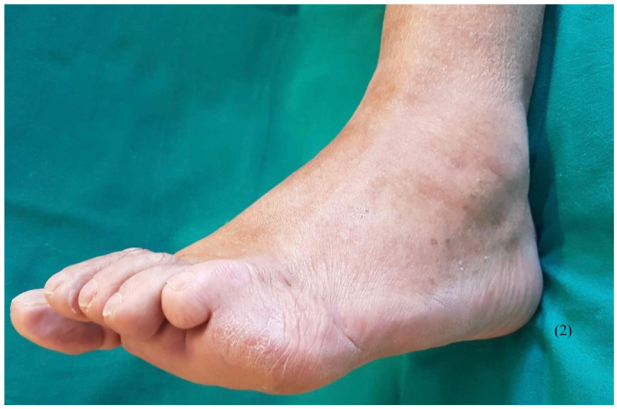

Fig. 2. Complete resolution of the ulceration after treatment with benzathine penicillin G 2.400.000 intramuscularly once a week for three weeks.

with bone localization. The patient was then treated with benzathine penicillin G 2.400.000 intramuscularly once a week for three weeks, with the complete resolution of the radiological and cutaneous alterations (Fig. 2). Also, the non-treponemal test showed a slight decrease in titer, from 1:64 to 1:8, at the three months follow-up after therapy.

Bone and joint involvement in early syphilis is rare and more commonly seen in congenital and tertiary syphilis (Lomholt, 1977). In secondary syphilis, osteitis or superficial osteolysis may be observed and few cases have been reported (Park et al., 2014; Liang et al., 2018). The disease can be confused with other immune-mediated, neoplastic, dysmetabolic and vascular processes.

This case suggests that in a patient with a history of syphilis and the presence of an ulceration of long duration and unknown origin, systemic organ involvement of syphilis should be included in the possible differential diagnosis (Avenel et al., 2009).

Ethical statement

This Medical Imagery respects ethical standards. No funding was involved. Patient's anonymity has been protected.

Conflict of interests

All authors disclose any financial and personal relationships with other people or organisations causing conflict of interest.

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