

Unexplained bone pain and sexual addiction

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DESCRIPTION

A 61-year-old single man with three children and a history of epididymo-orchitis and urethral stenosis 2 years earlier had suffered from bone pain for 3 months. The pain was disabling and affected the legs, pelvis and forearms. He had neither fever nor asthenia but had lost 8 kg. He was treated with paracetamol and tramadol with poor improvement. Then a discrete maculopapular rash of the trunk appeared, initially suggesting a drug reaction. At admission to hospital 6 months after the onset of the symptoms, the patient reported multiple bisexual relationships for about 2 years. There were slight painful indurations of the tibial crests and slightly infiltrated coppery palmoplantar papules with a thin squamous rim (figure 1), without any other clinical abnormality.

X-ray and CT scan revealed cortical osteolysis associated with periosteal reactions in the two tibias, the sternal manubrium, the 7th and 11th left ribs and both radius and ulnas (figures 2 and 3). Bone marrow puncture and protein electrophoresis were normal. Syphilis serology was positive with *Treponema Pallidum* Hemagglutinations Assay (TPHA) at 1/20 480 and Venereal Disease Research Laboratory (VDRL) at 1/16. Hepatitis and HIV serology were negative. Cerebrospinal fluid examination was normal. Penicillin-G treatment 4 MIUx6/day was initiated for 15 days, and bone pain resolved within



Figure 2 X-ray of both tibias and fibulas; white arrows indicate areas of cortical osteolysis.

7 days. Three months later, bone CT scan showed an almost total resolution of the bone lesions.

Syphilis is a sexually transmitted disease with a wide variety of symptoms. Its incidence has been rising since 2000 in many countries, as in the USA (from 2.1 to 8.7/100 000 between 2000 and 2016). Syphilis mainly affects men who have sex with men, often HIV infected (47%¹). Secondary syphilis may concern many organs, but very rarely the bone, with only 37 cases reported in 49 years.



Figure 1 Plantar papules with a thin squamous rim, 'Biett's' collarette.

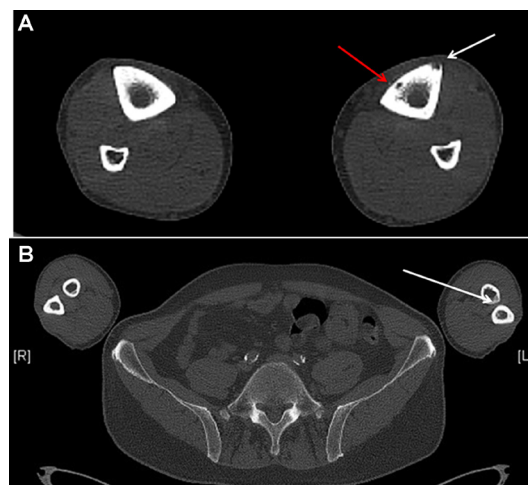


Figure 3 (A) Axial CT image of tibia and fibula: the red arrow indicates the periostitis reaction; the white arrow indicates area of cortical osteolysis. (B) Axial CT image: white arrow indicates area of cortical osteolysis of left radius.



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The most frequently affected bones were long bones of the limbs (60%), the skull (57%) and ribs (14%).² To observe spirochetes on bone biopsy is erratic. Indeed, only five cases were associated with the presence of a micro-organism in the biopsy, never by using the same technique²: either dark-field microscope, silver or immunoperoxidase staining or PCR. Histopathology examination usually finds plasmacytic infiltration.

X-rays typically show multifocal bone destruction and sometimes periostitis. Differential radiological diagnoses include multiple myeloma, cancer, bone metastatic lesions, amyloidosis, sarcoidosis, tuberculosis and Paget's disease.³ Yaws has a similar radiological aspect of polyosteoperiostitis but localised rather in the feet and hands and usually more severe than in syphilis.

This case was treated as tertiary syphilis, because the bone involvement was severe. Moreover, treatment data on the

efficacy of intramuscular penicillin G for syphilitic bone lesions are limited.³

In conclusion, bone syphilis is relatively easy to diagnose with serological tests and also easy to treat with penicillin G. The main challenge is now to evocate such a diagnosis, in particular in front of unexplained bone pain in patients with at-risk sexual intercourses.

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Learning points

- ▶ Early syphilis, as the great imitator, can induce multifocal bone destruction and periostitis causing bone pain.
- ▶ Unexplained bone pain may discuss syphilis in patients with at-risk sexual intercourses.

REFERENCES

- 1 Kidd S, Torrone E, Su J, *et al.* Reported primary and secondary syphilis cases in the United States: implications for HIV Infection. *Sex Transm Dis*. In Press. 2018.
- 2 Park KH, Lee MS, Hong IK, *et al.* Bone involvement in secondary syphilis: a case report and systematic review of the literature. *Sex Transm Dis* 2014;41:532–7.
- 3 Smith JE, Adair LB, Press HC. Destructive lesions of bone: X-ray differential diagnosis. *J Natl Med Assoc* 1976;68:331–3.

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