Sacral osteomyelitis due to *Nocardia asteroides*

A case report

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Nocardial osteomyelitis is increasing in both immunocompetent and immunosuppressed patients. We report a case of a *Nocardia asteroides* infection of the sacrum in a 37-year-old man who was successfully treated surgically.

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Case report

A previously healthy 37-year-old man was admitted to our hospital with a 3-week history of fever and low back pain. The pain, which was constant, moderate, and irradiated to the right hip, was not relieved by rest or analgetics. At admission, he was febrile (38.5 °C) and experienced pain in the right sacroiliac joint upon direct pressure and pelvic compression. The hip joints were painless and had normal movements. The ESR was 55 mm, and there was a leukocytosis of 15 × 10^9/L. There was no known history of drug abuse, and the anti-HIV test was negative. An initial radiograph of the pelvis was normal. However, the scintiscan showed an increased uptake of isotope over the right sacroiliac joint. Under image intensification control, a needle aspiration of the joint was performed, and a few milliliters of pus was obtained. *Nocardia asteroides* was isolated from the culture and was sensitive to cotrimoxazole. The patient received perorally daily doses of 800 mg of sulfamethoxazole and 160 mg of trimethoprim for 10 days. There was a poor response to treatment, and a lumbar fluctuant abscess was discovered 25 days after admission. A radiograph of the pelvis on the twenty-sixth day after admission showed a lytic lesion over the right upper sacrum, and a CT scan showed a lytic lesion breaking through the sacrum wall, indicating a retrofascial abscess (Figure 1).

A posterior surgical approach over the right sacroiliac area was performed, and a large amount of thick pus was evacuated. The entire infected tissue was excised. The cavity in the sacrum was curetted and lavaged with saline. *Nocardia asteroides* was identified from the culture of the operative samples. The wound healed uneventfully. Postoperatively, a return to progressive ambulation was allowed. The treatment with peroral co-trimoxazole was continued for 2 months. After this, the patient has been followed-up for 12 months, and he has remained asymptomatic.

Lytic lesion of the sacrum (arrow).

Figure 1. A 37-year-old man with *Nocardia asteroides* osteomyelitis.

Discussion

Nocardia asteroides is a gram-positive, partially acid-fast, branching filamentous actinomycete, which was previously reported to be an atypical *Mycobacterium* or *Actinomyces* species.

Nocardial infections are occurring with increasing frequency in patients with associated diseases (Di Vittorio et al. 1982) and in those being treated with immunosuppressive agents. However, many infected persons appear to have no obvious predisposing factors (Beaman et al. 1976). The most common primary site of involvement is the pulmonary system, with hematogenous dissemination to the brain and subcutaneous tissues (Curry 1980).

In 1987, 14 cases of nocardial bone infections were reported (Brauner et al. 1985, De Luca et al. 1986, Schwartz and Tito 1987). In 13 cases the osseous involvement was probably secondary to hematogenous dissemination, and in 1 case the infection resulted from direct inoculation of the bone (Brauner et al. 1985). Our patient probably had a hematogenous infection, because there was no apparent primary focus.

Antinocardial medication alone, however, is only occasionally successful in osteomyelitis (De Luca et al. 1986), whereas we suggest immediate operative drainage of the abscess and sequestrectomy.

With appropriate treatment, the prognosis of nocardial osteomyelitis appears to be good.

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