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Title: Spina ventosa: An unusual case of primary tuberculosis infection

Abstract:

Background: Spina Ventosa, also known as tuberculous dactylitis, is a rare condition that affects the metacarpals, metatarsals, and phalanges. It is characterized by a spindle-shaped expansion of the short tubular bones caused by tuberculous granuloma. It is relatively uncommon in individuals over the age of 5 years. We report an unusual case of isolated tuberculous dactylitis in an immunocompetent host.

Case description: A 34-year-old man presented with a one-year history of pain and swelling in his right index finger. Upon examination, it was discovered that he had suffered a minor injury a year ago. The patient did not exhibit any symptoms of fever, decreased appetite, or weight loss, and there was no indication of tuberculosis transmission in his medical history. The examination revealed swelling around the third phalanx of the finger, but there were no signs of skin inflammation. The finger's range of motion was limited and caused discomfort. A radiograph of the right hand revealed a bone abnormality with unclear boundaries in the second bone segment. Magnetic resonance imaging indicated an inflammatory condition in the second and third phalanx, with swelling in the bone marrow and signs of osteoarthritis. A bone sample was taken from the third phalanx, and Mycobacterium tuberculosis Polymerase chain reaction (PCR) was performed, which turned out to be positive. The histology examination indicated the presence of a centrally located epithelioid and giant cell granuloma surrounded by caseous necrosis Thoraco-abdominal computed tomography did not identify any other sites of tuberculosis infection. Chemotherapy regimen consisted of four antitubercular drugs (isoniazid, rifampicin, pyrazinamide, and ethambutol) for two months, followed by a two-drug regimen (isoniazid and rifampicin) for ten months. Immobilization of the index finger with a splint was also implemented for 21 days. The outcome was favorable, as radiographs taken after one year of treatment revealed bone consolidation.

Discussion: Tuberculous dactylitis without initial infection is rare, and delays in diagnosis and treatment. The key component of the diagnostic process is the bone biopsy, which includes histological and bacteriological examinations, as well as PCR testing for Mycobacterium tuberculosis.

Biography

Dr. Helmi Ernandes studied at the faculty of medicine of Tunis, Tunisia and graduated as MD in 2020. He obtained the position of assistant professor at the same institution He works int the infectious diseases department of The Mohamed Taieb Kassab Institute of Orthopedics and is specialized in the field of bone and joint infections. He is an ESCMID member, a member of ESCMID Study Group on implants associated infections, ESCMID Study Group on biofilms and ESCMID study group on clinical parasitology.