

Mini Review

Tuberculosis of the Knee: A Review of Literature

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Abstract

With the resurgence of tuberculosis, due to the pandemic of human immunodeficiency virus and the increase in the number of immunocompromised patients, osteoarticular Tuberculosis has been increased too. Tuberculosis aetiology should be considered in the differential diagnosis of knee arthritis. Here, I document a brief review of literature. In this review, there are not figures and outcomes.

Keywords: Osteoarticular tuberculosis; Knee joint; Disease

Introduction

Tuberculosis cases have increased in the past few years due to acquired immunodeficiency Syndrome and immigration of people from endemic zones, affecting one-third of the world population. After ganglion and kidney affection, osteoarticular tuberculosis is in third form of extrapulmonary tuberculosis. With the re-emergence of tuberculosis, more atypical osteoarticular cases are seen. Staphylococcus Aureus is usually responsible for osteomyelitis in patients with chronic renal failure. A high grade of suspicion is necessary to diagnose tuberculosis aetiology in different diagnosis of knee arthritis.

Epidemiology

An increase incidence of patients with osteoarticular tuberculosis has been observed due to immunodeficiency virus infection, immigration from endemic areas, alcoholism, chronic kidney disorders, immunosuppressive therapy, drug addition, intrarticular steroid injection and systemic illness [11,16]. Extrapulmonary tuberculosis represents at least 10% of all infections by M Tuberculosis, spinal tuberculosis being the most common form of osteoarticular tuberculosis followed to hip and knee [7,12]. Osteoarticular tuberculosis is caused by haematogenous lymphatic or direct local spread of tubercle bacilli from other lesions from a quiescent pulmonary primary or other extraosseous focus, although direct inoculation has been already reported [2,14]. Tuberculosis is usually a monoarticular disease, being most of the cases of monoarticular arthritis tuberculous [4,9,13]. There are few cases of tuberculous osteitis without joint damage [1,3,5,6,15].

Clinically

Knee tuberculosis presents usually as a chronic pain, local tenderness and progressive loss of function that could be intermittent and may delay the diagnosis [8,10].

Diagnosis and Treatment

In approximately 50% of the patients, no radiographic evidence of pulmonary involvement can be identified and a negative tuberculin Skin test do not exclude the diagnosis, as in immunocompromised patients who had a high rate of energy. In the early stages, radiological findings are non-specific. The typical radiographs findings are periarticular osteoporosis, peripherally located osseous erosions

and gradual narrowing of the cartilage space, and they appear later on. In order to evaluate soft tissue affection, MRI is the best method complementary. Bone scans with technetium 99m are useful identifying osteomyelitis foci. To archive a definitive diagnosis, it is essential to identify M. Tuberculosis; however, bone and joint tuberculosis are paucibacillar and many a time Ziehl-Nielsen stain is negative and it becomes necessary to wait for Lowenstein culture. Examination of a biopsy specimen is an important and useful diagnostic method, and a biopsy should be performed in every cases of osteoarthritis, in order to know which pathogen is responsible. Probably, amplifying DNA of M. Tuberculosis from synovial fluid or bone by polymerase chain reaction could be useful tool for the early diagnosis of tuberculosis. In conclusion, I believe that tuberculosis should be considered in immunosuppressed patients with osteoarthritis, particularly if they do not respond to antibiotics. In my opinion, surgical treatment is indicated when wide bone and curettage of the bone are performed, by means of a lateral approach, testing the cartilage integrity, and bone defect is filled with cement.

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