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Pseudotumoral Bone Tuberculosis of the Shoulder: About A Case and Reviewed the Literature

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Abstract: Osteoarticular tuberculosis represents 1 to 3% of extrapulmonary tuberculosis. The involvement of the shoulder with its pseudotumoral form is extremely rare. We report here the case of a 68-year-old woman who presented with a swelling of the right shoulder for one year and in whom the diagnosis of a tumor-like tumor tumor was retained after performing a biopsy with an anatomopathological study. The patient was treated with multi-bacillary chemotherapy according to the national program. This treatment involves the combination of rifampicin, isoniazid, pyrazinamide and streptomycin for two months; relayed by rifampicin and isoniazid for seven months. The evolution was favorable.
Keywords: Bone tuberculosis; shoulder; Pseudotumoral .

INTRODUCTION

Osteoarticular tuberculosis represents 1 to 3% of extrapulmonary tuberculosis. The involvement of the shoulder with its pseudotumoral form is extremely rare, and poses a problem of differential diagnosis with the tumoral affections [1, 2]. This is the case in our patient.

CASE REPORT

This is a 68-year-old housewife, vaccinated against tuberculosis and without any notion of tuberculous contusion in the environment, who had had a swelling of the right shoulder for a year. Clinical examination revealed a circumferential tumefaction in the spindle with inflammatory signs.

The examination of the skin had found a fistula in the axilla. Shoulder mobility was limited. There were no satellite lymphadenopathies and the general condition was preserved. There were no associated clinical signs, including pulmonary, digestive or urinary.

X-rays revealed a heterogeneous lytic image of the upper end of the humerus without periosteal reaction, but with narrowing of the scapulohumeral joint space. The chest x-ray was normal. The biological assessment revealed anemia, an inflammatory syndrome with a VS at 38 mm / h. Given the age of the patient, the importance of the lesion, it was decided to carry out a biopsy of the mass delto-pectoral. The surgical biopsy revealed a soft, whitish tumor.

Histological examination revealed bone tissue with an epithelio-gigantocellular granuloma centered by a necrosecaseuse. This characteristic aspect made it possible to make the diagnosis of tuberculous osteitis in its pseudotumoral form. BK research was negative on direct examination and lowenstein culture. The search for BK in tubal bronchial secretions was negative. The tuberculin intradermal reaction (IDR) was positive at 11 mm. The family survey did not detect family breakdown. The patient was treated with anti-bacillary multidrug therapy according to the national program of the Ministry of Health of Morocco. This treatment involves the combination of rifampicin, isoniazid, pyrazinamide and streptomycin for two months; relayed by rifampicin and isoniazid for seven months. The evolution was favorable. The patient was referred to rehabilitation afterwards.

Fig-1: X-ray of the right shoulder showing the lesion

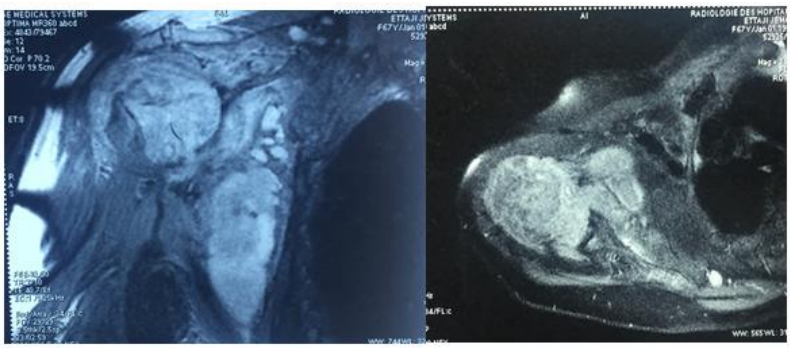

Fig-2 and 3: MRI of the right shoulder showing the lesion

DISCUSSION

Osteoarticular tuberculosis is less common than the pulmonary form. The upper limbs are affected in about 10% of bone and joint forms [3]. In different sets of patients, one-third of bone or joint involvement is associated with pulmonary tuberculosis [4-6]. Primitive bone localization is not always obvious. Joint involvement of Mycobacterium tuberculosis can be either direct hematogenous with invasion of the synovial membrane, or indirectly by extension of an adjacent bone site [7]. Most joint damage is due to the latter mechanism. It is important to know that tuberculous bone and joint involvement can be isolated and primitive. It is usually monoarticular, reaching the spine, hip and knee most frequently [4,6,8]. Primary bone involvement may be difficult to diagnose in the early stages, increasing the time to diagnosis [9-11]. SV is almost always elevated during tuberculosis [5,12,13]. However, it is neither specific nor reliable [4,5]. There is no pathognomonic radiological sign of bone or joint tuberculosis [4]. Standard radiography may show osteoporotic injury with subchondral erosions, joint space narrowing, reactive sclerosis, and progressive joint destruction [4,14,15]. Marked bone extension and sclerosis, periosteal reaction and cavitary formation can be observed. Computed tomography (CT) and magnetic resonance imaging (MRI) can aid diagnosis. Although not specific, MRI allows the lesion to be detected before standard radiography, to make the differential diagnosis and to evaluate the extension of the lesion. It usually shows significant edema, periarticular osteoporosis, bone lysis, sclerosis, periostitis, and thickening of the synovial membrane [16,17]. These MRI abnormalities are found in tuberculous and pyogenic osteomylitis and it is difficult to tell the difference [16]. MRI, by the fine contrast that it delimits between the affected parts and the normal marrow, is very sensitive in the early diagnosis of osteomyelitis. The infected parts appear in hyposignal in the T1-weighted sequences and in hypersignals in the T2

sequences [18]. M. tuberculosis causes tuberculomes with central caseous necrosis which appear as an intermediate signal in T2 sequence [19,20]. The diagnosis of tuberculosis should be confirmed by the isolation of M. tuberculosis either in histological analysis, bacteriological cultures or ideally both [4,5]. However, bone tuberculosis is a paucibacterial lesion, and it is difficult to isolate acid-fast bacilli, and to cultivate M. tuberculosis from these lesions [4, 14]. The puncture of the joint fluid is often insufficient to make the diagnosis [9]. In endemic areas, clinical signs, radiological signs and high ESR may be sufficient to make the diagnosis of tuberculosis [4].

Optimal duration of poly-chemotherapy treatment is controversial [21-23]. It must be at least six months for osteoarticular involvement and in some circumstances reach 18 months [7]. Some authors have suggested a combination of several anti-TB drugs for six to nine months during osteoarticular involvement [24]. Watts and Pertuiset [4.25] recommended a minimum continuous treatment of 12 months. The radiological signs of improvement are remineralization, restoration of the trabeculae and reduction of osteoporosis. Severe destructive TB lesions would not be as severe as expected [5,26,27]. Good functional results have been obtained in the shoulder with conservative treatment and rehabilitation despite joint destruction [26,27]. Better results have been reported with conservative management than with arthrodesis or excision [5,26,27]. Tuberculosis of the shoulder lends itself to debridement of the infected tissues because the shoulder is a joint that does not carry the weight of the body and which supports articular irregularities more [9].

CONCLUSION

Tuberculosis must be part of the differential diagnoses of many bone diseases. A normal chest X-ray, the absence of other active tuberculosis centers or the absence of systemic symptoms do not exclude the possibility of bone tuberculosis. It is necessary to make the diagnosis quickly and to start a suitable treatment; for this reason tuberculosis must be suspected in chronic pain of the shoulder and treated conservatively. A perfect result is obtained when the joint is not damaged. The arthrodesis should be reserved only for the failures of a medical treatment and well conducted rehabilitation.

Conflicts of interest

The authors do not declare any conflict of interest.

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