

Shoulder Arthotabes A Rare Cause of Bone Destruction About A Case

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Abstract

Case Report

The current rarity of osteoarticular manifestations of syphilis tends to make people forget certain aspects of the affection and to ignore them. Tabetic arthropathy is due to loss of proprioceptive innervation, causing artificial destruction important circles. Given the difficulty in treating this joint form, prevention based on the management of syphilis at a early stage is essential.

Keywords: Syphilis, joint damage, surgical management.

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INTRODUCTION

Tabetic arthropathy is a nervous disease of syphilitic origin characterized by lesions of the spinal cord which are manifested by disorders of deep sensitivity, damage to certain cranial nerves and trophic disorders. Joint damage, or arthrotabes, is a chronic condition that affects one or more joints, deprived of their painful and proprioceptive sensory innervation and continually subjected to everyday trauma. Tabetic arthropathy is the typical example of so-called "nervous" arthropathy. It appears in 10% of tabes cases.

OBSERVATION

Mr. B.L. is 48 years old. M, father of 3 children, with no particular pathological history, he was reached, at the age of 34, of primary syphilis, well treated, with penicillin G. Three and a half years ago, this patient presented a pseudoparalytic shoulder associated with significant, but painless, spontaneous swelling of the right shoulder. The physical examination noted a blocked mobility of the right shoulder. There was sensory neuropathy. There was no fever. X-rays of the shoulder showed major osteocartilaginous joint damage, predominantly of the right shoulder (Figures 1 and 2). The syphilitic serology was positive, with a VDRL (Venereal Disease Research Laboratory) negative and a TPHA (Treponema Pallidum Hemagglutination Assay) positive at 460. HBV, HCV and HIV serologies were negative.

The patient was referred to the orthopedic surgery department, where he underwent prosthetic replacement with a cephalic shoulder prosthesis (Figure-3).



Fig-1: Rx of the right shoulder showing bone destruction affecting the humeral head and the glenoid



Fig-2: Rx of the same patient showing the extent of bone destruction

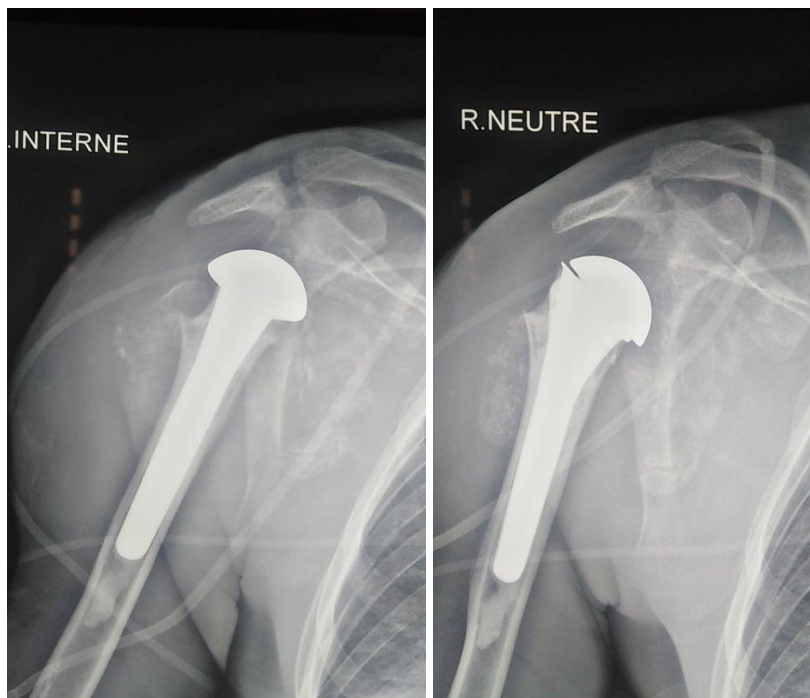


Fig-3: Rx of the shoulder facing showing a head prosthesis in place

DISCUSSION

Syphilis is a sexually transmitted and contagious, reportable disease. Untreated, it progresses to serious complications such as neurosyphilis. In these late neurological forms, in more than 10% of cases, the joints can be destroyed due to disorders of deep sensitivity [1]. According to Charcot, tabetic arthropathies are the consequence of a neurovegetative disturbance linked to lesions of the sympathetic nervous system causing abnormalities in joint trophicity

complicated by osteoclastic hypresorption. According to mechanical theory, neurological damage leads to chronic arthropathy linked to the repetition of microtrauma.

The time to onset of arthropathies during tabes varies, as illustrated by a study of 132 cases in which joint damage occurred [2, 3]:

- 21 times during the prodromal period of tabes;
- 38 times between the first and the fifth year;

- 32 times between the fifth and the tenth year;
- 41 times after the tenth year.

The knee is the joint most often affected (46%), then comes the foot, followed by the hip and shoulder. The joints of the elbow, hand, fingers and lower jaw are more rarely affected [2]. Classically, the onset of arthropathies is characterized by its brutality, its indolence and finally the importance of deformities. Indeed, in typical cases, arthropathy begins abruptly, in a false movement or following a minimal trauma. In addition, the joint swelling can be isolated, which is the inaugural sign of syphilitic arthropathy [4].

On the radiological level, the images can be limited at the beginning to banal degenerative lesions: osteosclerosis, subchondral geodes, early osteophytosis. At the next stage, abundant effusion as well as the presence of synovial cysts and ligamentous calcifications can already suggest the diagnosis. In the advanced forms, there are, to varying degrees, images of intra- and extra-articular bone destruction, with geodes, subchondral erosions, fragments of the epiphyseal bone and signs of osteonecrosis, all of these elements highlighting the very irregular appearance of the articular surfaces. Intra-articular foreign bodies are common. Depending on the locations and the evolutionary stage, there are two main forms:

- Hyper the hypertrophic form, dominated by signs of fragmentation associated with abundant and anarchic osteogenesis;
- The atrophic form, characterized by resorption phenomena [5]. The radiological examination shows a characteristic broad osteophytosis, frequent fragmentation, diffuse osteolysis, and instability and deformities. Computed tomography allows a complete analysis of elementary lesions, particularly those of the soft parts. Magnetic resonance imaging (MRI) is useful in nerve osteoarthropathies in pseudopottic form. The signal from the disc on T2 sequences is less intense in nerve osteoarthropathies than in infections [6]. Syphilitic serologies (VDRL and TPHA) occupy a primordial place in the diagnosis of tabetic arthropathy. Indeed, the demonstration of a positive syphilitic serology in the articular fluid, the blood or the CSF is essential to retain the diagnosis [7]. As with any form of syphilis, the treatment for tabes is based on penicillin G (20 to 30 million units per day for three weeks). The number of treatments varies depending on the clinical, biological and evolutionary data of the disease. The

orthopedic treatment is disappointing. Arthrodesis or arthroplasty is indicated when the joint is deformed and unstable. We emphasize the usefulness and the necessity of a preventive treatment for tabetic arthropathy, which consists in early protection of the joint by immobilization and joint economy [8].

CONCLUSION

Tabetic arthropathy is a rare entity at present, but its diagnosis must be evoked in front of any destructive and painless joint damage. The current rarity of osteoarticular manifestations of syphilis tends to obscure certain aspects of the disease and to ignore them. Tabetic arthropathy is due to a loss of proprioceptive innervation, leading to significant joint destruction. Given the difficulty in treating this joint form, prevention based on the management of syphilis at an early stage is essential.

Conflicts of Interest: The authors declare that they have no conflicts of interest.

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