

Knee Arthotabes a Rare Cause of Bone Destruction About a Case

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Abstract

Tabetic arthropathy, is a destructive neurogenic condition, due to loss of painful and proprioceptive innervation. It has become exceptional thanks to the early treatment of syphilis with penicillin. We report the case of a 58-year-old patient, consultant for a knee arthritis revealing a tabetic arthropathy with huge joint damage treated with hinged knee reconstruction prostheses

Key words: tabetic arthropathy; hinged knee prosthesis

Introduction

Tabes is a syphilitic nerve disease characterized by damage to the spinal cord, which manifests itself as deep tenderness, damage to certain cranial nerves and disorders of the spinal cord. trophic [1]. 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 the traumas of everyday life. Tabular arthropathy is a typical example of so-called "nervous" arthropathy. It occurs in 10% of cases of tabs, and has become exceptional thanks to early treatment with penicillin [2]. We describe a patient with an unexplained neuropathic knee who presented for a presumed malignancy or chronic septic joint, but in whom neurosyphilis ultimately was diagnosed and found responsible for his destroyed, yet painless knee

Case presentation

This is a 58-year-old patient who consulted for mono-arthritis of the right knee, which has been progressing for 6 months without fever, associated with

a biological inflammatory syndrome. Clinical examination noted varus knees, with a painless deformity and patellar shock in the left knee. The flexion was less than 60°, with great internal and external ligament laxity. There was sensory neuropathy, with abolished osteotendinous reflexes. Radiographs of the knee from the front and side showed major osteo-cartilaginous joint destruction of the medial femoral condyle with osteolysis of the medial border of the medial tibial plateau associated with multiple bone constructions with the presence of large intra-articular fragments (Figure 1). The pathological samples were not specific the diagnosis of tabular arthropathy in its hypertrophic form was made on the basis of a 20-year history of syphilitic inoculation canker, posterior radiculocordal syndrome, imaging data, and positive TPHA -VDRL (Treponema Pallidum Hemagglutination Assay- Venereal Disease Research Laboratory) syphilitic serology in blood and CSF. HBV, HCV and HIV serologies were negative

The patient underwent prosthetic replacement with a rotating hinge prosthesis



Figure 1: Radiograph of both knees face and profile: in the left knee destruction of the medial tibial plateau, loss of contact between the articular surfaces and calcifications of the soft tissues



Figure 2: Rx of the left knee in post op face and profile showing rotating hinge prosthesis in place

Discussion

Arthrotabetis is a unique manifestation of late, tertiary neurosyphilis that arises in 2% to 9% of individuals with untreated syphilis and can present between 3 to 50 years post infection [3]. The incidence of neuropathic arthropathy in these patients ranges from 6% to 10% [4]. The exact pathophysiology underlying the rapid destructive process of Charcot arthropathy is unclear but likely involves a combination of mechanical, neurologic, and metabolic factors [6]. The loss of proprioception and nociception likely results in repetitive mechanical trauma and neurogenic vasomotor disruption that may lead to increased bone resorption. The time to onset of arthropathies during tabes varies. 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 [5]. 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 [6].

The diagnosis of bone syphilis is serological: VDRL, TPHA, FTA (Fluorescent Treponemal Antibody). H. Hooshmand et al. [7] reported the results of a series in which the latter test was positive in all patients. In neurosyphilis, parenteral penicillin G is the most effective treatment, with the administration of 4 million intravenous penicillin G units every 4 hours for 10-15 days [8,9]. The course of tabetic arthropathy may be characterized by fusion of destroyed bone pieces with complete ankylosis. The essential treatment is rest and joint immobilization (removal of support, splints, bed rest). [10,11] Taken early, arthropathy can heal and the joint can return to its normal architecture. At a later stage, only prosthesis or arthrodesis is useful to improve the disability [12,13]. However, on this weight-bearing joint because of the hyperlaxity of the tendon structures, which would compromise prosthesis stability; rotating hinge prosthesis is the safe procedure for knee guaranteed stability

Conclusion

Tabetic arthropathy is a rare entity at present, but its diagnosis must be evoked in front of any destructive and painless joint damage; It is still possible in some countries such as Morocco

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