Open Access Original Research Article

MedPeer Publisher
Abbreviated Key Title: MedPeer
ISSN : 3066-2737
homepage: https://www.medpeerpublishers.com

TABETIC ARTHROPATHY: A FORGOTTEN DISEASE (TWO CASE REPORTS)

DOI: 10.70780/medpeer.000QGNW

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ABSTRACT

Background: Tabetic arthropathy is characterized by neurogenic joint destruction, which occurs in 10% of tertiary syphilis cases. Although they have become rare thanks to early and appropriate treatment of syphilis, it still persists in developing countries, raising concerns about its management.
Case presentation: we describe two cases of two males with knees deformation with no pain evolving for years.
Conclusion: Keep in mind tabetic arthropathy whenever it’s a patient presenting a neurogenic arthropathy.

KEYWORDS

Key words: arthritis, syphilis, tabetic arthropathy, neurogenic arthropathy.

MAIN ARTICLE

Background:

Tabetic arthropathy, also known as syphilitic arthritis, is a joint manifestation associated with syphilis, a sexually transmitted infection caused by the bacterium Treponema pallidum. This joint condition generally results from the progression of syphilis to its tertiary stage.
Syphilitic arthritis is characterized by inflammation of the joints, often leading to degenerative and destructive lesions. Affected joints may present with a range of symptoms, such as pain, swelling, stiffness and structural alterations. Joint involvement in the context of syphilis is neurogenic, meaning that it is linked to damage caused to the nervous system by the infection.
Although syphilitic arthritis has become rare in countries where syphilis is effectively treated with antibiotics, it can still pose challenges in areas where access to healthcare is limited. Early treatment of syphilis remains essential to prevent the development of severe joint complications.

Cases presentations:

Case 1 :

A 51 years old patient, chronic smoker, married, with a history of untreated chancroid at the age of 19. For more than 5 years, he had complained of swelling of the right knee, which became bilateral 6 months ago, with pain described as an electric shocks , with limpings and heaviness in both limbs , leading to dependence on crutches for walking . Examination revealed swelling in both knees, with laxity and mobility in all directions in both joints, with loss of relief and anatomical landmarks.
The neurological examination noted an abolition of osteotendinous reflexes in the lower limbs

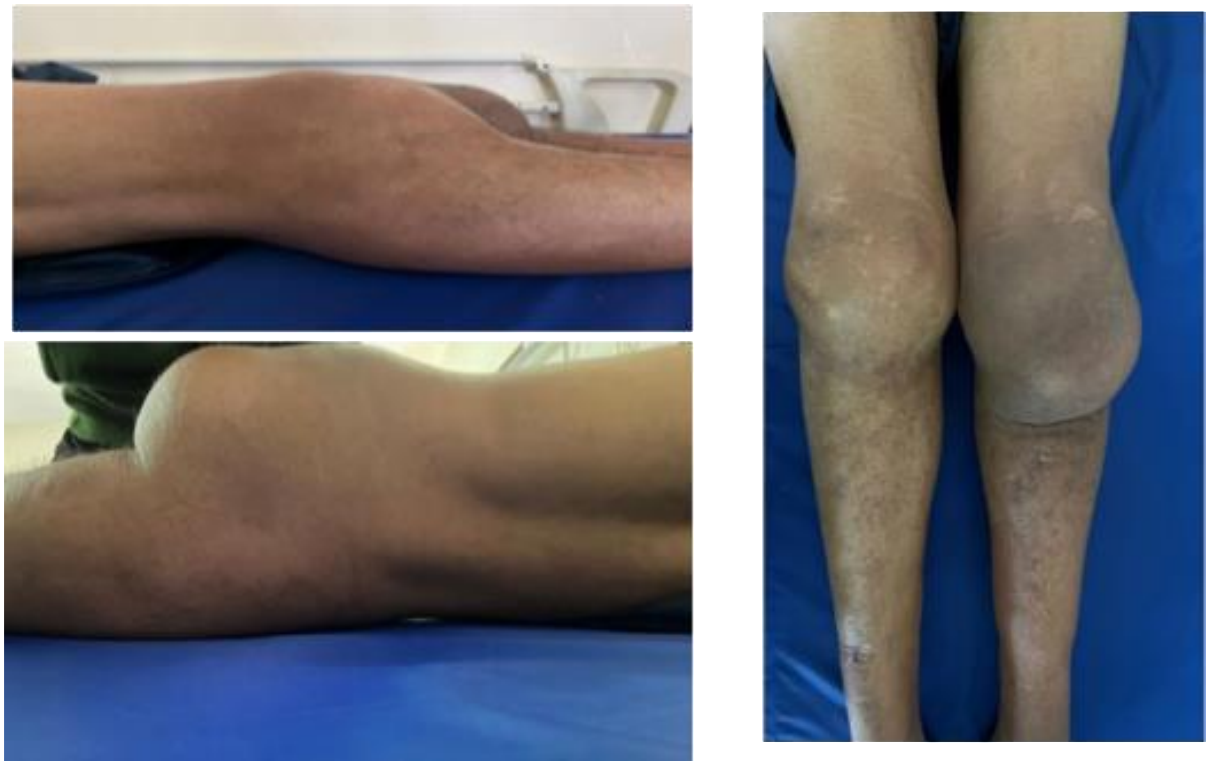

Fig. 1 Clinical images (case1)

Standard radiographs of the face and profile showed intra- and extra-articular bone destruction, with geodes, subchondral erosions, epiphyseal bone fragmentation and osteonecrosis

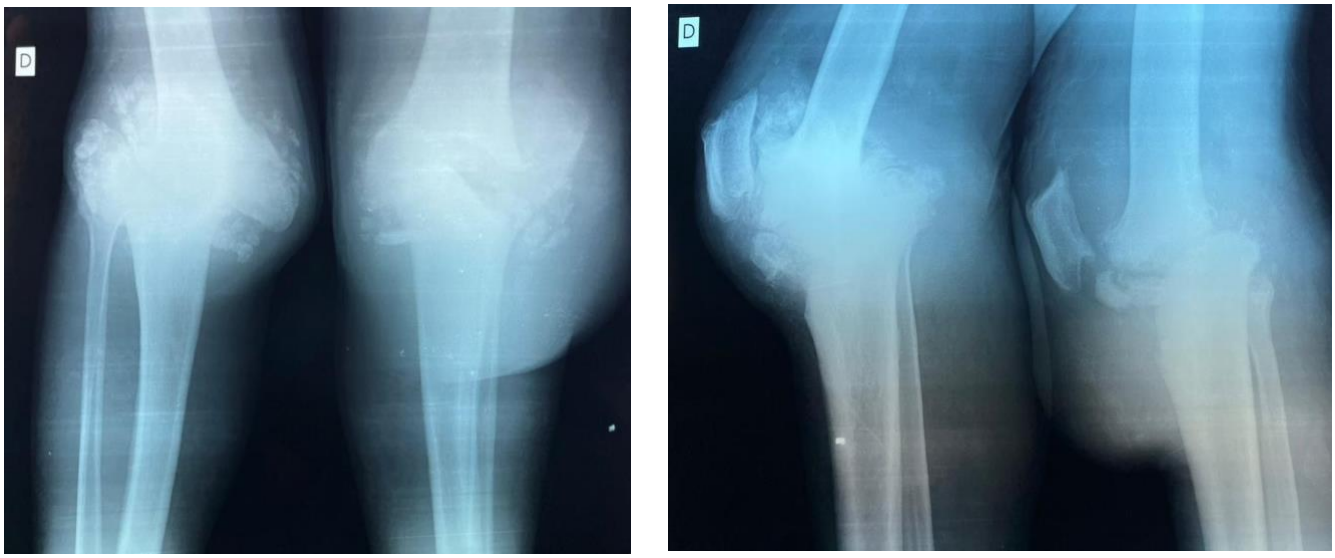

Fig. 2: Standard front and side X-rays ((case1)

A CT scan of the knees revealed advanced bilateral gonarthrosis with joint pinching, marginal osteophytosis, bone condensation, subchondral geodes and bone resorption leading to deformity of the condyles and tibial plateaus, with multiple intra- and periarticular foreign bodies and moderate joint effusion.

A joint puncture was performed, and the fluid was yellowish. Microscopic examination revealed rare leukocytes and red blood cells, with no crystals. Examination Bacteriological tests for BK were negative, while TPHA and VDRL serology were positive. The patient received Penicillin G.

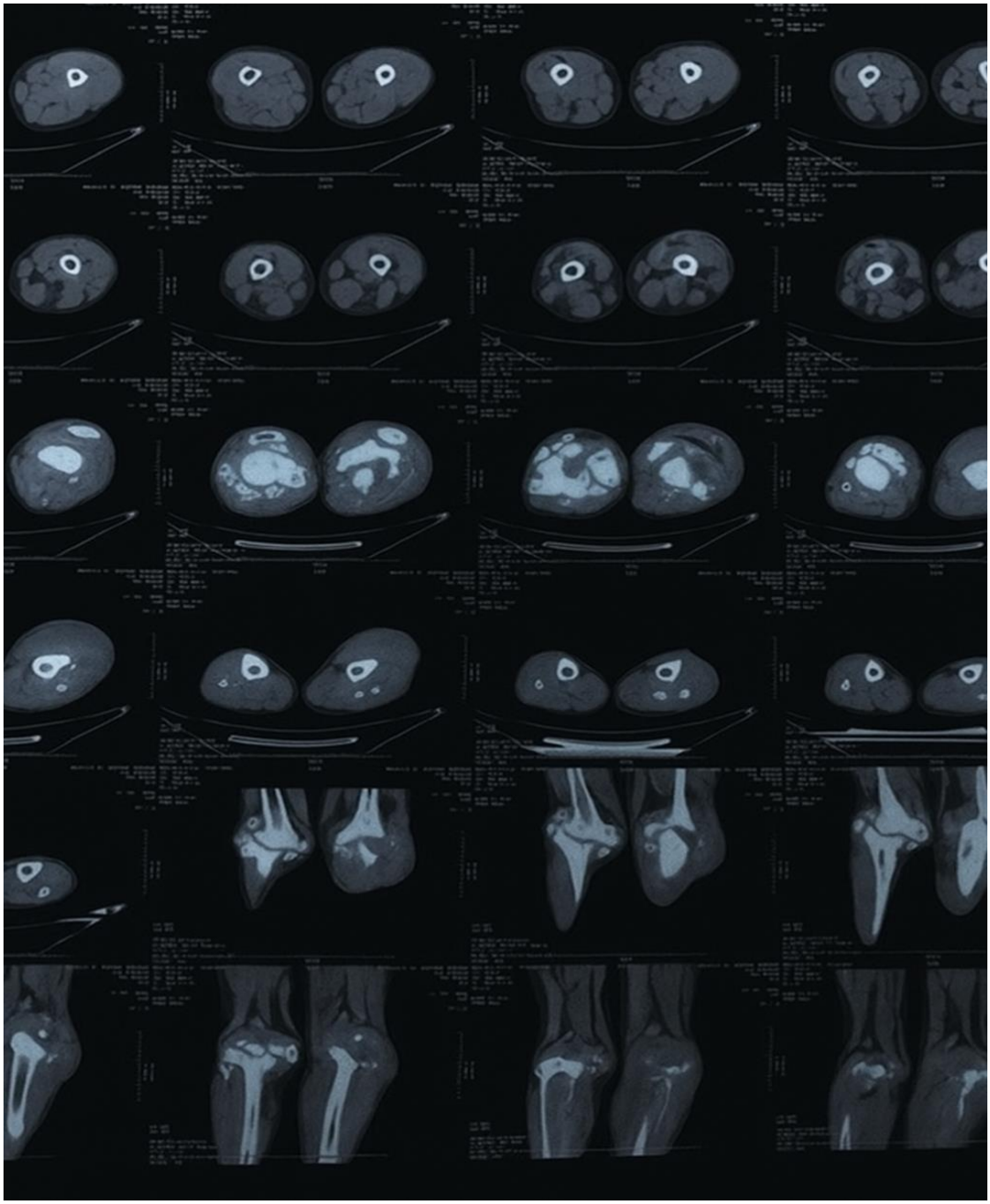

Fig. 3: CT scan of the knees (case 1)

Case 2:

A 61-year-old patient, a professional driver, with a history of right tibial plateau trauma in 2004, for which he underwent surgery. He's suffering a knee instability and deformation . The examination revealed a patient in good general condition, walking with a limp, with a varus knee deformity but without pain.

The standard X-ray of the knee (Figure 4) showed femoral epiphyseal hypertrophy with osteophytosis and intra- and extra-articular bone destruction, better studied on CT-Scann (Figure 5).

Given a history of genital chancre during adolescence and this clinical presentation, a diagnosis of tabetic arthropathy was suspected and confirmed by biological tests showing TPHA 2560 and VDRL+ as well as TPHA+ in the synovial fluid and cerebrospinal fluid.

The patient was treated with intravenous Penicillin G 30 million IU for 10 days, along with joint lavage and immobilization of the knee with an orthosis.

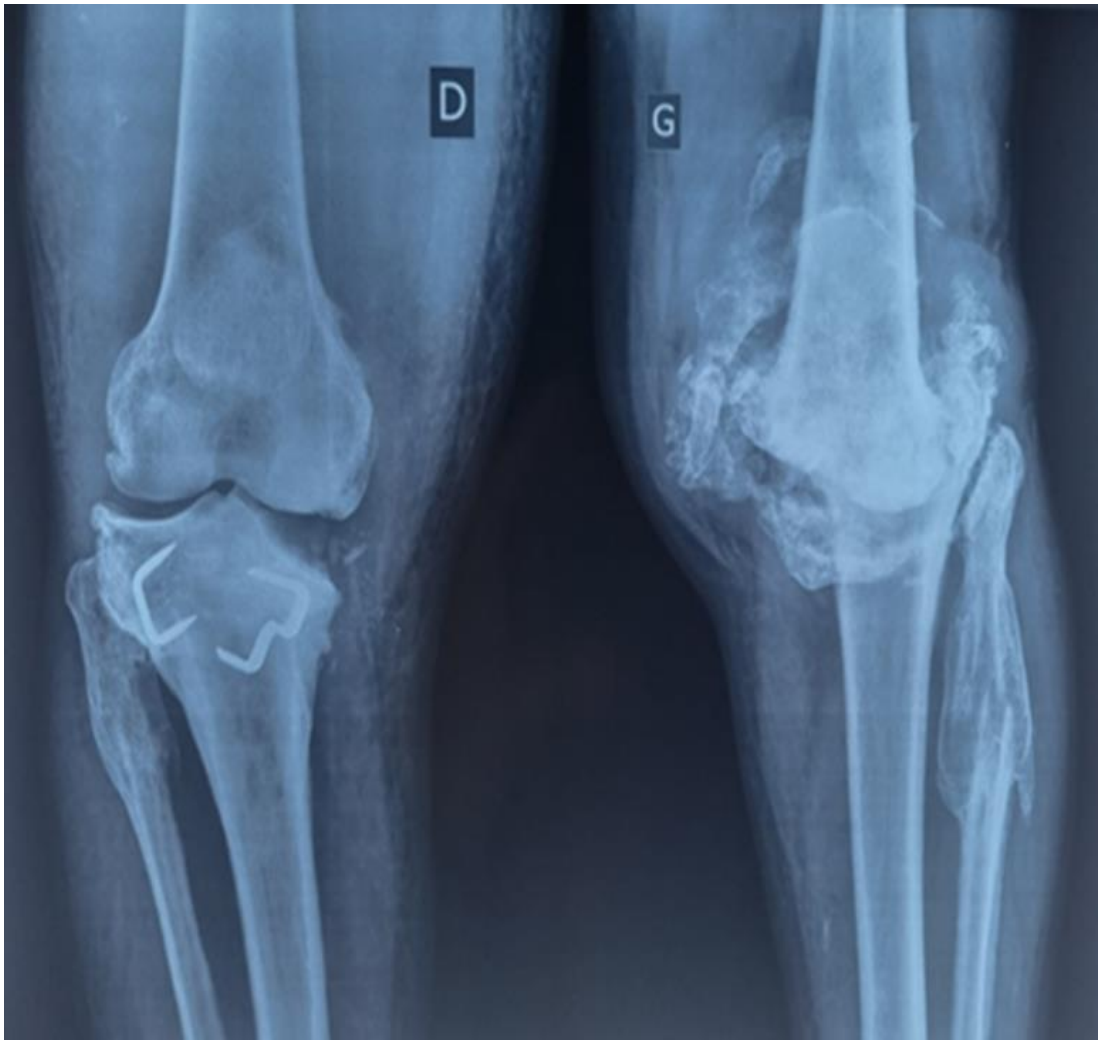

Figure 4 : Standard X-rays of the knees

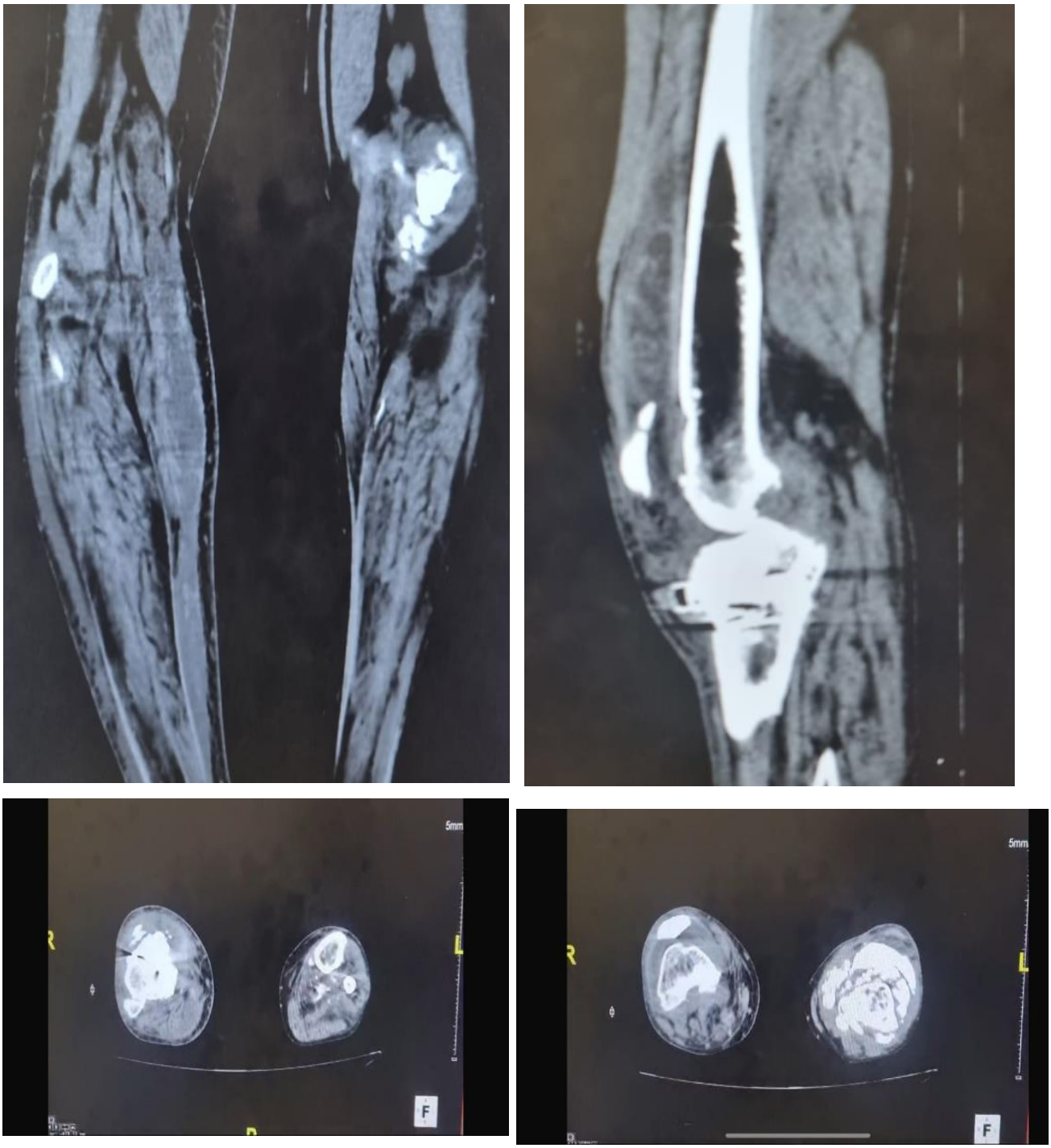

Figure 5 : CT Scan of the knees (Frontal, sagittal, and axial)

Discussion

Tabetic arthropathies are destructive neurogenic joint disorders that occur in 5-10% of tabetic cases, usually appearing 10-20 years after the first signs of the disease [1]. Tabes is currently rare due to the efficacy of early treatment of syphilis with penicillin G [2]. However, TA can reveal a tabes with discreet symptoms [1-2].

Joint involvement is most often mono- or polyarticular, predominating in the lower limbs (60 to 75%), affecting the knee, ankle, tarsus, hip, dorsolumbar spine, shoulder and elbow in decreasing order of frequency. Some forms rarer polyarticular forms also exist [3].

The pathogenesis of syphilitic arthritis is subject to debate, with two theories evoked:

The trophic theory implies a disturbance of osteoarticular trophicity through a vasculo-sympathetic mechanism.

Mechanical theory suggests that joint anesthesia exposes the joint to repeated trauma, favored by ataxia and ligament hyperlaxity[4-5-6]

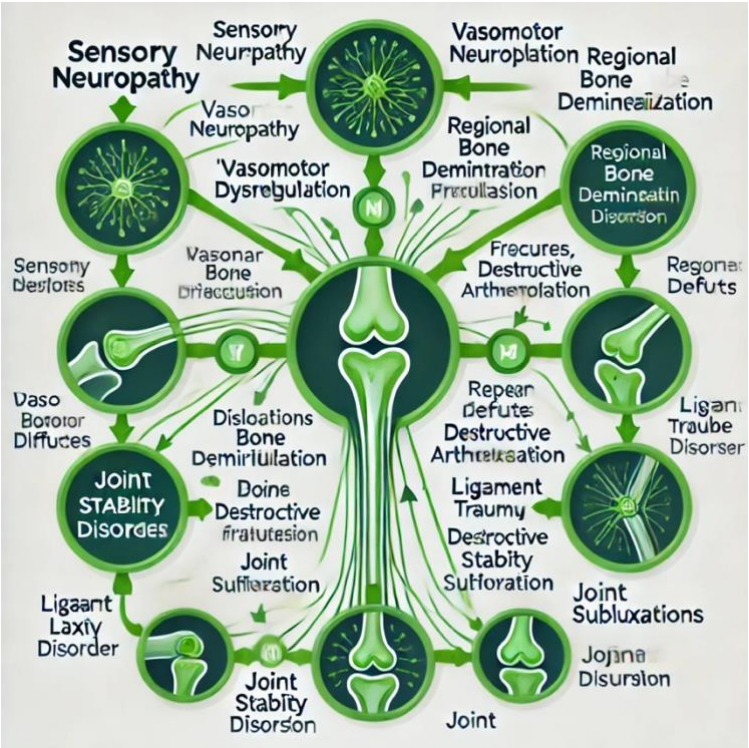

Figure 6: Pathophysiology of nerve osteoarthropathies

Clinically, the disease is usually discovered in the presence of mono-articular involvement, and the chronic form predominates, associating articular and neurological signs. The Tabetic

arthropathies are distinguished by their indolence, contrasting with the extent of joint destruction.

Clinical examinations reveal swollen, deformed joints, sometimes with joint dislocations or misalignments, and preserved or even increased joint amplitudes. Radiological signs may vary, ranging from trivial degenerative lesions to significant osteocartilaginous destruction [7] .

Biologically, the absence of an inflammatory syndrome was noted, and the fluid is usually mechanical. Positive syphilitic serology in blood, joint fluid or cerebrospinal fluid is important for diagnosis, with various serological techniques available (VDRL, TPHA, FTAtest, FTAabs, and NELSON test) [4].

The diagnosis of tabes is based on the discovery of specific signs such as abolition of reflexes in the lower limbs, disorders of deep sensitivity, and the Argyll Robertson sign [8].

Syphilis is treated with penicillin G, with the frequency of treatment adapted to clinical, biological and evolutionary data. Management of arthropathy is complex [9], sometimes involving prolonged off-loading, the use of orthoses, and weight reduction to limit worsening of bone lysis. Orthopedic treatment, although discussed on a case-by-case basis, is often disappointing [8-10].

Finally, the importance of preventive treatment is emphasized, with the aim of treating syphilis early and effectively, as well as the need to prevent syphilis as a sexually transmitted disease. [11].

Conclusion

Tabetic arthropathies are now rare, but it is important to be aware of them.

Painless, destructive arthropathy. Their prognosis is poor, especially in the absence of radical surgery, and the best treatment remains the prevention and early treatment of primary syphilis

ACKNOWLEDGEMENTS

The authors have no acknowledgements to declare and report no conflicts of interest.

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