

OSTEOARTICULAR MANIFESTATIONS IN NEUROLOGICAL DISEASES



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Abstract

Introduction: Osteoarticular manifestations frequently accompany neurological pathology, both at early and late stages, requiring multidisciplinary collaboration for the correct diagnosis and treatment of the disease, thus avoiding disabling complications and improving the quality of the patient's life.

Objectives: Arthropathies of nervous origin typically imply functional impotence characterized by hypertrophic or atrophic, constructive or destructive bone and joint changes, often arthropathy being the initial sign of neurological impairment, therefore it is necessary to study these manifestations and their impact on patients with neurological pathology.

Material and method: Literature survey

Results: Due to sensitivity disorders, local infusion disorders and secondary osteoporosis, fractures can appear, which are initially painless, and therefore ignored, but which result in moderate functional disorders and serious bone deformities, misalignment, dislocations, vicious callus formation and pseudo-arthrosis.

Joint injuries can provide important clues for diagnosis, therefore, atrophy of the intrinsic musculature of the hand and leg with deformation of the foot form ("dog cavus") drives us towards hereditary peripheral neuropathic pain. The "hammer" toes, the fall of the planting vault ("Lisfranc joint") are characteristic features of advanced peripheral neuropathies. Peripheral motor neuropathy causes atrophy of the foot's musculature, distorting the normal leg architecture, producing instability and walking disturbances, increasing the risk of falls in these patients.

The upper limb can be affected by syringomyelia, where we have osteopathies in the scapulohumeral, elbow and radiocarpal joints. Affection of the lower limb in Tabes involves the knee joint ("the great tabetic hyper-lax knee"), the small joints of the foot (Charcot "cubic foot"), the metatarsal joint, the calcaneocuboid, etc., while the upper limb and the coxo-femoral joint are rarely affected.

Charcot neuro-arthropathy is characterized by leg joint damage, with pathological fracture and articular dislocation (frequently metatarsophalangeal) resulting in severe deformities.

Algodystrophies in Parkinson's disease, accompanied by small hand joint diseases especially in proximal metacarpophalangeal and proximal interphalangeal joints, foot osteopathy's in diabetic neuropathy, and the deformities of the hand small joints in Charcot Marie Tooth Disease are some examples of joint damage in neurological pathology.

Vertebral arthropathies occur in the advanced stages of the disease (eg Guillain Barre, diabetic neuropathy, etc.) with painless evolution, characterized by rachidial deformities such as dorsal - lumbar kyphoscoliosis, gibbosity, disappearance of lumbar lordosis, etc.

Hemiplegia is accompanied by arthropathies on the affected side, especially the upper limb, (scapulohumeral and hand joints) complicating recovery due to appearance of pain.

In **conclusion**, it is useful to note that, regardless of the type of invalidating neurological disorder, prolonged immobilizations (months, years) leads to articular and periarticular disorders manifested by joint pain, periarticular ossification as neo-formed lamellar bone tract invading the joint capsule, ligaments and periarticular muscles, ultimately forming bone bridges leading to articular ankyloses.

Key words: osteoarticular disorders, peripheral and central neurological pathology.