Charcot joints

Tubes dorsalis is now an uncommon disease in Western countries, but patients with Aargill Robertson pupils and Charcot joints are frequently dredged up to appear in clinical examinations. Arthropathies of ataxic patients, Charcot's original description,1 was passed on to his students in a model lecture.2 He summarises the salient points:

"A. Without appreciable external cause, the local affection appears. At this moment the incoordination is not marked, the patients do not fling about their legs in a disorderly manner.
B. This arthropathy is developed at a but slightly advanced period of the spinal disease, and most commonly when its symptomatology is limited to lightning pains....
C. The arthropathy is produced, generally, without prodomes, if we except, however those cracking sounds [in the joint] which we find....
E*. Most usually, the first phenomenon discernible is extreme tunefaction of the entire member... formed 1°, by a considerable hydropathosis; 2°, by an engorgement which...presents a hard consistence, and in which the ordinary symptoms of oedema are not generally very marked."

This arthropathy is not commonly accompanied by fever, or by pains;... At the end of some weeks or months, the swelling disappears and then all returns to the normal state (benign form); sometimes, on the contrary, serious disorders remain in the joints, cracking, dislocations, answering to a wearing down of the osseous surfaces, and various luxations (malignant form). The member affected by arthropathy may still serve for prehension, if it be the upper extremity; or for walking, if the hip and knee be...affected. F....the order of preference begins with the knee, then comes the shoulder, next the elbow, the hips, and the wrists. But the small articulations are not always spared...."

Charcot separates the condition from osteoarthritis (dry arthritis), purulent arthritis, and nodose rheumatism, and from gout. Pathologically: "in cases of old standing...the signs observed are those of dry arthritis: to wit, eruption and deformation of the articular surfaces...bony bunches and stalactites, foreign bodies etc....I must request your attention to: 1°. The predominance of wearing away over the production of bony bunches in recent cases.... 2°...the frequency of luxations, which are, to some extent, the rule in ataxic arthropathy. while they are only exceptions in common dry arthritis."

Seeking enlightenment to the cause, he finds analogies in the arthropathies of paraplegia in Pott's disease, acute myelitis, tumours of gray substance, and traumatic spinal lesions. Charcot concludes that the anterior cornua of the gray matter, and in one case the spinal ganglia, are the starting point of the articular disorder.

The great English physician Thomas Clifford Allbutt recognized, and described the same clinical features a year later.

1 Charron JM. Sur quelques arthropathies qui parissent dépendre d'une lesion du cerveau ou de la moelle épinière. Archivon Physiolische Normal Physiologie 1868:1...161-78.
3 Allbutt TC. Remarks on a case of locomotor ataxia with dystrophy. St George's Hospital Reports 1869;4:259-60.
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