



INTERSTITIAL NEURITIS

AND THE PRESSURE THEORY OF PAIN.

A CRITICAL REVIEW AND A REFLEX HYPOTHESIS.

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INTERSTITIAL NEURITIS AND THE PRESSURE THEORY OF PAIN:

A REFLEX HYPOTHESIS

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"There is a great work to do in close and critical revision of present beliefs in every branch of clinical medicine."



Thomas Lewis (1930)

## 1. INTRODUCTION.

Of interstitial neuritis, said F.M.R. Walshe (1943) we lack a convincing pathology. "Of the pathological process that underlies this familiar affection", he says, "relatively little is known, but it involves the interstitial tissues of the nerve roots or trunks and not, save secondarily in some cases, the nervous elements. Clinically, the condition is characterised by pain along the course of the affected nerve, by tenderness of the nerve trunk and of the muscles supplied by it on pressure and on stretching, by tingling and numbness and sometimes objective sensory loss in the cutaneous distribution of the affected nerve, and by the absence in the great majority of cases of motor paralysis." To this definition should be added the fact that the science of pathology has added nothing to our knowledge of the nature of this affection.

During the course of this essay many opportunities will be taken of emphasising the general state of incertitude regarding the real nature of the complaint. The fact is that the term "neuritis" represents a clinical syndrome which has no definite pathological basis. Until a new pathological basis is established, the present usage cannot be abandoned; and, in spite of his doubts regarding the suitability of the term, the writer feels that he must adhere to it.

In a recent article (1944b) it was suggested that the symptoms of interstitial neuritis of a sensory nerve may sometimes be the effect of nervous reflexes rather than of a lesion of a nerve trunk. The purpose of this essay is to suggest that the theory may be applicable to all of the manifestations of interstitial neuritis. The essay is based upon personal observations upon 141 cases, the symptoms of which approximated more or less closely to the picture of neuritis. Particular attention is given to 63 cases in which motor or sensory signs occurred. The notes of 44 cases will be considered in some detail.

#### Neuritis and Neuralgia

An accurate dividing line between neuritis and neuralgia cannot be drawn, says Wilfrid Harris (1926) in his classical monograph; but well defined cases of each variety display characteristic features.

Neuralgia, he says, is a radiating pain which spreads far wider than the territory of the diseased nerve-filament which initiates it. Sometimes it embraces the field of one or more peripheral nerves, and it may be accompanied by tenderness and other reflex phenomena such as salivation, lacrimation and vasomotor oedema.

In interstitial neuritis, on the other hand, says Harris, there is a lesion of a nerve sheath, "in which not only are the nerve-filaments supplying the sheaths, the *nervi nervorum*, themselves involved, but the inflammatory process, tending to spread inwards from the connective tissue outer sheaths, involves the intraneural bundles, compressing them and aggravating the pain, which, at first local, now spreads widely along the

whole territory of the nerve trunk. Examples of this form of neuritis are so-called brachial neuritis and sciatica. Irritative phenomena are the early symptoms, and in the majority of cases the clinical signs do not progress beyond local tenderness, general hyperaesthesia and pain. In a minority of cases signs of nerve-damage from compression will appear, as loss of deep reflexes, muscular wasting, anaesthesia and trophic phenomena of the skin and nails in the extremities".

The essential difference between neuritis and neuralgia, it would appear, is that in the former case, there is evidence of a lesion of a nerve-trunk. In the case of neuralgia, symptoms may spread in a reflex manner throughout the distribution of a nerve; in the case of neuritis, symptoms of the same nature and with the same distribution result from a lesion of the nerve-trunk itself. This distinction, for the purposes of this essay, is important and even crucial.