

CERVICAL, DORSAL AND LUMBAR SPINAL SYNDROMES

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The author has made a field investigation of 1500 workers in different occupational groups with special reference to pain symptoms from the cervical, dorsal and lumbar spine. The close resemblance between these symptoms and so-called muscular rheumatism is pointed out.

The stiff neck-brachialgia syndrome, with its heretofore little noted, many-sided symptom picture, is described on the basis of the data reported by the workers. Particular attention is called to *pseudo-angina pectoris*, which is frequently misinterpreted as true heart trouble and to *headache, humero-scapular peri-arthritis* and *epicondylitis* as symptoms belonging to the syndrome. A history of stiff neck or brachialgia was reported by 51 % of the material. The incidence was about the same in those doing light and heavy work.

A history of *pain symptoms that could be referred to the dorsal spine* occurred in only 5 %, the symptoms as a rule being mild.

The lumbar spine syndrome (lumbar insufficiency, lumbago or sciatica) had occurred at any time in 60 % of the material. The total incidence was somewhat higher in those engaged in heavy work but the socio-economic importance manifested in lost working days was appreciably greater in the heavy occupations. The first symptoms usually appeared at or before 30 years of age.

Weighty circumstantial evidence was found in the literature and in the results of the clinical and roentgen examinations of the material that the stiff neck-brachialgia syndrome is often a result of changes in the cervical spine, particularly its intervertebral discs, and that the lumbago-sciatica syndrome often arises from corresponding changes in the lumbar spine and its intervertebral discs.

Disc degeneration should be interpreted as a more or less physiologic process which begins early in some but eventually develops in all regardless of occupation. However, it may develop and even attain advanced stages without ever having given rise to pain symptoms. Whether or not symptoms appear seems largely to be a matter of chance. The changes in the discs that are considered to be of primary significance in the occurrence of spinal symptoms are radial ruptures directed posteriorly or postero-laterally. These changes are not visualized in conventional roentgenograms, and start to develop several years before signs of disc degeneration can be demonstrated with conventional roentgen technic. The localization and direction of the radial rupture and the degree of inflammatory reaction and herniation caused by the rupture seem to be of primary importance. Not infrequently, infectious diseases, dampness and "draughts", as well as certain types of accidents and hard work, appear to have a provocative effect. In addition, irritation of the sympathetic nervous system probably plays a certain part in the appearance of the pain symptoms. On the other hand the investigation indicates that moderate static deformities such as pelvic tilt from inequality in the length of the legs, kyphosis, lordosis or lumbar scoliosis and certain roentgen-anatomic anomalies are of no significance to the spinal symptoms in question. Nor could any connection be established with bodily type, flat foot or foot fatigue, gastric disorders, varicose veins or hernia.