Department of Neurosurgery, Aalborg Hospital, Aalborg, Denmark

Neurogenic Intermittent Claudication

By

I. Søgaard and F. F. Madsen

With 4 Figures

Summary

Twenty-six patient treated for neurogenic intermittent claudication (NIC) have been examined on an average of 25.5 months after a decompression operation. Twenty-two of the patients were either considerably better (15 patients) or completely free of symptoms (7 patients). Pre-operatively two thirds of the patients were able to walk less than a 100 metres. Post-operatively 12 of the patients had an unlimited walking distance.

Keywords: Neurogenic intermittent claudication; spinal stenosis; laminectomy; spinal surgery.

Introduction

Neurogenic intermittent claudication in patients with spinal stenosis was described for the first time by van Gelderen in 1948 as “ein orthotisches (lordotisches) Kaudasyndrom” 7. In the title is mentioned what is probably an important aspect with regard to patho-physiology, that the A-P diameter of the spinal canal varies with the degree of lordosis. In 1954 and 1955 Verbiest emphasized the sagittal, and the interpeduncular diameters of the spinal canal in patients with NIC. The designation claudication cauda equinae was suggested by Blau and Logue in 1961 2, and the condition has since been described several times in small series.

NIC is seen in patients with spinal stenosis 6 who typically complain of pain, paraesthesia, loss of sensation, and weakness from the back to the legs or in the legs alone. The symptoms are seen after walking a short distance and disappear when resting, typically with kyphosis of the lumbar spine.
Materials and Methods

The sole criteria for inclusion in this series has been symptoms provoked by walking in a patient where a vascular pathogenesis by objective examination seems to be excluded.

All patients were admitted to the Neurosurgical Department, Aalborg Hospital from February 1, 1977 to March 1, 1982 and neurogenic periodic limping diagnosed, and they were reexamined 3–50 months (average 25.5 months) after operation.

Twenty-seven patients, who's sex and age is shown in Fig. 1, are included in the material. The mean age is 57.5 years. The mean age for the men is slightly lower than that of the women (54.1 years/62.3 years).

![Fig. 1. Distribution of sex and age for 27 patients with neurogenic intermittent claudication](image)

Symptoms

All patients complained of low back pain and/or radicular pain or paraesthesia for a shorter or longer period. Low back pain was more easily tolerated than if the pain had come from a herniated intervertebral disc, as seen from the long span of time it had been present, on average 14.8 years (range 3–49 years).

Complaints caused by walking were pain in the back and leg, dysaesthesia, atony of the legs and affection of the external sphincter muscle.

The actual moment where the symptoms provoked by walking appeared for the first time, could not be confirmed precisely, but it varied from a few months to more than 5 years before admission.

All patients had symptoms provoked by walking and 4 patients