INTERMITTENT PRIAPISM IN SPINAL STENOSIS

by A. M. HIDALGO OVEJERO*, S. GARCIA MATA*, M. A. SAURAS HERRANZ**, E. MARAVI PETRI** and M. MARTINEZ GRANDE*

A case of intermittent priapism with neurogenic claudication caused by spinal stenosis is reported. The symptoms disappeared completely after decompressive laminectomy.

Keywords : spinal stenosis ; priapism ; decompressive laminectomy.
Mots-clés : canal lombaire étroit ; priapisme ; lamino-arthrectomie.

SAMENVATTING

A. M. HIDALGO OVEJERO, S. GARCIA MATA, M. A. SAURAS HERRANZ, E. MARAVI PETRI en M. MARTINEZ GRANDE. Intermitterend priapisme en lumbaal kanaalstenose.

De auteurs beschrijven een geval van intermitterend priapisme met neurogene claudicatio, veroorzaakt door een lumbaal kanaalstenose. De klinische tekens verdwenen na decompressieve lamino-arthrectomie.

RÉSUMÉ

A. M. HIDALGO OVEJERO, S. GARCIA MATA, M. A. SAURAS HERRANZ, E. MARAVI PETRI en M. MARTINEZ GRANDE. Priapisme intermittent et canal lombaire étroit..

Les auteurs présentent un cas de priapisme intermittent avec claudication neurogène, provoqué par un canal lombaire étroit. La symptomatologie a régressé après lamino-arthrectomie décompressive.

INTRODUCTION

Cauda equina compression caused by lumbar stenosis is quite frequently encountered. The clinical manifestations are lumbalgia, sciatica, neurogenic claudication and motor, sensory and reflex deficits.

Several authors (1, 3) have studied the various aspects of the symptomatology but we know of only five publications which report priapism as a symptom of causa equina compression (2, 4-7). Two of them showed an association with sphincter involvement (2, 6). We present here another case of priapism due to canal stenosis and discuss its physiopathology.

CASE REPORT

A 56-year old man complained of pain in both calves and thighs after walking 300 meters. He also noted a feeling of pins and needles in the gluteus, perineum and thighs with an intense penile erection and mictional urgency. After a 10 minute rest in a seated position, the symptoms remitted and the patient was able to walk again. Once the erection disappeared, he could urinate without difficulty. Valsalva maneuvers did not cause any pain.

Physical examination showed isolated fasciculations in the calves and ischiotibialis muscles and a slight motor deficit in both big toe extensors. Lasègue's sign was positive at 70° bilaterally. The lumbar spine on standing was displaced laterally towards the right, with extreme rigidity on active

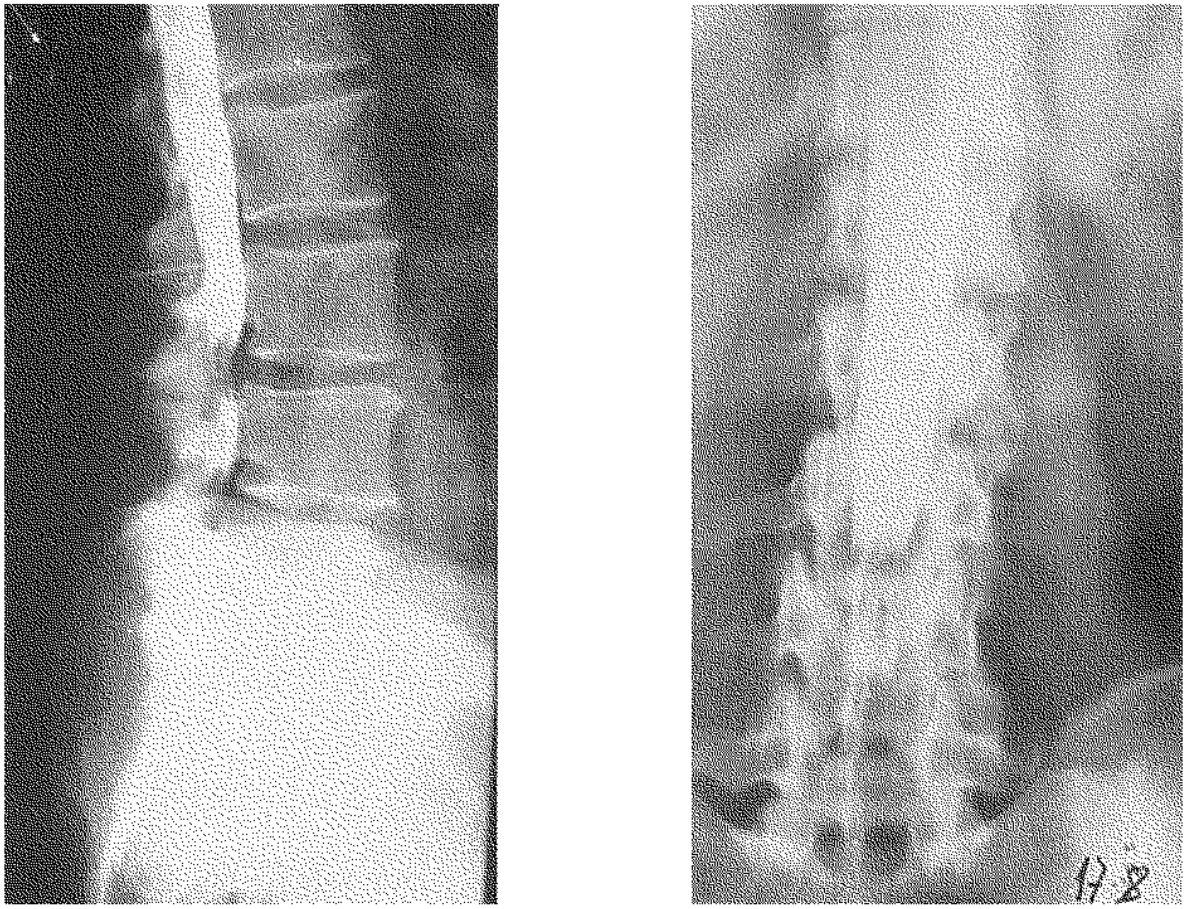
* Department of Orthopaedics, Hospital Virgen del Camino, Pamplona (Spain).
** Department of Neurology, Hospital Virgen del Camino, Pamplona (Spain).

movement. No other neurological manifestations were found. Simple radiology of the lumbar spine showed L4/L5 discopathy.

Metrizamide myelography demonstrated spinal stenosis at the L3-L4 level in sagittal and transverse views and total block in the L4-L5 space (figs. 1 and 2).

Computed tomography showed severe combined spinal stenosis (fig. 3). The patient underwent a wide L3-L4 and partial L5 decompressive laminoarthrectomy. Severe dural compression was found. Return of normal pulsation of the dural sac was observed after the procedure. An epidural fat graft was used. Postoperative evolution was satisfactory with total resolution of the previous symptomatology.

Three years later the patient remains asymptomatic.



Figs. 1 and 2. Myelography and tomomyelography showing the spinal stenosis.

DISCUSSION

Spinal stenosis is a frequent cause of peculiar clinical symptomatology, intermittent claudication (1) being its most remarkable manifestation in which radicular bilateral pain is exacerbated while walking or in certain positions (2).

The involvement of the autonomic nervous system causing priapism is quite unusual and the mechanism not yet clear. Two different explanations have been considered. The first one suggests the possibility of a parasympathetic reflex response due to mechanical stimulation of the afferent radicular nerves of the sacral segments, while

walking or at given positions of the lumbar spine (4, 5).

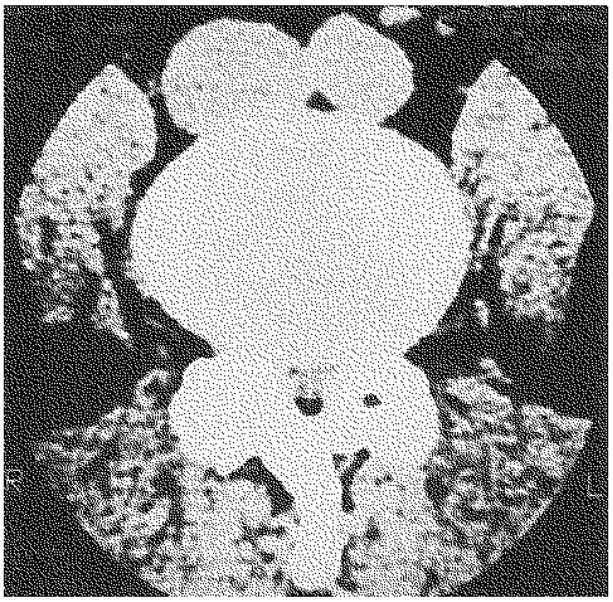


Fig. 3. — Computerized tomography showing both central and peripheral spinal stenosis.

The other theory explains the erection by means of a direct stimulation of the parasympathetic efferent radicular nerves (2, 6).
In this case, the first mechanism seems to be more likely, given the initial sequence of sensory problems and the subsequent appearance of the erection. In all the cases published including this one the symptomatology diminished with rest, and in none of them was the erection followed by ejaculation. Decompressive surgical treatment resolved the problem in all cases.

REFERENCES

1. ARNOLDIC C., BRODSKY E., CAUCHOIX J. Lumbar spinal stenosis and nerve root entrapment syndromes : definition and classification. *Clin. Orthop.*, 1976, *115*, 4-5.
2. BRISH A., LERNER M. A., BRAHAM J. Intermittent claudication from compression of cauda equina by a narrowed spinal canal. *J. Neurosurg.*, 1964, *21*, 207-211.
3. DYCK P., PHEDSANT H., DOYLE J., RIEDER J. Intermittent cauda equina compression syndrome. Its recognition and treatment. *Spine*, 1977, *2*, 75-81.
4. LAHA R., DUJOVNY M., HUANG P. Intermittent erection in spinal canal stenosis. *J. Urol.*, 1979, *121*, 123-124.
5. MERLINI L., GRANATA C., PROSPERI L. Claudicatio e Priapismo intermittente da compressione della cauda equina da stenosi lumbare. Descrizione di un caso. *Chir. Org. Mov.*, 1981-82, *67*, 235-238.
6. RAMM Z., FINDLER G., SPIEGELMAN R., SHACKED I., TADMOR R., SHAMER A. Intermittent priapism in spinal canal stenosis. *Spine*, 1987, *12*, 377-378.
7. RAVINDRAN M. Cauda equina compression presenting as spontaneous priapism. *J. Neurol.*, 1979, *42*, 28-282.

A. M. HIDALGO OVEJERO
Goroabe 5-1°
31005 Pamplona (Spain)