

GLUTEAL ATONY AS A DIAGNOSTIC SIGN OF A PROTRUDED LOWER LUMBAR INTERVERTEBRAL DISC.

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The protruded and nerve encroaching lower lumbar intervertebral disc is the most common cause of lumbar pain and work disability, and it is important to obtain an as accurate a diagnosis as soon as possible, so as to treat the patient efficiently.

The clinical tests and signs that are usually employed are compared with one another as to their frequency in surgically proved protruded protruded lumbar inter-vertebral discs.

The most frequent lesions are found in the two lower lumbar discs and it is these nerve roots (L5-S1-S2) that supply the inferior gluteal nerve whose branches enter the deep surface of the gluteus maximus. A lesion to these nerve roots may cause an atony or an atrophy of this muscle, as well as sensory changes in the sacral area.

This sign of gluteal atony was found to be present in 60% of the patients examined, who were admitted to the hospital because of pain in the lumbar region or sciatica.

Key Words : Diagnostic sign in lower lumbar root compression. Gluteal atony.

Pain in the lumbar region, is usually of sudden onset following physical exertion, it is frequently seen, and is a major cause of absenteeism from work. This condition has affected humanity throughout the ages, and it is referred in Genesis, where there is a description of Jacob being affected by sciatica that had led to paralysis for it says "the sinew that shrank" and also that "he halted upon his thigh".

Although lumbago, sciatica were known for long it was Mixter and Barr who showed in 1933 that the cause for this condition was a protruded or sequestered intervertebral disc, and they had also suggested the surgical treatment.

However in most of those affected, it is a self-limiting disease that readily responds to a few days of rest. At its onset the pain may be excruciating, and it is imperative that at this stage a comprehensive clinical evaluation be obtained. It is necessary to ascertain whether there be an involvement of the nerve root, if so which and to what extent. A decision must be made by the clinician at this initial pain phase whether the patient be treated conservatively, or further studies must be made with a possibility that he be treated surgically-

The clinical evaluation should include the history, but specifically a detailed physical examination which should be performed and recorded.

As sciatica is often of short duration, and worker's compensation again, it is possible to mimic the clinical signs, and thereby lead the physician

astray. The pertinent signs, and thereby lead the physician astray. The pertinent signs of sciatica being, an antalgic scoliosis with a limitation of the movements of the lumbar spine. Pain may be elicited locally over the spinous processes of the involved vertebrae, or when the straight leg test (Lasegue) is performed, or there may be a weakness of the muscles of the thigh, or the extensors of the foot or the toes.

Presented here is an additional sign, that shows a one or two sided atony of the gluteus maximus. The test is elicited with the patient being in the prone position, with his arms beside him. The examiner stands at the foot of the bed with the line of vision at the level of the buttock, and so one visualizes the gluteal contours. In the relaxed position the muscle's the muscles are atonic and flatten, but on contracting, the unaffected side becomes tense and rises, while on the affected side the muscles remain atonic and flat. This sign as yet in unknown to the lay public, and hence it has not been mimiced, and when present is diagnostic.

MATERIAL AND METHOD

During the course of this study, all of the patients who were admitted to the hospital because of lumbar or sciatic pain were unselectively included in this study. All of the clinical parameters were examined in every patient, recorded and subsequently compared. These being a limitation of spinal flexion, the presence of an antalgic scoliosis, the Lasegue sign, muscular weakness, sensory changes in the leg, foot and the sacral region. Also elicited were the peripheral reflexes at the knee and ankle. Changes in the muscle

tone of the rectal sphincter and that of gluteal atony were looked into.

All of the patients who did not respond to conservative treatment underwent a myelogram and where positive were operated upon. (This clinical study precedes the availability of the computerized tomography (CT) or the non magnetic resonance (N.M.R.).)

RESULTS

We are presenting the findings of fifty-two patients all of whom had severe low back pain or sciatica, and they did not respond to conservative treatment. A myelogram was performed in each, and all were proved to be suffering from protruded intervertebral disc by exploratory surgery.

Lasegue sign was the most prominent finding, to be followed by that of Gluteal atony, other findings are contributory and they must be evaluated on the whole.

Fig. 1 shows the presence of the Gluteal atony as being the only clinical sign in 13 %, and its presence with one other sign in 35 %.



Fig. 1. Tracing taken from a photographic projection, showing gluteal atony on the left side.

DISCUSSION

A clinical sign, easily elicited, and photographically recordable is presented. It is present in 60% of those affected by a protruded lumbar disc especially when the L5 and the S1 roots are affected. It is at times the only positive finding in the presence of pain, and hence it is highly recommendable.

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