Lumbar spinal block by posterior rotation of anulus fibrosus

Case report

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Two cases are reported in which a protruded anulus fibrosus rotated posteriorly into the spinal canal. The clinical signs resembled those of a ruptured intervertebral disc. Diagnosis and successful treatment by operative removal are discussed.

KEY WORDS  
- anulus fibrosus  
- lumbar protrusion  
- intervertebral disc  
- myelography

We can find no detailed report of a protruded anulus fibrosus that rotated posteriorly from its intervertebral space into the spinal canal. Therefore we deemed it worthwhile to present the following two well-documented cases.

Case Reports

Case 1

On July 2, 1972, this 58-year-old laborer, used to lifting heavy weights, was admitted to the neurosurgical unit of the Civic Hospital of Acquaviva delle Fonti because of disabling low back pain of 2 years' duration radiating to the anterior thigh, accompanied by weakness of the legs and dysuria.

Examination. The Lasègue test was strongly positive bilaterally. There was marked hypotrophy of the right quadriceps, hyporeflexia in both legs, particularly of the right Achilles, and patellar jerks. Perception of vibration was reduced in both legs. Myelography showed a complete block at L2-3 (Fig. 1). The Queckenstedt test was markedly positive, and the cerebrospinal fluid (CSF) protein content was 90 mg%.

Operation. On July 5, 1972, with the patient under general anesthesia, a total laminectomy of L2-3 was carried out. A dense yellowish fibrotic tissue about 4 to 5 mm thick, 3 cm wide, and 3.5 cm long had caused massive obliteration of the epidural canal posteriorly (Figs. 2 and 3). The mass was traced to its origin from the right side of the L2-3 intervertebral space, and removed. The histological examination revealed a degenerated anulus fibrosus. After surgery, the patient noted immediate relief. On the tenth postoperative day he was allowed to be up and about, and walked without difficulty.

Case 2

This 54-year-old farmer was admitted to
Posterior anulus fibrosus rotation

Fig. 1. Case I. Myelogram showing total block of L2-3.

Fig. 2. Case I. Operative photograph showing degenerated anulus fibrosus protruding posteriorly into the epidural space at L2-3.

Fig. 3. Case I. Drawing showing the peculiar protrusion of the anulus fibrosus into the spinal canal.

Our neurosurgical unit on July 6, 1972, with low back pain radiating posteriorly to both legs. About 2 months before admission, while lifting a heavy weight, he first experienced the excruciating pain, and had been in bed ever since because of it.

Examination. The Lasègue test was positive at about 30° bilaterally. There was paresthesia over the L4-S1 distribution in both legs and loss of perception of vibration in the patellar and ankle regions of both legs. The Achilles reflexes were absent bilaterally, and the patellar reflexes were markedly reduced bilaterally. The Queckenstedt test was normal because the spinal needle was purposely inserted above the suspected block; the CSF protein content was 85 mg%. Myelography initially showed a total block at L4-5 (Fig. 4 left); after the Valsava maneuver, when the patient strained, the contrast medium overcame the block...
but a large defect persisted at L4-5 (Fig. 4 right and Fig. 5).

*Operation.* On July 8, a total laminectomy was performed at L4-5 with the patient under general anesthesia. A fibrotic dense yellowish tissue like that described in Case 1 was identified and removed. The histological examination confirmed the fact that the specimen was degenerated anulus fibrosus tissue. Postoperatively the patient improved gradually. After 20 days he was allowed to get up, and was able to walk normally.

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