HERNIATION OF THORACIC INTERVERTEBRAL DISCS WITH SPINAL CORD COMPRESSION IN KYPHOSIS DORSALIS JUVENILIS (SCHEUERMANN'S DISEASE)

CASE REPORT

JOHN H. VAN LANDINGHAM, M.D.*

Service of Neurological Surgery, Neurological Institute, Presbyterian Hospital, New York, New York

(Received for publication January 4, 1954)

Posterior herniations of intervertebral discs in the thoracic region, while not nearly so common as in the lumbar or cervical regions, are a definite and well-recognized clinical entity. As has been described by Logue, these lesions are more apt to declare themselves by clinical evidence of spinal cord compression than by root compression or local back pain. They tend to occur in individuals beyond the age of 30 who show no propensity to generalized disease of the spine. More often than not there is no history of trauma, as emphasized by Logue, and by Love and Kiefer.

The following case of thoracic disc herniation is of interest because of several unusual clinical features which will be pointed out below.

J.J.C., a male aged 17 years, was admitted with a history of having awakened one morning 4 weeks previously with a "numb feeling" (not complete anesthesia) from the hips down. This gradually became more marked and a week later he began to experience awkwardness in walking and a sense of stiffness in the hamstring muscles, starting on the left. There was no history of trauma, pain, sphincter disturbance, or of previous neurological symptoms.

Examination revealed moderate obesity, a moderate dorsal kyphosis with no tenderness of the back, and a wide-based gait, with a suggestion of spasticity and a tendency to slap the toes on the floor when walking. Strength was normal. Position and vibratory perception were slightly impaired in the lower extremities, more so on the right. Touch and pain sensation were present but impaired below the 9th thoracic dermatome. Myotatic reflexes were slightly increased in the lower extremities and there was a bilateral Babinski sign.

The only significant laboratory finding was a spinal fluid protein of 106 mg. per cent with no manometric block.

X-rays of the dorsal spine showed a kyphotic deformity and some wedging of the mid-thoracic vertebral bodies consistent with Scheuermann's disease. Myelography showed a ventral filling defect at the 7th thoracic interspace with smaller similar deformities at T8 and T9 (Figs. 1 and 2).

Operation. On Jan. 7, 1953, a laminectomy of the 7th, 8th, and 9th thoracic vertebrae revealed two degenerated discs at the 7th and 8th interspaces. These were removed by an extradural approach, but with the dura mater open so that the cord was constantly under direct vision. The spinal cord appeared to be normal in color, size and consistency, but was bowed dorsally. The discs were soft and slightly yellow and had ruptured through the annulus fibrosus but not through the posterior longitudinal ligament. Each disc was removed from the right, following which extradural inspection of the left side revealed no evidence of a ventral mass. After removal of the discs the dorsal bowing of the cord was observed to be greatly reduced and the dura mater was closed.

Course. Postoperatively the patient, fitted with a steel supportive brace for the thoracic spine, improved rapidly. When seen in the follow-up clinic 6 weeks and again 4 months after operation he had no complaints, his gait was normal and the extensor plantar reflexes had

* Present address: Talcott Building, 315 West State Street, Rockford, Illinois.
Fig. 1 and 2. (Left) Pantopaque myelogram showing lateral view of thoracic spine. Note wedging of the vertebral bodies resulting in a moderate kyphosis, and the large ventral defect opposite the T7 interspace and the smaller defects at T8 and T9. (Right) Diagram of myelogram.

disappeared. Moreover sensation was intact save for slight hypalgesia on the lateral aspect of each thigh and calf.

COMMENT

This case is of interest for several reasons. First, the patient had physical and x-ray evidence of thoracic spine abnormality typical of Scheuermann’s disease. In Scheuermann’s report of 18 cases of juvenile kyphosis, there is no mention of spinal cord compression. Cloward and Bucy have reported 10 proved cases of spinal extradural cyst with cord compression. Eight of these were in the thoracic region and associated with either the early or late changes of kyphosis dorsalis juvenilis, and all 8 occurred in the age range from 12 to 20 years. However, so far as can be determined, no other instance of spinal cord compression caused by posterior disc herniation in Scheuermann’s disease has been reported in the literature. In this case, moreover, multiple disc herniations were demonstrated by myelography and surgical exploration. To be sure, the large extrusion at the 7th intervertebral space was undoubtedly the only one that produced neurological symptoms and signs. Finally this patient was unusually young for such a lesion. The youngest previously reported patient with thoracic disc herniation of which we are aware was 26 years old, in the series of Love and Kiefer, all others having been over 30.