Two-Level Thoracic Disc Herniation

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Abstract

We report a rare case of two-level thoracic disc herniation that occurred in a 48-year-old woman. She was referred with a 10-month history of pain on the right side of the thorax. On examination, she had hypoesthesia and hypalgesia in the right T6–T8 dermatomes. An MRI scan revealed a large herniated disc at the T7/8 level and a smaller herniated disc at the T6/7 level. At surgery, the unilateral transpedicular approach was used, and a large prolapse was removed at the T7/8 level. The T6/7 level was decompressed. The patient made an uneventful recovery. Six months after surgery her pain had disappeared, but she still had hypoesthesia in the right T6–T8 dermatomes.

Key Words: Thoracic disc herniations, prolapse, transpedicular surgery.

Introduction

Thoracic disc herniation is uncommon and surgery for thoracic disc herniation represents less than 1–2% of operations for disc disease (1–6). Nevertheless, a great deal of interest has been focused on this disorder because its diagnosis and treatment are difficult (2, 5). Also, thoracic disc herniation is one of the few notable causes of cord compression that are reversible (5). Only 27 cases of two-level thoracic disc herniation have been reported (7–11). We report a rare case of two-level thoracic disc herniation that occurred in a 48-year-old woman.

Case Report

A 48-year-old woman was referred with a 10-month history of pain on the right side of the thorax. She had no previous medical history apart from osteomyelitis in her left arm when she was a child. The only medication she was taking was carbamazepine, which had very little effect on her thoracic neuralgia. On examination, she had hypoesthesia and hypalgesia in the right T6–T8 dermatomes. Motor and sensory nerve function in the arms and legs was normal and she had no sphincter disturbance. An MRI scan with sagittal T1 and T2 weighted image with gadolinium contrast revealed a large herniated disc at the T7/8 level and a smaller herniated disc at the T6/7 (Fig.). At surgery, the unilateral transpedicular approach was used, and a large prolapse was removed

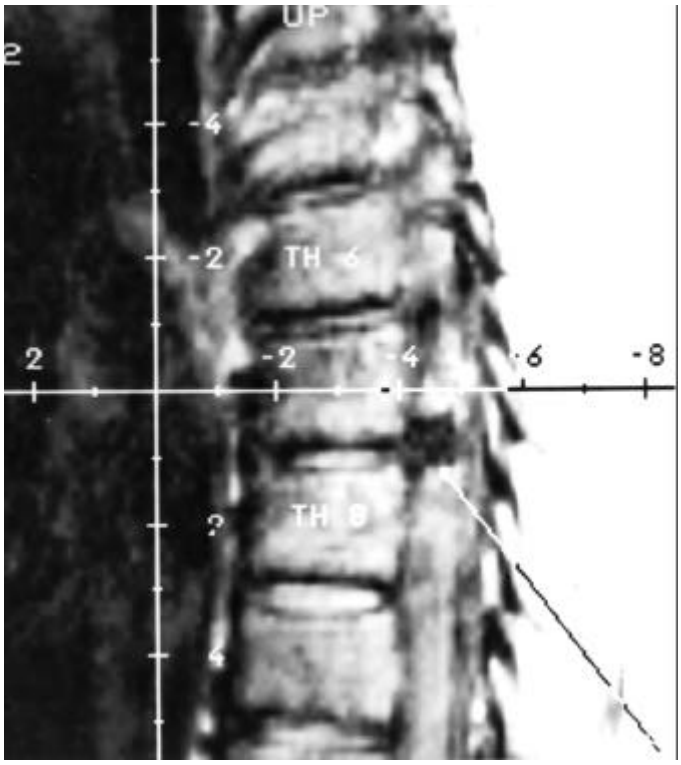

Fig. An MRI scanning with sagittal T1 and T2 weighted image with gadolinium contrast showing a large herniated disc at the T7/8 level and a smaller herniated disc at the T6/7 level diagnosis.

at the T7/8 level. The T6/7 level was decompressed. Histologic examination of the disc material showed fibrocartilage tissue. The patient made an uneventful recovery. Six months after surgery her pain had disappeared, but she still had hypoesthesia in the right T6–T8 dermatomes.

Discussion

The diagnosis of thoracic herniation is considered to be difficult and the clinical presentation can be perplexing, since a wide range of manifestations is possible (7). Differential diagnosis from spinal cord tumor, vertebral tumor, spondylitis and cerebrovascular disease is important (1, 3, 7–8). Pain, lower limb numbness and weakness, paresthesia and sphincteral dysfunction are the most common symptoms (8). Multiple thoracic disc herniations have been reported at every level, but they occur most frequently at the lower levels (10). In a recent review of 26 cases, it was found that two contiguous vertebral discs were affected in 80% of cases, with 55% from T7–T10 (8). Females seem to be affected more frequently than males, younger patients more often than older ones (8). Magnetic resonance imaging (MRI) has surpassed CT/myelography and is now the diagnostic examination of choice in the detection of thoracic disc disease (6). Most herniation will be detected on the sagittal T1-weighted sequence, but axial T1-weighted or sagittal T2-weighted images may be necessary for detection of all lesions (6). However, difficulty in differentiating thoracic disc herniation and osteophytes can be encountered, and if operative treatment is considered, MRI should be supplemented by myelography combined with CT to select the optimal surgical approach (4). Early

treatment with decompressive laminectomy, especially in association with disc removal, has proven disappointing and has been discredited as surgical therapy for thoracic disc herniation, because of an unacceptably high incidence of spinal cord damage (1–5). This seems to be due to the narrowness of the subarachnoid space around the thoracic spinal canal (3). When surgery is attempted in this situation, the slightest manipulation of the cord in order to achieve disc excision can be hazardous (3). To avoid cord manipulation, more anterior and lateral procedures have been developed (2–4). Principally, these are the anterolateral or transthoracic approach, the posterolateral approaches (including the transpedicular, transversoarthropedicular and costotransversectomy) and the lateral extracavitary approach (1–5). All are effective, and postoperative neurological deterioration is unusual (1, 3, 4). The transpedicular approach, originally described by Patterson and Arbit in 1978 (12), has been found to be an effective and safe method of surgical decompression (4). The relative simplicity of the procedure is one of its advantages, since transthoracic approaches may be problematic for patients in poor medical condition (4).

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