Thoracic disc herniation in acromegaly

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Summary: Herniation of a thoracic disc in an acromegalic giant is reported. Degenerative changes in the spine in association with dorsal kyphosis, and the additional strain, resulted in the disc prolapse.

Introduction

Herniation of a thoracic disc is uncommon.¹ Its incidence has been estimated to be one per million population per year.² Thoracic disc herniation has been described in kyphosis dorsalis juvenilis (Scheurmann's disease)³ but not in an acromegalic patient. Such an occurrence is reported in the present communication.

Case report

A 24 year old male presented with sudden onset of low back pain followed by progressive weakness of his left leg of 3 weeks' duration. There was no history of spinal trauma or strain. Bladder function was normal. Examination revealed a well built tall male with a height of 198 cm and weighing 100 kg. He had clinical features of acromegaly in the form of coarse facial features with enlarged nose, lips and jaw and maloccluded teeth. There was acral enlargement with thickening of the heels and palm pads and soft tissues of fingers and toes. He had thoracic kyphosis. Fundus examination was normal. Neurological examination revealed spastic paresis (grade 4/5) of the left leg. All modalities of sensation were diminished by 20–30% below T-12 level on the left side. Endocrinological assessment was consistent with a somatotrophic adenoma.

Plain X-ray of skull showed enlargement of sella turcica with preserved cortical outline. Cranial contrast enhanced computed tomographic (CT) scan showed an enhancing sellar lesion, measuring 1.9 cm × 2.0 cm, with suprasellar extension. Iohexol

CT myelography showed a left anterolateral extradural lesion at T10-11 disc space (Figure 1).

A T9 through 11 laminectomy was performed. A soft disc was found to be protruding anterolaterally at T10-11 level on the left side, compressing the spinal dura. It was removed completely. He had a transient increase of his motor deficit to grade 1/5, which subsequently improved to normal in 6 weeks.

Figure 1 Iohexol CT myelogram showing the herniated thoracic disc compressing anterolateral surface of the spinal cord.

Two weeks following discectomy, a total intracapsular excision of the pituitary adenoma was performed. Histopathological examination confirmed an acidophil adenoma.

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He received 40 Gy irradiation to the pituitary region in 20 fractions over 6 weeks. Repeat CT scan showed no tumour. At follow up, 2 months later, he had no neurological deficit.

Discussion

Thoracic disc herniation accounts for less than 1% of all intervertebral disc herniations;^{1,2} 75% of all thoracic disc herniations occur below T-8 especially at T11-12 levels (26%).¹ Multiple⁴ and intradural⁵ thoracic protrusions have also been reported.

The role of various aetiological factors in herniated thoracic discs is still controversial. Trauma has been considered important by some^{2,6} while unimportant by others.^{7,8} Disc degeneration seems to be an important factor but its cause remains uncertain.¹ Acromegaly predisposes to development of degenerative joint disease which in the spine may cause compression of nerve roots or spinal cord.⁹ Dorsal kyphosis is common in acromegalic patients. The additional strain of a

tall heavily built acromegalic giant with dorsal kyphosis and a degenerated spine probably resulted in protrusion of the thoracic intervertebral disc in the present case.

Myelography was hitherto considered to be the procedure of choice for the diagnosis of protruded thoracic disc with a diagnostic accuracy of 56% to 92%.^{10,11} However, high resolution tomographic scanning in combination with attentive myelography provided an excellent and better means of diagnosis of thoracic disc herniation.¹² In the present case, thoracic disc herniation was clearly demonstrated by Iohexol CT myelography.

The standard treatment consisting of a posterior decompressive laminectomy with extradural and/or intradural removal of disc has been associated with poor results attributed to spinal cord retraction necessary to remove the disc.¹ However, over 80% success rate has been reported with posterolateral, lateral or transthoracic approach.^{1,13} Symptoms lasting less than 9 months and a soft disc have been associated with a good prognosis¹ as was also observed in the present case.

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