Thoracic Intradural Anterior Epidermoid Manifesting as Sudden Onset of Paraplegia
—Case Report—

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Abstract
A 32-year-old female presented with a rare thoracic intradural anterior epidermoid tumor manifesting as acute onset of paraplegia. The tumor was completely removed through a laminectomy. She achieved a full neurological recovery. This is a very unusual presentation for an epidermoid tumor.

Key words: epidermoid, thoracic spine, intradural, paraplegia

Introduction
Epidermoid tumors occur infrequently in the spinal canal and are rarely found to be the cause of cord compression.\(^1,2,11,13\) Spinal epidermoid tumors are more frequently located in the lumbar\(^3\) and rarely in the cervical and thoracic regions.\(^1\) The incidence of thoracic epidermoids is about 0.8% of all spinal epidermoids.\(^1\)

We describe the clinical features of a rare case of an anteriorly placed, thoracic intradural epidermoid tumor.

Case Report
A 32-year-old female was admitted with a history of rapidly progressive weakness of both legs. Over a period of 10 days she had become paraplegic. She had suffered local mild pain in the thoracic spine for 3 months which had increased in severity since the onset of weakness of the legs. She was constipated and was catheterized for retention of urine.

Examination found she had spastic paraplegia with exaggerated reflexes and positive Babinski’s sign. Marked sensory loss of all modalities was noted below the T-8 dermatome. Roentgenographs of the thoracic spine were normal. Myelography showed a total block to the flow of contrast medium at the T-7 level (Fig. 1). A meniscus was formed by the lower edge of the tumor, which was sited anteriorly and to the left of the cord.

A laminectomy from the T-6 to T-8 levels was extended laterally on the left. When the dura was divided, the cord ballooned through the incision. The well-defined, encapsulated tumor was seen on the left, anterior to the ligamentum denticulatum and the anterior nerve roots, measuring approximately 3 cm in length and 1.5 cm in width. The thickened leptomeninges overlying the tumor were dissected, demonstrating the epidermoid character of the tumor. The lesion was excised completely, first by debulking the soft and cheesy contents and then by

Fig. 1 Myelogram showing an anterior intradural-extradural obstruction to the flow of contrast medium at the T-7 level.
excising the capsule which could be easily detached from the surface of the cord. Histological examination of the tumor specimen showed features typical of an epidermoid (Fig. 2).

She showed rapid neurological improvement following surgery. At the 3-month follow-up examination she could walk unaided, despite some residual spasticity, and had regained bladder and bowel control.

**Discussion**

Spinal epidermoids are slightly more common in children, and some may arise as an error in the development. Overlying dermal sinus, dimple or hair tuft, and associated bone and other soft tissue anomalies are usual accompaniments. Occasionally, occult spina bifida may also be present. In our patient, there was no cutaneous or bony abnormality. Lumbar puncture and implantation of cutaneous tissue in the spinal canal have also been implicated as the cause of some of these tumors. These tumors are usually located in the posterior intradural space, within the roots of cauda equina, and are sometimes intramedullary. Anteriorly placed, intradural epidermoid tumors are very rare, with only two such cases reported in the lumbar spine.

The slow growth characteristics result in epidermoid tumors usually presenting with long-standing symptoms and subtle neurological deficits. Despite most of these tumors arising as developmental errors and being 'congenital' in origin, they usually present clinically in early adulthood due to the slow growth. Acute presentation with rapid progressive paraplegia has not been reported previously. The exact cause of the acute symptoms in our patient were not known. Magnetic resonance imaging is the investigation of choice, but was not possible in our patient as the symptoms developed rapidly. Financial constraints also played a part.

As for cranial epidermoids, complete removal is the preferred treatment and is generally curative. However, adhesions of the capsule to the surrounding neural structures may sometimes limit the extent of excision.

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**References**


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