Case report

Giant thoracic schwannoma masquerading as transverse myelitis

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Learning Point for Clinicians
Clinicians must consider schwannomas in acute paraparesis in young people. Prompt diagnostic imaging is critical for early intervention. Surgical decompression can result in significant improvement and favorable outcomes, especially when performed early. A thorough neurologic examination will allow proper anatomic localization and guide further investigations.

Introduction
Schwannomas are neoplasms that arise from schwann cells of the posterior spinal root, cranial nerves or peripheral nerves. They account for up to 30% of all spinal tumors and have roughly the same incidence as meningiomas. They may involve multiple spinal compartments (intradural extramedullary 72%, extradural 13%, intradural 13% and intramedullary 1%).1 Classification of these tumors uses location and extent and entails five distinct classes.2 Class V has been described almost exclusively in the lumbosacral spine and as intrascaral lesions.2,3 However, rare reports have described giant thoracic schwannomas.4 We report the case of a patient with type V thoracic schwannoma mimicking acute transverse myelitis.

Case presentation
A 37-year-old Hispanic female with no significant medical or family history, presented with worsening bilateral leg weakness and heaviness over 1 week to the point of significant gait dysfunction. She could not stand by herself, and needed assistance to ambulate. One day prior to presentation, she noticed mild midline lower back pain. Her sensory complaints consisted of altered sensations in her feet, reporting that they felt cold, along with intermittent numbness around the buttocks that radiates to the inguinal area bilaterally. She denied urinary or fecal incontinence, visual changes, dysarthria, dysphagia, tinnitus or any deficit in the upper extremities. Her medications consisted of over the counter vitamins. She denied alcohol and tobacco consumption.

The patient’s physical examination revealed intact cranial nerves and normal tone, dexterity, speed and strength in her upper extremities. Examination of lower extremities showed mild spastic catch, slow foot tapping bilaterally and inability to rise from a chair without using her arms. She had 4/5 strength in hip flexion, knee flexion and dorsiflexion bilaterally. She had normal biceps, brachioradialis and triceps reflexes. Knee and ankle jerk reflexes were brisk and symmetric. Plantar reflex yielded up-going toes bilaterally. Sensory testing revealed normal light touch sensation diffusely, decreased pinprick sensation at dermatome T10, with normal pinprick
sensation in her hips and lower extremities bilaterally. She had loss of vibration at the toes, ankles, knees, but was otherwise preserved at the iliac crests. Romberg sign was positive. Gait was wide-based, ataxic and slow. She was able to stand on toes and heels; however, she had moderate difficulty with forward tandem. The patient had mild tenderness to palpation around T10, worse in left paraspinal muscles.

Magnetic resonance imaging (MRI) of the thoracic spine showed a 9.3 cm × 6.0 cm lytic multilobulated vertebral mass and adjacent paraspinal soft tissue mass present from T8 to T10, centered at T9 with severe lytic destruction of the T9 vertebral body, and expansion of the large soft tissue mass extending into the lower posterior left thoracic cavity with numerous calcifications (Figure 1a–d). A large amount of the mass extended into the spinal canal, encircling the spinal cord and compressing it severely with anterolateral displacement.

Given significant spinal cord compression, the patient underwent decompressive laminectomy and subtotal resection of the lesion. Intra-operatively, it was noted that the vertebral lamina at T8–T11 displayed lytic defects, and lesions consistent with a tumor were protruding through these defects. Normal dura could not be visualized with these defects. A frozen section of the tumor was

Figure 1. Non-contrast MRI acquired within 24h post-presentation. (a, b) T2 Sagittal and (c, d) T2 axial. The lesion (9.3 cm × 6.0 cm) is a large lytic multilobulated mass present from T8 to T10 extending into the adjacent paraspinal soft tissue, left lower thoracic cavity and the spinal canal.
consistent with possible meningioma without signs of malignancy. The patient did well post-operatively with minimal pain, regained function in areas of weakness and had resolution of the ataxic gait. Histopathology revealed a schwannoma with large areas of degenerative changes. While some areas had an epithelioid appearance, there were other areas with a classical Antoni A pattern. Immunohistochemical stains for S100 protein labeled all tumor cells.

The presentation of nerve-sheaths tumors vary depending on location and rapidity. Tumors extending between T8 and T12 often entailed some component of superficial and/or deep abdominal pain which was not observed in our case. Our case is unusual in that a large, likely longstanding, type V schwannoma caused symptoms of rapid paraparesis and gait ataxia, mimicking clinically acute transverse myelitis. It is important to distinguish transverse myelitis from spinal cord compression, especially when symptoms evolve rapidly. Early detection is critical, as late intervention may entail worsened outcomes.

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References