

Neuroimaging Highlight

A Massive Thoracic Meningocele in a Patient with NF1

Pushan Dasgupta¹ , Ian E. McCutcheon² and John M. Slopis¹

¹Department of Neuro-Oncology, UT MD Anderson Cancer Center, Houston, TX, USA and ²Department of Neurosurgery, UT MD Anderson Cancer Center, Houston, TX, USA

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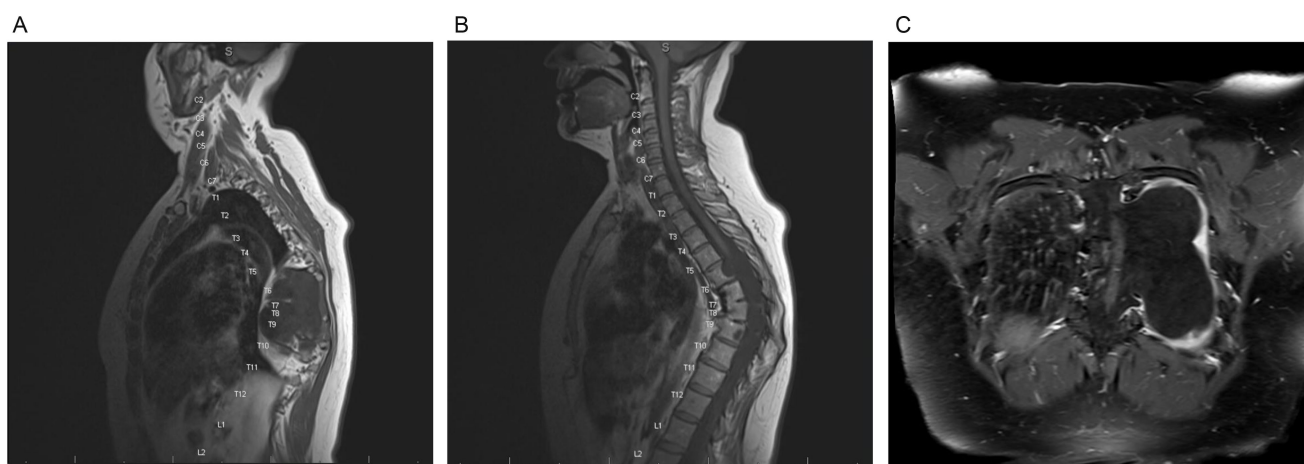


Figure 1. [a, b] Sagittal and [c] coronal T1-weighted MRI sequences of the thoracic spine. The spinal levels from which the meningocele originates are shown [A], as is the kyphosis and some of the vertebral scalloping and dural ectasia [b]. The widely patent connection between the spinal canal and the meningocele, and its relation to the spinal cord, is shown in [c]. MRI = magnetic resonance imaging.

Thoracic meningoceles are uncommon but when seen are often associated with neurofibromatosis 1 (NF1). Here we present a unique case where a massive thoracic meningocele presented with chest pain in a patient with NF1. A 56-year-old female with a diagnosis of NF1 presented with pain in the entire chest wall. She described the pain as circumferential around the entire chest “like a barrel”. Cardiology evaluation (with echocardiography) revealed no pulmonary hypertension or other cardiac disorder. MR angiogram of the chest also revealed no intrathoracic vascular structural abnormality. Inflammatory myopathy was considered to explain the pain but electromyography was unremarkable as were creatine kinase and erythrocyte sedimentation rate. Magnetic resonance imaging of the thoracic spine demonstrated a large thoracic meningocele involving the spinal canal from T5-T10 and extending into the left hemithorax with measurements of $11.5 \times 6.1 \times 12.5$ cm (Figure 1A-C). Imaging was also notable for leftward displacement of the spinal cord toward the meningocele starting at the T6 level and extending to

the T9 level with kyphosis of the thoracic spine centered on the block vertebral bodies forming the T7-T8 levels. Significant posterior scalloping is present from T6-T10 with attendant dural ectasia. Neurosurgical consultation recommended no intervention to correct the meningocele as plication carried a risk of producing a subarachnoid-pleural fistula from the meningocele into the pleural space of the thoracic cavity. This case adds to our understanding of how unique and diverse the presentations of NF1 can be and of the surgical challenges posed by NF1-associated meningoceles.

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Corresponding author: Pushan Dasgupta; Email: prdasgupta@mdanderson.org

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