Intradural Intramedullary Teratoma Presenting in the Lumbar Spine: Report of a Rare Case

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Background
Teratomas of the spinal cord constitute 0.1-0.5% of all spinal tumors, and these lesions are extremely rare in adults. The authors describe a rare case of intradural intramedullary teratoma at the L1-level and perform review of literature of adult onset spinal teratomas.

Case presentation
A 36-year-old woman presented with 8 years of progressing lower back pain. There was no history of spinal dysraphism, congenital spinal abnormalities, previous spinal surgery, or lumbar puncture. Neurological examination revealed hyperesthesia at L1 dermatomes on both sides and at L2 dermatomes on the right, higher reflexes in legs then in arms, positive Babinski reflex on the right.

Methods Management and Outcome
Lumbar magnetic resonance revealed intradural intramedullary tumor at the L1-level, located on the left side of spinal cord with spinal cord compression. Histopathology examination of the resected tumor revealed transitional and respiratory epithelium (a), acinar structures (b) and hyaline cartilage (c). There were no immature elements or malignant cells. Post-operatively neurological symptoms regressed, patient was mobilized and was able to start walking with assistance.

Discussion
- Teratoma is defined as a neoplasm that is composed of a variety of parenchymal cell types derived from three germinal layers (ectoderm, endoderm, and mesoderm)
- Intramedular spinal teratoma is the most common type of spinal teratomas
- The main spinal teratoma symptoms are pain, weakness and numbness of the legs, sphincter and/or gait dysfunction, intramedullary teratomas present early on with increased reflexes and loss of vesical and rectal control
- Histopathologic examination is the gold standard for definite diagnosis
- Teratomas are diagnosed when remnants of all three germ layers are present
- MRI is the gold standard diagnostic technique for spinal teratoma. The tumor presents as inhomogeneous intensities in both T1- and T2-weighted images due to teratoma’s tissue heterogeneity
- Surgical resection is the first line treatment for spinal teratoma, usually decompressive laminectomy is performed
- The goal of surgery should always be the most radical removal possible with relieve of the nerve compression with the aim of preventing progressive deterioration.

Conclusions
Teratomas should be taken into consideration in the differential diagnosis of intramedullary lesions when the imaging reveals variable signal intensity because of tissue heterogeneity. A partial resection is a viable treatment option when the lesion is attached to vital structures because of the low recurrence rates reported in the literature.

Key words
Neuroradiology, spine, teratoma, adult onset