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Cystic Lesions in Spinal Astrocytoma

Spinal Astrositomda Kistik Lezyonlar

Ahmet Evlice, Dilek İşcan, Meltem Demirkıran
Çukurova University Faculty of Medicine, Department of Neurology, Adana, Turkey

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Introduction

Astrocytoma, which originates from uncontrolled growing glial cells, is the second most common tumor of the spinal cord after ependymoma in adults (1). It is more common in males, and the most common location is the cervical spinal cord, followed by the thoracic cord (2,3,4). Astrocytoma manifests with radicular pain and sensory loss. Motor deficits, spasticity, and sphincter dysfunction present in later stages (3,5). A patient with weakness of the legs in whom neuroimaging and histopathologic findings indicated a diagnosis of anaplastic astrocytoma is reported in this article.

A girl aged 17 years was admitted to our hospital with progressive weakness and numbness in the legs and urinary incontinence. The patient's neurologic evaluation revealed grade 4/5 paraparesis, hyperactive reflexes of the lower extremities, loss of sensation below the level of L1, loss of vibratory sense in the lower extremities, and bilateral Babinski signs. Spinal magnetic resonance imaging (MRI) showed multiple microcystic lesions at the levels of T5-9 in the epidural space, spinal cord edema, and myelomalacia T9 through T12 (Figure 1, 2, 3). A lumbar puncture was performed with a pre-diagnosis of myelitis. Protein level was 2549 mg/dL, glucose 71 mg/dL, lactate 4.9 mg/dL, and sodium 135 mEq/L in the cerebrospinal fluid and no cells were counted. A neurosurgical consultation was then ordered with a pre-diagnosis of spinal mass lesion. The patient underwent neurosurgery and a histopathologic evaluation of the specimen indicated a diagnosis of anaplastic astrocytoma. Lesions of patients with astrocytoma in spinal MRI are hypointense or isointense in T1 and hyperintense in T2, as seen in our patient (Figure 1, 2, 3) (6). Cystic lesions are rare, and are difficult to distinguish from solid tumors because they contain high levels of protein (6,7). Our patient had multiple independent cystic lesions around the tumor. No other patients with these features have been

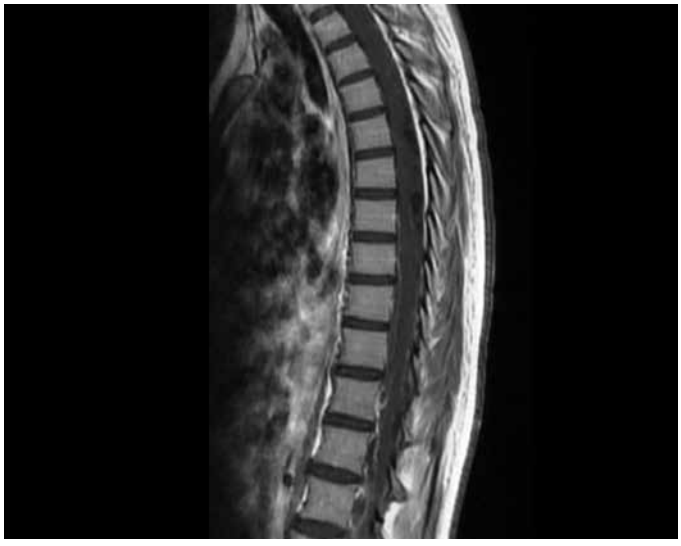

Figure 1. Spinal magnetic resonance imaging, T1-weighted sequences, sagittal plane

Address for Correspondence/Yazışma Adresi: Ahmet Evlice MD, Çukurova University Faculty of Medicine, Department of Neurology, Adana, Turkey
Phone: +90 322 338 60 60-3206 E-mail: aevlice@yahoo.com
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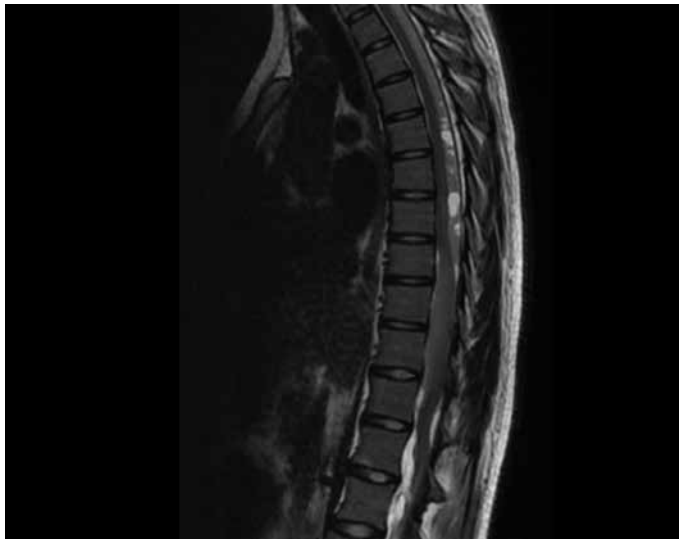

Figure 2. Spinal magnetic resonance imaging, T2 weighted sequences, sagittal plane

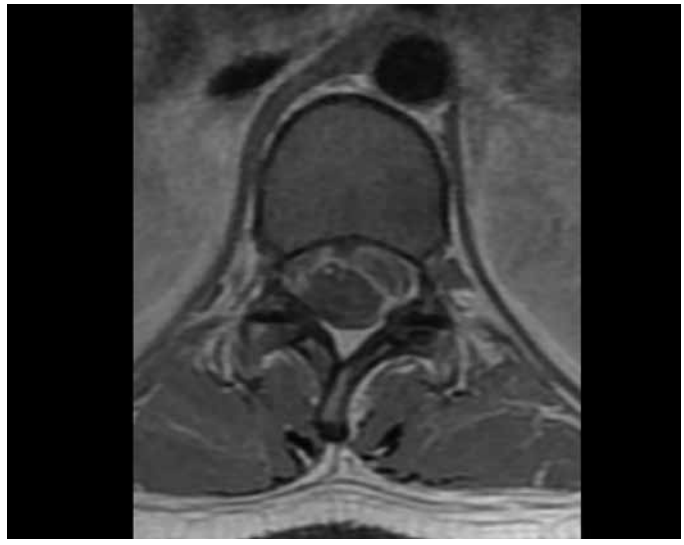

Figure 3. Spinal magnetic resonance imaging, T2 weighted sequences, axial plane

reported in the literature. This patient was reported because she had uncharacteristic neuroimaging findings.

Ethics

Informed Consent: Consent form was filled out by all participants.
Peer-review: Externally peer-reviewed.

Authorship Contributions

Medical Practices: Ahmet Evlice, Dilek İşcan, Meltem Demirkıran, Concept: Ahmet Evlice, Dilek İşcan, Meltem Demirkıran, Design: Ahmet Evlice, Dilek İşcan, Meltem Demirkıran, Data Collection or Processing: Dilek İşcan, Analysis or Interpretation: Ahmet Evlice, Dilek İşcan, Meltem Demirkıran, Literature Search: Ahmet Evlice, Dilek İşcan, Meltem Demirkıran, Writing: Ahmet Evlice, Dilek İşcan, Meltem Demirkıran.

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