

# Accepted Manuscript

Diastematomyelia with the owl sign (Type I split cord malformation)

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PII: S1529-9430(15)00547-1

DOI: [10.1016/j.spinee.2015.05.025](https://doi.org/10.1016/j.spinee.2015.05.025)

Reference: SPINEE 56347

To appear in: *The Spine Journal*

Received Date: 14 May 2015

Accepted Date: 19 May 2015

Please cite this article as: Alimli AG, Oztunali C, Boyunaga OL, Derinkuyu BE, Damar C, Aslan A, Ucar M, Diastematomyelia with the owl sign (Type I split cord malformation), *The Spine Journal* (2015), doi: [10.1016/j.spinee.2015.05.025](https://doi.org/10.1016/j.spinee.2015.05.025).

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## **Diastematomyelia with the owl sign (Type I split cord malformation)**

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1   **Diastematomyelia with the owl sign ( Type I split cord malformation )**

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3   A 4-year old female patient was admitted our Neurosurgery Department with the complaints  
4   of weakness in her left leg, difficulty in walking and falling down frequently while walking.  
5   She had a sacral dimple since her birth but it was not investigated. Physical examination  
6   revealed sacral dimple, scoliosis and slight dorsal flexion of the left foot. Magnetic resonance  
7   imaging (MRI) of the spine was performed. MR images showed thoracolumbar levoscoliosis.  
8   Additionally, syringomyelia was present throughout the T5-T7 vertebrae (**Figure 1**) and the  
9   spinal cord was tethered with a low-lying conus medullaris at L4 level. MR images showed  
10   congenital fusions of the T7-T8 and T12-L1 vertebral bodies (**Figure 2**). Vertebral anomalies  
11   including hemivertebrae and butterfly vertebrae at the level of T9-11 were observed (**Figure**  
12   **1-2**). Spinal canal was ectatic at the lower thoracal and lumbar levels (**Figure 3**). There was  
13   diastematomyelia with a bony spur continuing throughout the T 11- L2 levels (the owl sign)  
14   (**Figure 3**). At these levels, the spur in the spinal canal divided the spine into two hemicords  
15   (Type I split cord malformation with two dural sacs) (**Figure 3**). A T11-12 laminectomy with  
16   the removal of the bony spur to repair the diastematomyelia was performed. Dural tubes were  
17   then repaired and a common thecal sac was subsequently formed. A coccygeal dermal sinüs  
18   tract that is not extending into the spinal canal was observed during the operation and the tract  
19   was excised. The patient was discharged uneventfully following the surgery.

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21   **Figure Legends**

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23   **Figure 1:** Sagittal T2 weighted MR image shows syringomyelia (black arrows) and vertebral  
24   anomalies (white arrows).

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26   **Figure 2:** Sagittal T2 weighted MR image shows congenital fusion of the T12-L1 posterior  
27   vertebral bodies (white arrow) and vertebral anomalies (black arrows).

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29   **Figure 3:** Axial (right) and coronal (left) T2 weighted MR images show diastematomyelia  
30   with a bony spur (asterix) ( the owl sign) and two hemicords (black arrows) with the ectatic  
31   spinal canal (white arrows) .

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