JCINCR Journal of OPEN ACCESS Clinical Images and Medical Case Reports

ISSN 2766-7820

Clinical Image

Open Access, Volume 6

MRI diagnosis of lipomyelocele in a child with Tethered Cord syndrome

Tlaite Oubaddi*; Zineb Izi; Siham El Haddad; Nazik Allali; Latifa Chat

Pediatric Radiology Department, Ibn Sina University Hospital Center, Faculty of Medicine and Pharmacy of Rabat, Mohammed V University, Rabat, Morocco.

*Corresponding Author: Tlaite Oubaddi

Pediatric Radiology Department, Ibn Sina University Hospital Center, Faculty of Medicine and Pharmacy of Rabat, Mohammed V University, Rabat, Morocco. Email: tlaite.oubaddi@gmail.com

Received: Apr 22, 2025 Accepted: May 12, 2025 Published: May 19, 2025 Archived: www.jcimcr.org Copyright: © Oubaddi T (2025). DOI: www.doi.org/10.52768/2766-7820/3595

Introduction

A 5-year-old boy, presenting with fecal incontinence, had a subcutaneous swelling in the sacral region since birth. Lumbo-sacral MRI revealed a posterior neural arch defect through which a lipomatous subcutaneous mass penetrated the spinal canal and attached to the tethered cord (Figure 1). The spinal cord-lipoma junction was located within the spinal canal, consistent with a diagnosis of lipomyelocele. Lipomyelocele is a subtype of closed spinal dysraphism characterized by a subcutaneous lipomatous mass that herniates through a defect in the posterior neural arch, penetrating the spinal canal and attaching to the tethered spinal cord. Unlike lip myelomeningocele, there is no meningeal herniation, and the subarachnoid space remains intact. The lipoma is typically located within or at the margin of the spinal canal, without expansion of the surrounding cerebrospinal fluid spaces. Clinically, patients may present with a sacral mass and neurological symptoms, such as urinary and fecal incontinence, depending on the level of the tethered cord. MRI plays a crucial role in diagnosing lipomyelocele by providing detailed imaging of the spinal cord, lipoma, and associated anatomical anomalies [1,2].

References

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Citation: Obada T, Izi Z, El Haddad S, Allali N, Chat L. MRI diagnosis of lipomyelocele in a child with Tethered Cord syndrome. J Clin Images Med Case Rep. 2025; 6(5): 3595.



Figure 1: Lumbo-sacral MRI showing a posterior neural arch defect through which a lipomatous subcutaneous mass (arrow) penetrates the spinal canal and attaches to the tethered cord (arrowhead). Note that the spinal cord–lipoma junction is located within the spinal canal.