Teaching Neuroimages: Prenatal Diagnosis of Limited Dorsal Myeloschisis

Author(s):
Lauren Jiayu Fu, MBBS; Velda Xinying Han, MRCPCH; Jeremy Bingyuan Lin, MRCPCH; Clement HR Yong, FRANZCR; Betsy K. Soon, FRCR; Furene Sijia Wang, 1,2; Vincent DW Nga, MRCS, FRSEd

Corresponding Author:
Furene Sijia Wang, furene_wang@nuhs.edu.sg

Affiliation Information for All Authors: 1. Khoo-Teck Puat-National University Children’s Medical Institute, National University Health System, Singapore; 2. Yong Loo Lin School of Medicine, National University of Singapore, Singapore; 3. Department of Diagnostic Imaging, National University Health System, Singapore; 4. Division of Neurosurgery, Department of Surgery, National University Health System, Singapore

Equal Author Contribution:

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Lauren Jiayu Fu: Drafting/revision of the manuscript for content, including medical writing for content; Major role in the acquisition of data; Study concept or design; Analysis or interpretation of data
Velda Xinying Han: Drafting/revision of the manuscript for content, including medical writing for content; Major role in the acquisition of data; Study concept or design; Analysis or interpretation of data
Jeremy Bingyuan Lin: Drafting/revision of the manuscript for content, including medical writing for content; Major role in the acquisition of data; Study concept or design; Analysis or interpretation of data
Clement HR Yong: Drafting/revision of the manuscript for content, including medical writing for content; Major role in the acquisition of data; Study concept or design; Analysis or interpretation of data
Betsy KH Soon: Drafting/revision of the manuscript for content, including medical writing for content; Major role in the acquisition of data; Study concept or design; Analysis or interpretation of data
Furene Sijia Wang: Drafting/revision of the manuscript for content, including medical writing for content; Major role in the acquisition of data; Study concept or design; Analysis or interpretation of data
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The fetus of a 34-year-old primigravida with gestational diabetes but no folate deficiency, was found to have a posterior sacral cystic lesion at 21-weeks ultrasound. Fetal magnetic resonance imaging (MRI) at 22-weeks revealed a 2.3x1.1x2.2cm hyperintense cystic lesion, resembling a meningocele without bony or intracranial abnormalities (Figure-1). Postnatally, a midline fluid-filled sacral mass with squamous epithelial covering was seen\(^1\) (Figure-2A). Neurological examination was normal. Postnatal MRI confirmed the diagnosis of limited dorsal myeloschisis (LDM) and also detected Chiari I malformation (Figure-1). LDM should be considered in posterior sacral cystic lesions without bony abnormalities, and has a better prognosis than meningoceles.\(^2\)


References


Figure-1: Neuroimaging (T2-weighted)

22-weeks Fetal MRI: (A) Sagittal, (B) Axial images of the lesion
Postnatal MRI (C) Spine (Axial): Fibroneural stalk (arrow). Fine neural elements (dotted), (D) Brain (Sagittal): Chiari I malformation.
Figure-2: Clinical images

(A) 3.5x5cm LDM.  
Intra-operative photos: (B) Fibroneural stalk, (C) Tethered cord, S2 (D) De-tethered cord
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