Limited Dorsal Myeloschisis: a diagnostic pitfall in the prenatal ultrasound of fetal dysraphism

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Objective
To determine ultrasonographic characteristics of Limited Dorsal Myeloschisis (LDM) at prenatal ultrasound and to highlight the main features that may help differentiate LDM and myelomeningocele (MMC).

Methods
We prospectively collected the medical data and ultrasonographic (US) characteristics of all patients referred to our French national center for in utero prenatal repair of MMC (PRIUM study) from November 2013 to April 2017.

Results
Among the 60 patients assessed, the diagnosis of MMC was revised in 10 cases. In one case, the diagnosis of lipomyelomeningocele was achieved. In the other 9 cases, the diagnosis of LDM was established. On US scan, LDM was characterized by a spinal saccular lesion with a thick peripheral lining in continuity with the adjacent skin. Within the saccular lesion, a thick hyperechoic well-delineated structure was present in continuity with the spinal cord. Cerebral structures were normal except in two cases showing a cisterna magna slightly decreased in size. In the remaining 50 cases, MMC was confirmed with cerebral anomalies present in 49/50 cases (98%).

Conclusion
LDM is a form of closed dysraphism accessible to prenatal diagnosis by US that may mimic MMC. Considering the major difference in prognosis between these two entities, physicians should be aware of the existence and US characteristics of LDM.