

EP13.27. Approach of a mono chorionic twin pregnancy with Dandy Walker malformation in one fetus: case report

Ricardo López-Rubio¹ , Ivan Davila² , Oscar M. Salazar-Cerda² , Ma. Catalina Rodríguez-Gutiérrez²

1. Department of Gynecology and Obstetrics, Maternal Fetal Medicine and Fetal Surgery , ISSSTELEON, Monterrey, Nuevo León, Mexico.
2. Department of Gynecology and Obstetrics, Tecnológico de Monterrey, Monterrey, N.L., Mexico

Background

In mono chorionic pregnancies, the prevalence of congenital anomalies is notably higher compared to singleton pregnancies, with the risk of malformations being up to four times greater (1,2). The Dandy-Walker malformation (DWM) is a rare congenital anomaly affecting the fourth ventricle and cerebellum, characterized by posterior fossa enlargement, upward displacement of the tentorium, agenesis of the vermis, and cystic dilation of the fourth ventricle (3).

Case report

We present the case of a 27-year-old patient with a mono chorionic bi amniotic twin pregnancy, diagnosed at 12.6 weeks. At 20 weeks, an anatomical scan revealed two female fetuses, with one displaying an enlarged posterior fossa and agenesis of the vermis, without ventriculomegaly (Figure 1). Neurosonography at 22.4 weeks confirmed the suspicion of DWM (Figure 2).

A fetal MRI at 32 weeks confirmed the diagnosis, showing DWM without additional anomalies (Figure 3). The second twin showed normal development. At 36 weeks, moderate ventriculomegaly was noted. Both newborns had a 9/10 Apgar score at birth, and a transfontanelar ultrasound confirmed the Dandy-Walker malformation and ventriculomegaly in the affected twin.

Conclusion

Mono chorionic pregnancies present a higher risk of congenital anomalies, with discordant malformations observed in 80% of cases. Performing systematic screening, as suggested by the ISUOG guidelines, allows for an adequate evaluation of both mono chorionic pathology and the detection of discordant malformations.



Fig. 1: second trimester evaluation, transcebellar plane with enlarged posterior fossa and partial agenesis of the vermis.



Fig. 2: Sagittal plane of a neurosonography showing the upward displacement of the tentorium

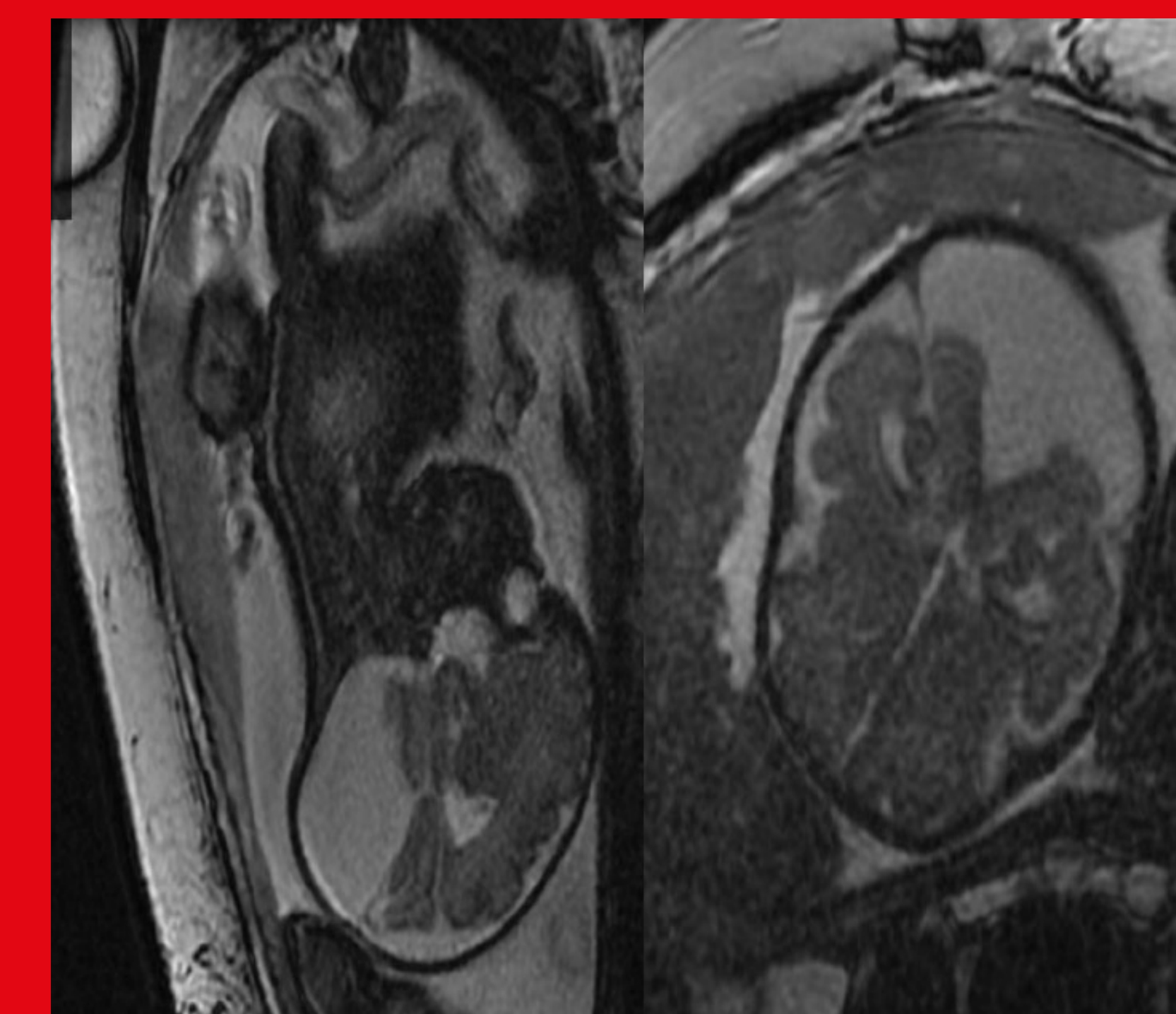


Fig. 3: Fetal MRI showing the enlarged posterior fossa, partial agenesis of the vermis and the upward displacement of the Tentorium.

REFERENCES

1. Glińska S, Rankin J, Wright C. Congenital anomalies in twins: a register-based study. *Human Reproduction*. 2008;23(6):1306-11.
2. Yu Y, Cozen W, Hwang AE, Cockburn MG, Zadnick J, Hamilton AS, et al. Birth anomalies in monozygotic and dizygotic twins: results from the California twin registry. *Journal of Epidemiology*. 2019;29(1):18-25.
3. Monteagudo A, Medicine SIM-F. Dandy-Walker Malformation. *American Journal of Obstetrics and Gynecology*. 2020;223(6):B38-B41.
4. Osenbach RK, Menezes AH. Diagnosis and management of the Dandy-Walker malformation: 30 years of experience. *Pediatric neurosurgery*. 1992;18(4):179-89.

4. Osenbach RK, Menezes AH. Diagnosis and management of the Dandy-Walker malformation: 30 years of experience. *Pediatric neurosurgery*. 1992;18(4):179-89.
5. Litwirska E, Walasik I, Szpotariska M, Staniewski P, Góra T, Szajner T, et al. Discordance for defects in mono chorionic twins: prevalence and impact on perinatal outcomes. 2024.
6. Khalil A, Rodgers M, Baschat A, Bhide A, Gratacos E, Hecher K, et al. ISUOG Practice Guidelines: role of ultrasound in twin pregnancy. *Ultrasound in obstetrics & gynecology: the official journal of the International Society of Ultrasound in Obstetrics and Gynecology*. 2016;47(2):247-63.