

# Prenatal suspicion of Dandy–Walker malformation with postnatal diagnosis of complex congenital brain malformation

Ji min Sonn, In Yang Park

## Background

Prenatal posterior fossa abnormalities may represent an isolated Dandy–Walker spectrum lesion or a component of a broader congenital brain malformation. Associated cortical abnormalities can remain difficult to fully characterize before birth.

## Pre-natal course

- 38-year-old nulliparous woman referred for fetal neurosonographic evaluation.
- 15+5 weeks: cerebellar hypoplasia below the 1st centile and communication between the fourth ventricle and cisterna magna.
- Follow-up: persistent small cerebellum and teardrop appearance of the lateral ventricle, raising suspicion for Dandy–Walker spectrum.
- 27+4-week fetal MRI: hypoplastic cerebellar vermis with mild cephalad rotation, enlarged posterior fossa, and left lateral ventriculomegaly.
- Cell-free DNA screening, amniotic fluid karyotype, and chromosomal microarray were normal.

## Postnatal findings

- Female infant delivered vaginally at 37+2 weeks; birth weight 3123 g; Apgar scores 7 and 10.
- Postnatal brain MRI demonstrated a complex congenital brain malformation involving both supra- and infratentorial structures.
- Clinical assessment was consistent with subependymal heterotopia, schizencephaly, cerebellar hypoplasia, and persistent left lateral ventriculomegaly.
- EEG was unremarkable.
- Follow-up showed progressive macrocephalic head growth and global developmental delay requiring rehabilitation therapy.

## Conclusion

When Dandy–Walker malformation is suspected prenatally, the entire fetal brain should be evaluated carefully for associated supratentorial abnormalities. Serial neurosonography and fetal MRI are valuable, but postnatal MRI may be essential for complete delineation of cortical malformations. Prenatal counseling should acknowledge that the final diagnosis and neurodevelopmental prognosis may be more complex than initially anticipated.

