The purpose of a study was to describe the relationship between intracranial and extracranial anomalies and neurodevelopmental outcome for fetuses diagnosed with a posterior fossa anomaly (PFA) on fetal MRI.

Cases of Dandy-Walker malformation, vermian hypogenesis/hypoplasia, and mega cisterna magna (MCM) were identified through the Fetal Care Center of Cincinnati between January 2004 and December 2010. Parental interview and retrospective chart review were used to assess neurodevelopmental outcome.

Posterior fossa anomalies were identified in 59 fetuses; 9 with Dandy-Walker malformation, 36 with vermian hypogenesis/hypoplasia, and 14 with MCM. Cases with isolated PFAs (14/59) had better outcomes than those with additional anomalies ($p = 0.00016$), with isolated cases of MCM all being neurodevelopmentally normal. Cases with additional intracranial anomalies had a worse outcome than those without intracranial anomalies ($p = 0.00017$). The presence of extracranial anomalies increased the likelihood of having a poor outcome ($p = 0.00014$) as did the identification of an abnormal brainstem ($p = 0.00018$).

Intracranial and extracranial anomalies were good predictors of neurodevelopmental outcome in this study. The prognosis was poor for individuals with an abnormal brainstem, whereas those with isolated MCM had normal neurodevelopmental outcome [1].

1)
Patek KJ, Kline-Fath BM, Hopkin RJ, Pilipenko VV, Crombleholme TM, Spaeth CG. Posterior fossa anomalies diagnosed with fetal MRI: associated anomalies and neurodevelopmental outcomes. Prenat Diagn. 2012 Jan;32(1):75-82. doi: 10.1002/pd.2911. PubMed PMID: 22367673.