

Cerebral arteriovenous malformation diagnosed in a term pregnancy

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Objective

Vascular malformations are originated between the 4th and 10th week of intrauterine development and they appear from birth, although they may not be apparent weeks or even months later. Cerebral arteriovenous malformations (AVM) are complex anomalies that can develop a wide variety of symptoms (headache, seizures, neurological deficit...) including heart failure. In this paper we report a clinical case of AVM with late but antepartum diagnosis studied in our clinical service.

Methods

Report of a clinical case and a review of the related literature.

Results

We present the clinical case of a pregnant woman with a well-controlled and normoevolutived pregnancy. In the ultrasound scan in 38⁺¹ week, the fetus showed an anechoic and elongated structure located in the midline of the brain, recorded by Doppler + that seemed to be an arteriovenous malformation. The rest anatomy was normal. MRI reported fistula/AVM and cardiomegaly, fetal echocardiography did not reveal heart failure. After reviewing the literature and the possible needs, we decided to refer the patient to a third level hospital which had interventional radiology service, because it is currently the first line of treatment. The pregnancy ended by elective cesarea at 39⁺² week. He was a male, with Apgar score 7,9,10. Neonatal studies showed findings of non-galenic pieal-type AVM and, as additional findings, portosystemic intrahepatic fistulas. The genetic study revealed a variant of uncertain clinical significance in the RASA1 gene. After discussing the case in a multidisciplinary session (neonatology, neurosurgery, child radiology, interventional radiology, psychology, and the palliative care team), and considering the high probability of complications, the possibility of palliative care was offered to the family, who accepted. One year later, the patient is being followed up by neurosurgery, pediatric cardiology and the home-care unit. He shows a mild psychomotor retardation, and currently he does not require well tolerated cardiological medication.

Conclusion

AVMs form a wide and heterogeneous spectrum of damages that constitute a diagnostic and therapeutic challenge, since they are not always evident during intrauterine development, and when they are, they are usually signs of late ultrasound appearance. The obstetric attitude that should be taken, in case of suspicion, is to complete the intrauterine study and to decide whether the anomaly and the present or foreseeable repercussion require transfer to another hospital that can provide the maximum guarantee of attention to the needs of the newborn. That include a specialized child radiology team, as well as interventional radiology to try to repair the injury by angiography as the first choice, although this is not always possible without a high risk of complications.