Case series report : Aneurysmal Malformation of the Vein of Galen, report of 13 cases.

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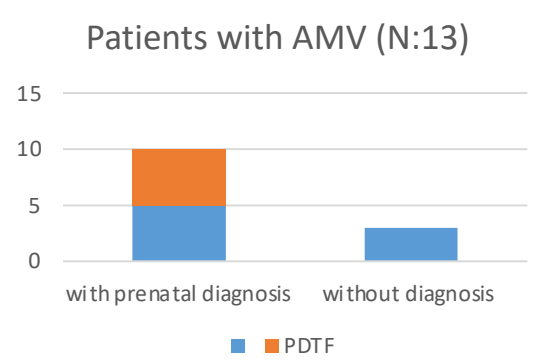
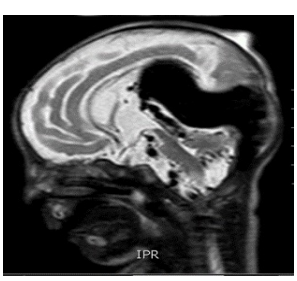
Introduction: Aneurysmal malformation of the vein of Galen (AMV); of rare appearance, it's an arteriovenous anomaly that affects the vein of Galen and the cerebral arteries. The size of the aneurysm determines its clinical presentation. A large aneurysm can shunt between 50-60% of cardiac output to the lesion and cause high-output Heart Failure (HF). This can be presented as hydrops fetalis or heart failure in early neonatal life.

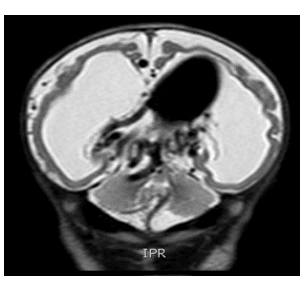
Objectives: To report the experiece in the perinatal managment of 13 newborn with AMV, referred to neonatal intensive care area of Dr. J.P Garrahan Hospital a complex Pediatric Hospital in Buenos Aires, with or without prenatal diagnosis, some of which were referred during the prenatal time to our Fetal Diagnosis and Treatment Program -PDTF-.

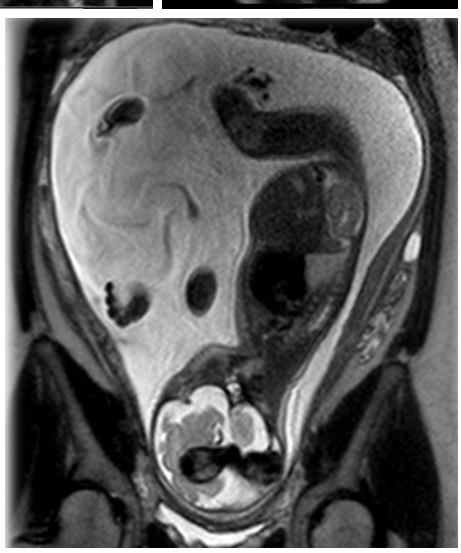
Methods: Retrospective descriptive cohort study. Data collected from medical records of patients admitted to neonatal intensive care with aneurysmal malformation of the vein of Galen between 1/1/2012 to 12/31/2022. Patients with brain vascular malformations with different characteristics than AMV were excluded.

Results: There were 13 patients in total. 10 (77%) of them had prenatal diagnosis and only 5 of these were referred to the Fetal Diagnosis and Treatment Program. The median GA at prenatal diagnosis was 31 weeks (27-34) and the prenatal refferal time was 33 weeks (33-35.4). Median days of life for postnatal referral was 14 days for those who did not have prenatal diagnosis and 2 days for those who had it. Only 2 patients referred to the program had fetal MRI. 100% of the patients referred were born by cesarean section. 77% of all newborns present heart failure. In 5 newborns they were congenital heart disease identified and/or dysmorphia, both poor prognostic factors for the surgical treatment. 6 pacients required embolization treatment in the neonatal period, 4 of they had prenatal diagnosis, only 2 survived. The total survival was 54%.









Variable	Median
GA at prenatal diagnosis	31 weeks (27-34)
Prenatal refferal time	33 weeks (33 – 35,4)
Birth weight	2835 gr (2763 – 2985)
Median days of life for postnatal referral with prenatal diagnosis	2 days
Median days of life for postnatal referral without prenatal diagnosis	14 days

Conclusions: The incidence of AVM is unknown. Most cases are not diagnosed up to the 3rd trimester of pregnancy. As in the literature, the patients presented late prenatal diagnosis and association with heart failure with rates of up to 50% mortality. Given the prenatal suspicion of AVM referral to a high-complexity center is indicated for evaluation by a multidisciplinary team, complete studies in the fetal stage, confirm the diagnosis and prognosis, advise parents, optimize the opportunity of delivery and offer treatments suitable for each particular situation. Further studies are required to evaluate the feasibility of possible prenatal approaches to this anomaly.

ID: 4873