

EP06.34- Etiology and associated anomalies in fetus diagnosed with cerebral anterior complex cyst: a cohort study.

Andrea Dall'Asta¹, Enrico Corno¹, Maria Teresa Baffa¹, Giovanni Battista Luca Schera¹, Giuliana Suma¹, Edwin Quarello^{2 3}

¹Department of Medicine and Surgery, Obstetrics and Gynecology Unit, University of Parma, Italy; ²Hospital St Joseph/I.M.R, Marseille, France ³Institut Méditerranéen d'Imagerie Médicale Appliquée à la Gynécologie, la Grossesse Et l'Enfance (IMAGE2), Marseille, France.



UNIVERSITÀ DI PARMA

Objective

To characterize the sonographic features and etiology of fetal cerebral anterior complex cysts (AntCC) and assess their association with additional brain and extracranial malformations.

Methods

Retrospective study conducted at two referral units (University Hospital of Parma, Italy, and Hopital Saint Joseph, Marseille, France) and including fetuses diagnosed with cerebral cysts located at the level of the anterior complex cyst on transcaudate and/or transthalamic coronal planes. All cases underwent neurosonographic and extracerebral examination as well as follow up sonographic assessment. Information concerning associated anomalies and genetic and MRI assessment were collected. Pregnancy outcomes and postnatal or pathology data were reviewed when available.

Results

32 cases of AntCC were included. Bilateral lesions were identified in 37.5% cases and isolated cysts in 13/32 (40.6%) cases. Co-existent anomalies consisted in:

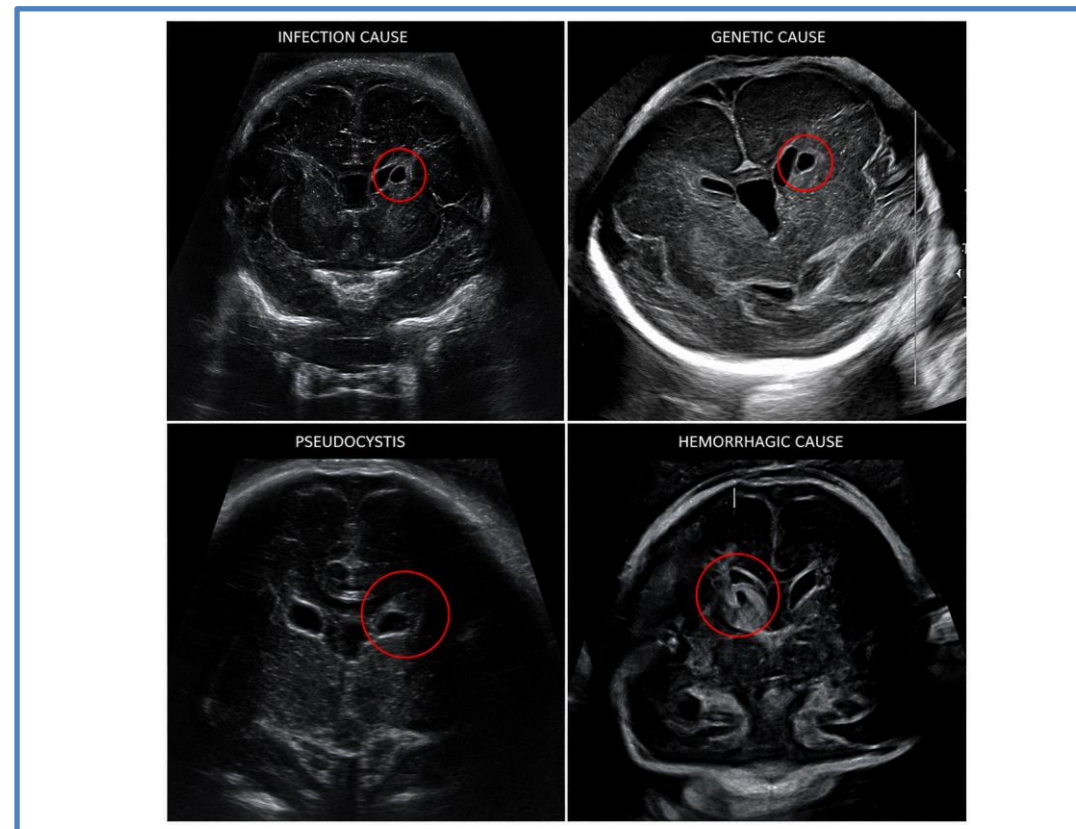
Intracranial hemorrhage (6 cases);

Congenital CMV and Toxoplasmosis infection (2 cases and 1 case);

Malformations of the cortical development (2 cases)

Porencephaly (1case); Ventriculomegaly (1case); Callosal dysgenesis (1case);

Antenatal MRI was performed in 59% cases and provided additional diagnostic information in 5%. Amniocentesis was performed in 14/32 (43.8%) cases with CMV detected in the amniotic fluid in one case, while genetic testing was performed in all cases, with no genetic abnormalities detected antenatally and one case diagnosed postnatally. Live birth occurred in 24/32 (75.0%) cases, while 8/32 (25.0%) pregnancies underwent termination



Conclusions

AntCC is a heterogeneous ultrasound finding and not a single pathological entity, acting as an open window of several conditions associated, approximately in half of cases, with brain additional anomalies. Therefore, in such conditions a thorough description (exact location and features) of such entities and a detailed systematic multi-planar neurosonographic approach of the fetal brain allowing us a comprehensive framework are mandatory.