Teaching NeuroImages: Schizencephaly in fetal alcohol syndrome

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Figure Cranial MRI

(A) Axial T1 bilateral closed lip schizencephaly, with polymicrogyric cortex, lining the cleft. (B) Axial T2 hypogenesis of the corpus callosum (star) together with bilateral closed lip schizencephaly (thin arrow) and polymicrogyric cortex (thick arrows).

Intrauterine exposure to alcohol may result in a distinct pattern of craniofacial abnormalities and CNS dysfunction, designated fetal alcohol syndrome (FAS). The spectrum of brain malformations associated with maternal alcohol abuse during pregnancy is broader than the relatively uniform phenotype of FAS,¹ with the most striking abnormalities involving the impairment of neuronal cell migration.^{2,3} Schizencephaly, a neuronal migration disorder, has not been previously associated with FAS.

We present a 2-month-old girl with confirmed maternal alcohol consumption during pregnancy, without exposure to other toxic substances, and full phenotype of FAS. Cranial MRI revealed bilateral schizencephaly with hypoplasia of corpus callosum (figure, A and B).

AUTHOR CONTRIBUTIONS

Dr. Spalice: drafting/revising the manuscript, acquisition of data. Dr. Del Balzo: study concept or design, acquisition of data. Dr. Papetti: drafting/

revising the manuscript, study concept or design, analysis or interpretation of data, acquisition of data. Dr. Nicita: drafting/revising the manuscript, acquisition of data. Dr. Ursitti: study concept or design, study supervision. Dr. Salvatori: study concept or design, acquisition of data. Dr. Mattiucci: drafting/revising the manuscript, acquisition of data. Dr. Mancini: study concept or design, acquisition of data. Dr. Tarani: study concept or design, acquisition of data.

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