

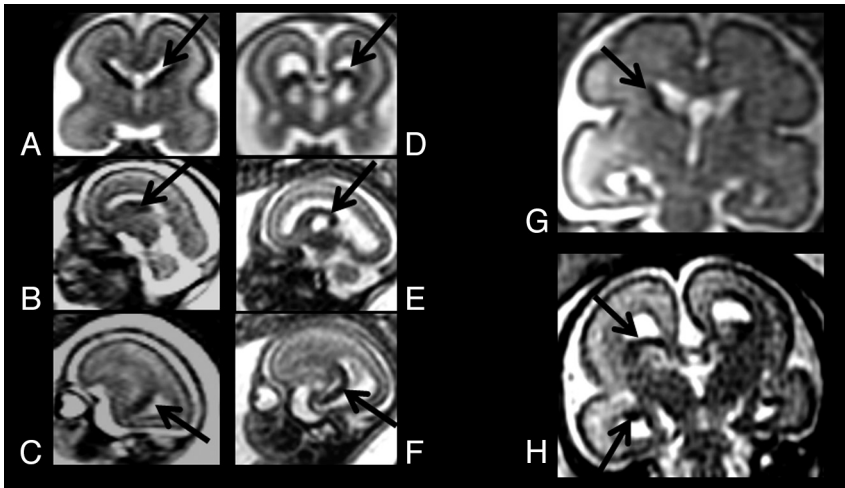
**On-line Table 1: Clinical, imaging, and follow-up data**

Case	GA at FMR Imaging (week)	Sex	Genetic Risk Factor	Karyotype	Maternal Serum Ongoing TORCH Infection	Ultrasound-Based Indications for FMR Imaging	Head Size Biometry at FMR Imaging (percentile)
1	22	F	None	NA	None	CC agenesis. Reduced cranial and cerebellar biometry	10 <sup>th</sup>
2	29	F	Parents first-degree cousins. Previous pregnancy reported male fetus dead in utero with possible "Dandy-Walker malformation"	Normal 46XX	None	Reduced body biometry, CC agenesis. Reduced cranial and cerebellar biometry	< 3 <sup>rd</sup>
3	23	M	Previous son dead at 17 months with reported "microcephaly and corpus callosum agenesis"	Normal 46XY	NA	CC agenesis. Borderline bilateral ventriculomegaly	10 <sup>th</sup>
4	22	F	None	Normal 46XX	None	CC agenesis. Reduced cranial and cerebellar biometry. Borderline bilateral ventriculomegaly	5 <sup>th</sup> -10 <sup>th</sup>
5	25	F	None	NA	None	Reduced body biometry, CC agenesis. Reduced cranial and cerebellar biometry. Moderate bilateral ventriculomegaly	> 5 <sup>th</sup> -< 10 <sup>th</sup>

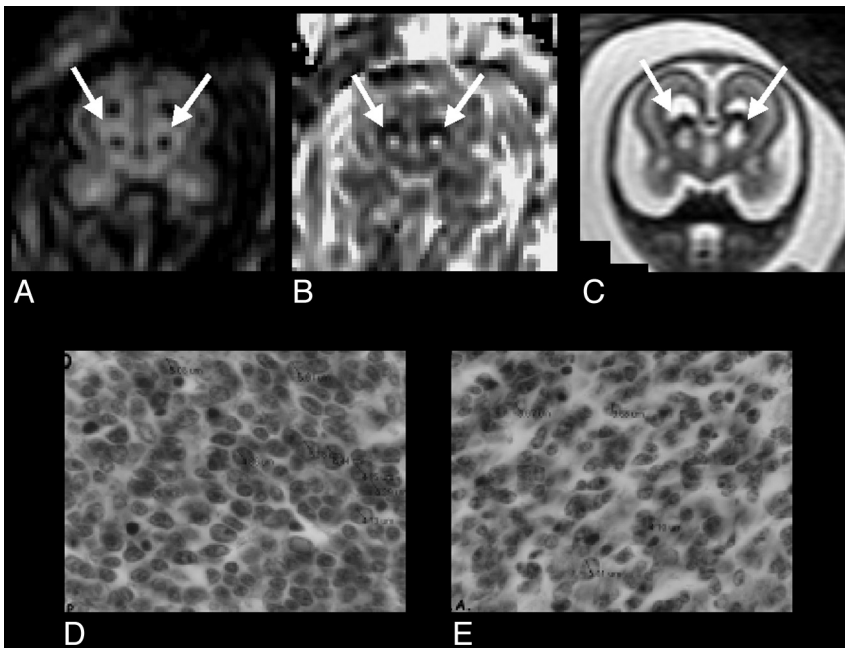
**On-line Table 1 (continued)**

Case	Ganglionic Eminence Region Cavitations at FMR Imaging	Ganglionic Eminence Volume Increase	CC Agenesis or Severe Hypoplasia at FMR Imaging	Cortical Mantle Findings at FMR Imaging	Cerebellar and Brain Stem Findings at FMR Imaging	Clinical Follow-Up Data	Follow-Up Neuromaging Data	Follow-Up Brain Pathology Data
1	Small bilateral	Mild doubtful increase	Yes	Cortical mantle thinning, reduced opercularization, no sulcation	Apparently regular morphology, reduced biometry, cerebellar vermis partial hypoplasia	PT	NA	CC agenesis. Bilateral cavitation underneath GE, lined by epithelium-like structure. GE volume increased. Heterotopic cortical plate neurons extending into the marginal zone
2	Small bilateral	Clear increase	Yes	Reduced opercularization, probable band heterotopias, reduced sulcation	Apparently regular morphology, reduced biometry, cerebellar vermis present	Eurotic delivery at 38 week GA. Severe hypotonia, poor feeding, no seizures. Dead from respiratory complications at 2 months	Neonatal MR imaging. CC agenesis. Reduced opercularization, band heterotopias (more conspicuous anteriorly), diffuse abnormal sulcation. Small bilateral cysts between GE and thalamus	NA
3	Large bilateral	Mild doubtful increase	Yes	Cortical mantle thinning, reduced opercularization, no sulcation	Apparently regular morphology, reduced biometry, cerebellar vermis present	PT	MR autopsy. CC agenesis, parieto-occipital sulcus absent; bilateral symmetric cavitations underneath GE with regular margins	NA
4	Large bilateral	Clear increase	Yes	Cortical mantle thinning, reduced opercularization	Apparently regular morphology, reduced biometry, cerebellar vermis present	PT	NA	CC agenesis. Bilateral cavitation underneath GE, lined by epithelium-like structure. GE volume increased. Heterotopic cortical plate neurons extending into the marginal zone
5	Small bilateral	No increase	Yes	Cortical mantle thinning, reduced opercularization, no sulcation	Apparently regular morphology, reduced biometry, cerebellar vermis present	PT	NA	NA

**Note:**—FMR indicates fetal MR; NA, not available; PT, pregnancy termination; TORCH, toxoplasmosis, others, rubella, cytomegalovirus, herpes.



**ON-LINE FIG 1.** A–C, Single-shot FSE T2-weighted sections from healthy control 22-week GA fetus; D–F, matching sections from case 4 prenatal study show GE (arrows) to be larger than the one of control; G, ss-FSE T2-weighted coronal section from healthy control 29-week GA fetus; H, matching section from case 2 prenatal study shows GE (arrows) to be larger than that of control.



**ON-LINE FIG 2.** Case 4 of On-line Table 1: A, coronal DWI section; B, corresponding ADC map; and C, matching T2-weighted single-shot FSE section shows relatively DWI-hyperintense signal and slightly low ADC (0.85 SD, 0.09  $\mu\text{m}^2/\text{s}$ ) in the GE (arrows). D, Thionine-stained section ( $\times 100$  magnification) depicts higher GE cell attenuation with smaller interstitial space with respect to age-matched (22-week GA) healthy fetus (E). Cell bodies appear to be generally slightly larger than those of healthy control.