Histopathology revealed an increased cell density of oligodendrocytes (3350.5 cells/mm², compared to 1683.6 cells/mm² in adjacent normal-appearing white matter, p < 0.001). Myelination (luxol fast blue staining) was normal. Supernumerary cells were negative for IDH1R132H by immunohistochemistry, IDH1/2 wildtype by Sequenom, and negative for Ki-67, synaptophysin, and BRAF V600E. The overlying cortex was completely normal, with no gliosis, balloon cell, neuronal dysmorphology or calcification. The original neuropathologic diagnosis was oligodendroglial hamartoma, although a more descriptive diagnosis of focal oligodendroglial hyperplasia is preferred. The patient continues to have 1-2 nocturnal partial (focal with dyscognitive features) seizures per month, but has had no convulsive seizure since her surgery (4.5 year follow-up). Oligodendroglial hyperplasia is a poorly characterized subtype of microdysgenesis, and a rare cause of medically refractory epilepsy. Histologically, it is important that it is differentiated from oligodendroglioma. Because of the paucity of published cases, the clinical impact of surgical resection of oligodendroglial hyperplasia found within the seizure onset zone is uncertain.

CONFLICTS OF INTEREST:
None.

ABSTRACT A10

Synaptic plexi of heterotopic white matter neurons in epileptogenic focal cortical dysplasias
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doi:10.1017/cjn.2015.376

The objective was to define the role of excessive heterotopic white matter neurons beneath focal cortical dysplasias (FCD) for their contribution to epileptic circuitry. Synaptic plexi can be identified by synaptophysin immunoreactivity. Other neuronal markers can distinguish the origin of these neurons from the fetal subplate zone or by radial migration by using calretinin reactivity for GABAergic inhibitory interneurons or lack of calretinin expression by radial migratory excitatory neurons. Synaptophysin, calretinin and NeuN antibodies were applied to paraffin sections of surgical resections of epileptic foci in 16 infants, children and adolescents, ages 3 months to 17 years, with focus on subcortical axonal networks: 10 FCD I and 6 FCD II. Ten normal fetal brains of 18-22 gestational weeks, 6 of 37-41 weeks, 10 infants, children and adolescents, ages 3 months to 17 years, with focus on subcortical axonal networks: 10 FCD I and 6 FCD II. Ten normal fetal brains of 18-22 gestational weeks, 6 of 37-41 weeks, 10 infants, children and adolescents, ages 3 months to 17 years, with focus on subcortical axonal networks: 10 FCD I and 6 FCD II. Ten normal fetal brains of 18-22 gestational weeks, 6 of 37-41 weeks, 10 infants, children and adolescents, ages 3 months to 17 years, with focus on subcortical axonal networks: 10 FCD I and 6 FCD II. Ten normal fetal brains of 18-22 gestational weeks, 6 of 37-41 weeks, 10 infants, children and adolescents, ages 3 months to 17 years, with focus on subcortical axonal networks: 10 FCD I and 6 FCD II. Ten normal fetal brains of 18-22 gestational weeks, 6 of 37-41 weeks, 10 infants, children and adolescents, ages 3 months to 17 years, with focus on subcortical axonal networks: 10 FCD I and 6 FCD II. Ten normal fetal brains of 18-22 gestational weeks, 6 of 37-41 weeks, 10 infants, children and adolescents, ages 3 months to 17 years, with focus on subcortical axonal networks: 10 FCD I and 6 FCD II. Ten normal fetal brains of 18-22 gestational weeks, 6 of 37-41 weeks, 10 infants, children and adolescents, ages 3 months to 17 years, with focus on subcortical axonal networks: 10 FCD I and 6 FCD II. Ten normal fetal brains of 18-22 gestational weeks, 6 of 37-41 weeks, 10 infants, children and adolescents, ages 3 months to 17 years, with focus on subcortical axonal networks: 10 FCD I and 6 FCD II. Ten normal fetal brains of 18-22 gestational weeks, 6 of 37-41 weeks, 10 infants, children and adolescents, ages 3 months to 17 years, with focus on subcortical axonal networks: 10 FCD I and 6 FCD II. Ten normal fetal brains of 18-22 gestational weeks, 6 of 37-41 weeks, 10 infants, children and adolescents, ages 3 months to 17 years, with focus on subcortical axonal networks: 10 FCD I and 6 FCD II.