

**Canadian Association of Neuropathologists
L'Association Canadienne des Neuropathologistes**

CASE No 1

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A 10-year-old, right handed female presented to an outside facility at the age of 6, after experiencing changes in behavior including clumsiness, and seizures. The patient's mother traced the beginning of symptoms to problems with performance in kindergarten, leading her to repeat the year. Her first seizure occurred in October 2005 during her second year of kindergarten. An initial EEG was interpreted as normal and the patient was treated conservatively. In January of 2006 she experienced another seizure, was brought into the ER and evaluation included CT. This revealed a large left hemispheric lesion which was subsequently biopsied and felt to be most consistent with astrocytoma. The patient began a scheduled 8 week course of carboplatin and vincristine chemotherapy; however, this was terminated early due to thrombocytopenia. She also began levetiracetam (Keppra) which initially controlled her seizures. In 2008 seizure frequency drastically increased in the setting of multiple imaging studies which showed stable lesion size. She was suffering 15 or more grand mal seizures a day ; a left frontal lobectomy was performed, and subsequently her seizure frequency decreased to 5-6 per day. Additionally, with the addition of clonazepam (Klonopin) the length of each seizure decreased from approximately 12 minutes to 5 minutes. However, her memory and word recollection began to deteriorate, and the continued seizures interfered with her ability to attend and succeed at school. She then presented to our facility for further evaluation and management. In addition to the above history, radiology revealed that the lesion was growing and now showed areas of contrast enhancement in the insula. An aggressive re-resection was performed, including complete left hemispherectomy. The patient's seizures were subsequently controlled post-operatively and she was discharged with residual right sided weakness (3/5) in both upper and lower extremities, a right sided visual field deficit and slow but appropriate verbal responses.

Materials submitted: 1 H&E stained section from the most recent resection

Questions: What is the diagnosis?

 How should this lesion be graded?

 Is any further therapy warranted for the lesion?