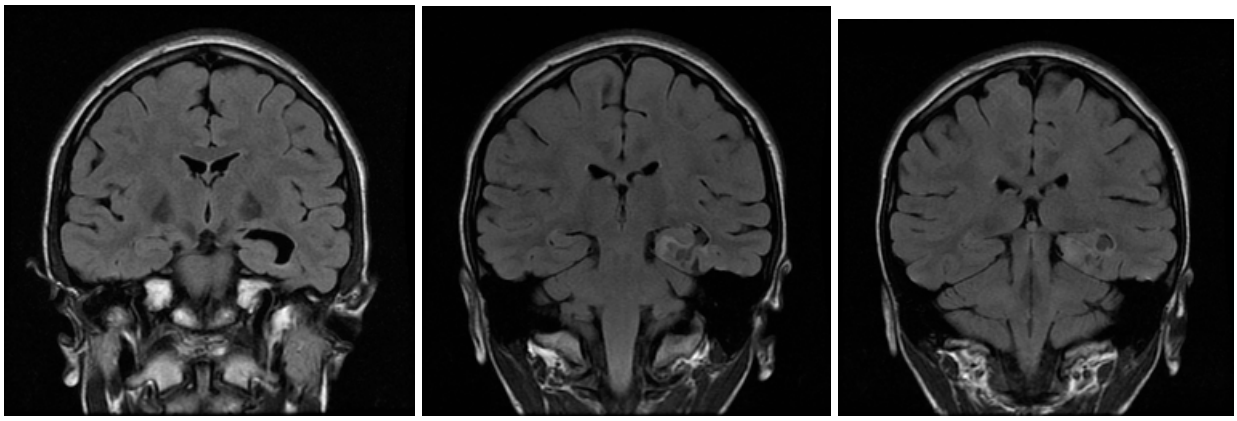
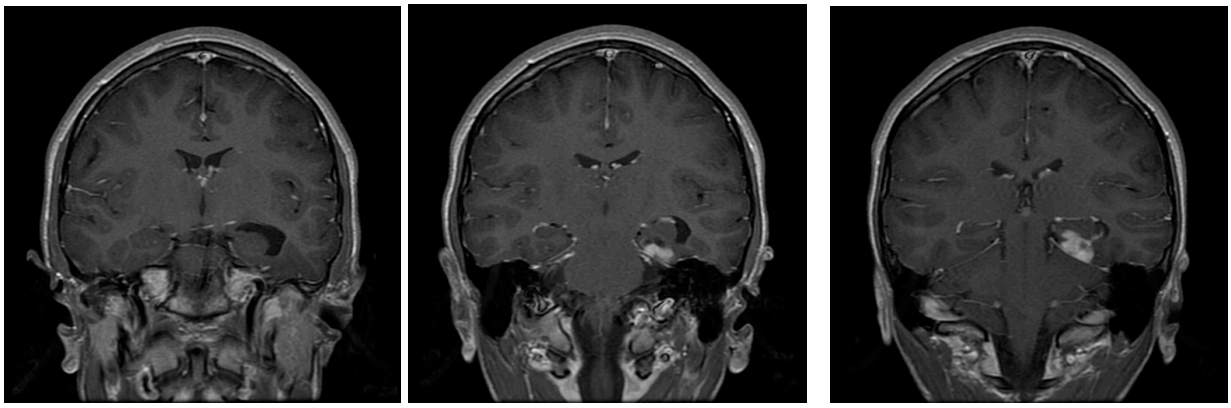
CHILDREN'S HOSPITAL CONFERENCE CASE 8.19.2011

16 y/o female with 6 months of partial complex seizures never fully controlled by anti-epiletoic meds. MRI showed following lesion

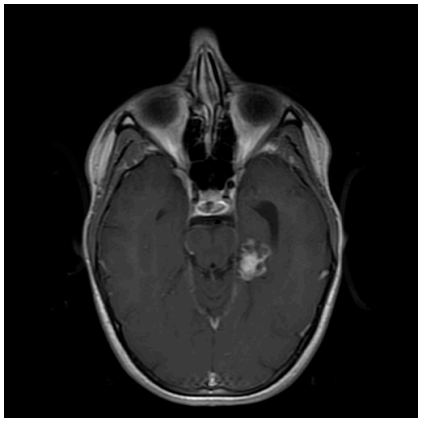
FLAIR



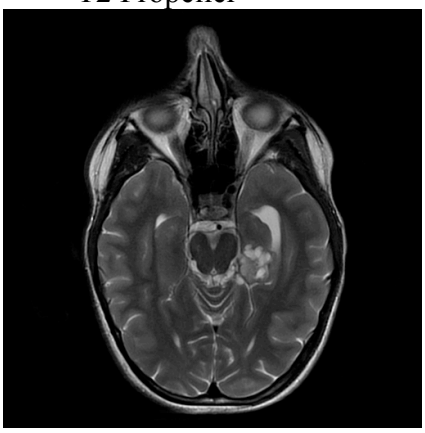
T1+C



Axial +C



T2 Propeller



Describe the lesion. What is the clinical/radiologic differential?

What is the H&E diagnosis?

http://image.upmc.edu:8080/NeuroPathology/GlialTumors/GlialTumors3/GT.97A.svs/view.apml

ANSWERS.
The differential of mesial temporal lesions associated with epilepsy includes:
Ganglioglioma, JPA, DNET and cortical dysplasia.
Of these JPA is the most likely to enhance.

DIAGNOSIS:
GANGLIOGLIOMA, WHO GRADE 1.

GFAP highlights the glial component, perivascular piloid cells and nodules of GFAP positive oligo-like cells. IE. The glial component is JPA like.
http://image.upmc.edu:8080/NeuroPathology/GlialTumors/GlialTumors3/GT.97D.svs/view.apml

Synaptophysin highlights all the various neuronal components including the large ganglion like cells. “Normal” neurons typically have little perikaryal synaptophysin vesicles. Neoplastic neurons and damaged neurons can have reduced axonal transport so they build up variably in the cytoplasm.
http://image.upmc.edu:8080/NeuroPathology/GlialTumors/GlialTumors3/GT.97B.svs/view.apml

NeuN strongly stains normal neurons and can be useful to distinguish entrapped normal neurons from neoplastic. Neoplastic neurons typically have no or weaker neuN staining.
http://image.upmc.edu:8080/NeuroPathology/GlialTumors/GlialTumors3/GT.97C.svs/view.apml