

Case #10

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**Clinical Abstract:**

This patient first presented, aged nine years, with a history of headache for several weeks. Neurological examination was normal, apart from the presence of bilateral papilloedema. Brain scan and angiogram revealed a left frontal mass very close to the midline. At craniotomy a cystic lesion was found and a mural nodule (20 grams of tissue) was submitted for histology. No further treatment was considered necessary. He remained symptom free for many years.

At sixteen years, he presented with a history of three major convulsions having occurred over a three week period. Neurological examination was entirely normal. A skull x-ray showed curvilinear calcification near the midline just beneath the saggital sinus in the area of the previous left craniotomy. An EEG and brain scan suggested recurrent tumor; left carotid angiogram demonstrated a tumor in the left mid-frontal region superiorly, which produced a left to right shift of the pericallosal artery and internal cerebral vein. The calcification appeared to be related to the periphery of this recurrent tumor. Left frontal craniotomy revealed tumor extending to the superior surface of the frontal lobe. Though superficially there appeared fairly sharp demarcation between tumor and surrounding brain, on its deep aspect, it was apparent that tumor shaded off into surrounding brain tissue. A 4.5 cm tumor containing a small cyst was submitted for histological examination. Because this was recurrent tumor, the young man received post-operative irradiation; a dose of 4900 rads was given to the whole brain. He was subsequently maintained on anti-convulsants for control of the occasional seizure.

At 25 years, still virtually asymptomatic, a second left frontal recurrence was detected on follow-up CT scan. The only neurological abnormality noted was an equivocal right plantar response with a definite flexor plantar response on the left side. Craniotomy showed tumor densely adherent to falx on the medial aspect of the left frontal lobe. As there was relatively sharp demarcation between tumor and brain, complete excision was attempted; at one point, tumor extended into the anterior horn of the left ventricle. A 4 cm diameter tumor was removed and sent for histology.

Material submitted: a) section from frontal tumor prior to radiation (H&E)  
b) section from second recurrence (H&E)

Points for discussion: 1. Diagnosis  
2. Prognosis  
3. Recommended treatment