

### **Brain Case 13**

**EXAM:** MRI brain with and without contrast

**INDICATION :** Ataxia, and headache. History of malignant melanoma.

**TECHNIQUE:** Sagittal T1 weighted, axial T2 weighted, axial FLAIR, and post gadolinium contrast enhanced axial, coronal, and sagittal scans after administration of 0.1 mmol per kilogram of a gadolinium-based contrast agent were performed through the brain. No immediate complications were noted.

3D post-processing of the raw data will be performed to guide intraoperative localization..

#### **FINDINGS:**

These images demonstrate a heterogeneous mass in the right side of the cerebellum associated with moderate edema and slight displacement of the fourth ventricle from right to left. The mass appears to be apposed to the surface of the right side of the cerebellum on postcontrast imaging and measures approximately 2.9 cm by 1.5 cm. There are additional smaller masses identified at the gray-white junction seen in the left occipital parietal and temporal lobes measuring under 5 mm in size. There is a right parietal mass centered in the post central gyrus which measures 5 mm in size and extends to the pial surface of the brain.

The cerebellum is moderately swollen on the right side but without tonsillar herniation.

Both vertebral arteries, basilar artery and both carotid arteries are patent. No calvarial lesions are detected. The ventricles are mildly dilated. There are foci of increased signal intensity in the periventricular white matter as well as the subcortical white matter as well as in the striatocapsular region compatible with small vessel ischemic change.

#### **IMPRESSION:**

1. Multiple metastases in the periphery of the brain the largest of which is in the right cerebellum with extension to the surface of the right cerebellar hemisphere and with associated mass effect on the fourth ventricle. Subcentimeter masses are seen bilaterally in the supratentorial compartment some of which are along the pial surface of the brain raising the possibility of potential subarachnoid seeding -- cerebrospinal fluid analysis may be useful.
2. Moderate small vessel ischemic change in the white matter and striatocapsular regions without acute infarctions.





