Brain Tumor Classification Report

Name: Rahul

Age: 59

Gender: Male

Symptoms: Headache

Prediction: Meningioma Tumor

Description:

Abnormality Identified:

The MRI scan reveals a large, well-defined, extra-axial mass with a broad dural base, consistent with a meningioma tumor. The lesion appears hyperintense and is causing compression of the adjacent brain parenchyma.

Impact Analysis:

The presence of this meningioma tumor is causing mass effect on the surrounding brain tissue, which likely leads to increased intracranial pressure. This can explain the patient's symptom of headache due to the pressure on pain-sensitive structures in the brain. The size and location of the tumor may also affect neurological function depending on the involved brain regions, potentially leading to further clinical deterioration if untreated.

Final Diagnosis:

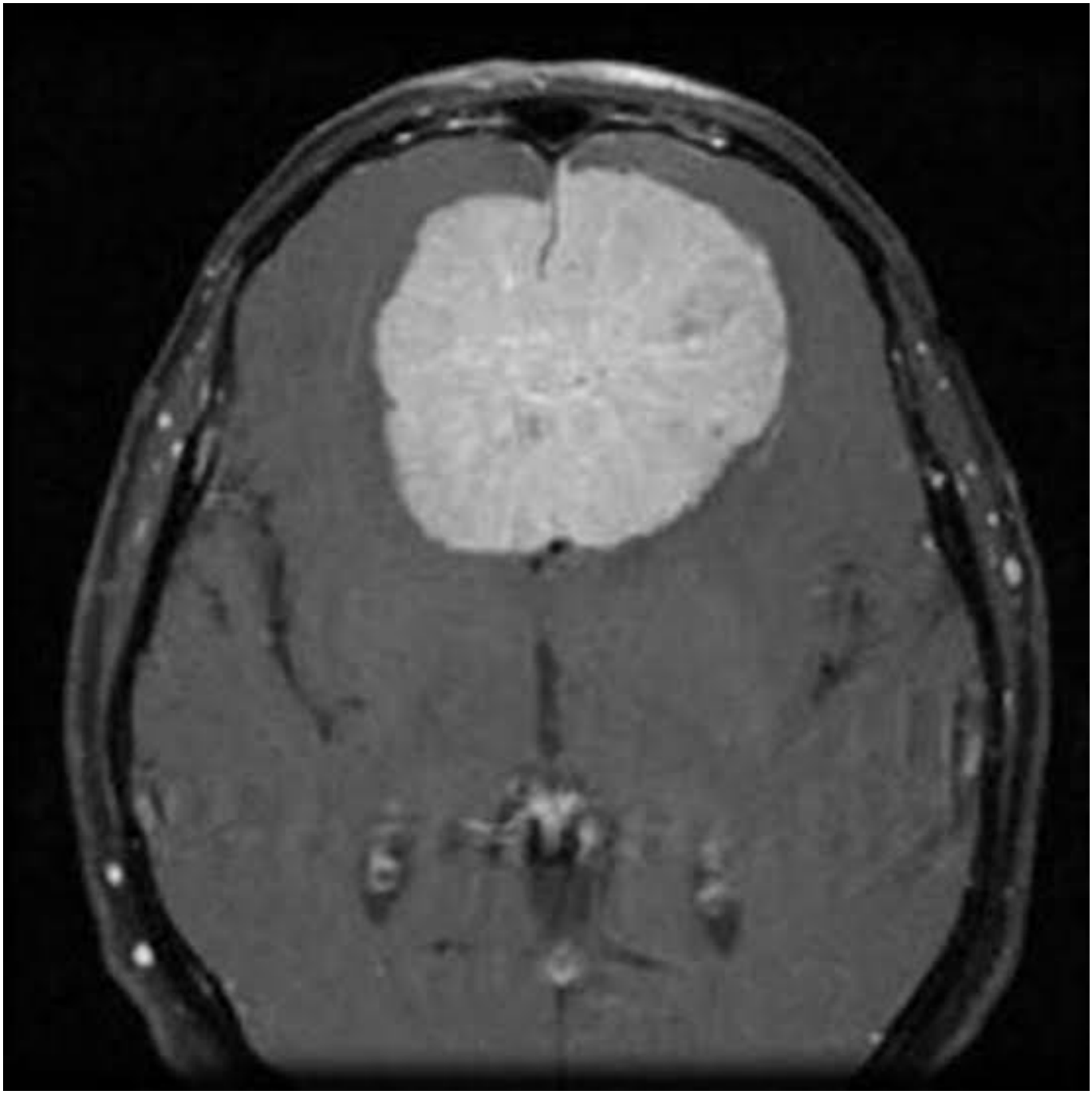
The clinical deterioration in this 59-year-old male patient presenting with headache is most likely caused by the meningioma tumor identified on the MRI scan. The tumor's mass effect and associated increased intracranial pressure are the primary contributors to symptoms.

Meningiomas are typically benign, slow-growing tumors that arise from the meninges, the protective membranes covering the brain and spinal cord. They are the most common primary intracranial tumors in adults. Although usually benign, their location and size can cause significant neurological symptoms due to compression of adjacent brain structures. Diagnosis is often confirmed by imaging studies such as MRI, and treatment options include surgical resection, radiation therapy, or observation depending on the tumor size, location, and symptoms.

Precautions:

- Regular follow-up with neuroimaging to monitor tumor size and progression.
- Avoid activities that increase intracranial pressure, such as heavy lifting or straining.
- Report any new or worsening neurological symptoms immediately, such as seizures, weakness, or vision changes.
- Maintain good hydration and control blood pressure to optimize cerebral perfusion.
- Consult with a neurosurgeon or neuro-oncologist for evaluation of treatment options tailored to the patient's specific case.
- Manage pain and headache symptoms with appropriate medications under medical supervision.

Original Image



Grad-CAM Image