

Hepatocellular Carcinoma Presenting As a Clival Mass

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Introduction

- Hepatocellular carcinoma (HCC) comprises the majority of primary liver cancer and has a poor prognosis. Clivus metastasis is rare with only a few reported cases in the medical literature.

Case Description

- A 63-year-old woman presented for evaluation after she was found to have a skull base mass on CT of the head at an outside hospital.
- She endorsed dysphagia for three months, however denied headaches or visual disturbances.
- MRI revealed a mass in the clivus (Figure 1a). The patient subsequently underwent an endoscopic transsphenoidal resection of the clival mass.
- Histopathology from the tissue revealed a hepatoid carcinoma, concerning for metastatic HCC (Figure 1b and 1c).
- Immunohistochemical stains were positive for hepatocytic marker arginase-1 (Figure 1d). Laboratory studies revealed AFP 56,344 ng/mL, CA-125 376 ng/mL, normal B-HCG and CEA.
- Triple phase CT of the liver revealed two LI-RADS 5 lesions suggestive of HCC as the primary malignancy.

Images

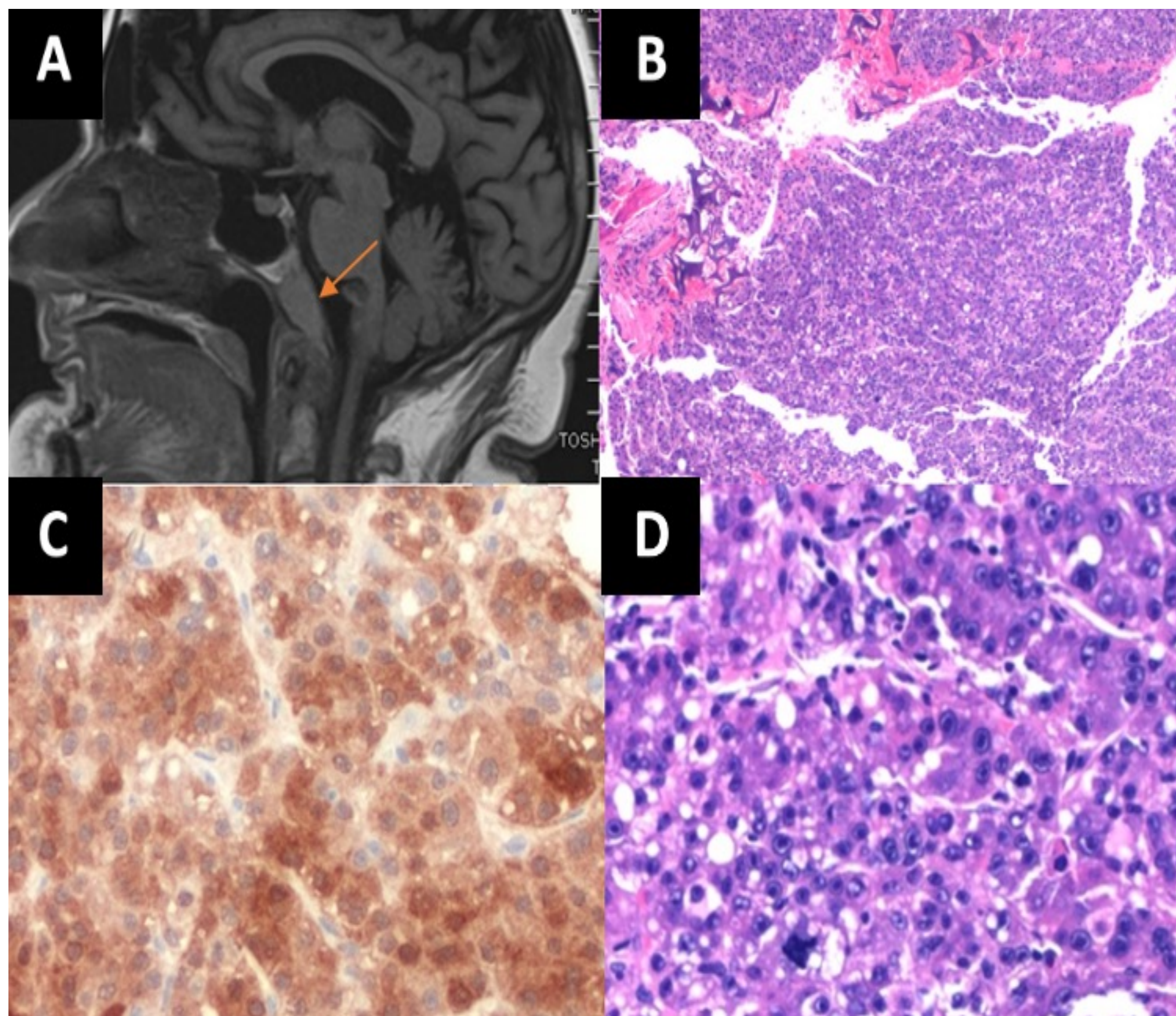


Figure 1: A. Sagittal view of the MRI brain revealing clivus mass (red arrow) measuring 5.4 cm by 2.9 cm by 3.6 cm. B and C. H&E stain at low and high power showing proliferation of malignant epithelial cells with hepatoid morphology arranged in sheets of nests and trabeculae. D. Positive immunohistochemical stain for hepatocytic marker arginase-1.

Case Description (contd.)

- Patient's case was discussed at multidisciplinary tumor board with recommendations for systemic immunotherapy with atezolizumab plus bevacizumab and radiation therapy to the clivus.

Discussion

- The incidence of HCC has almost tripled since the 1980s making it the fastest rising cause of cancer related deaths.
- Metastasis to the brain comprises 0.26% to 2.2% of cases and the skull base is the most rarely affected anatomical site.
- Although exceedingly rare, metastasis to the clivus should be considered in the differential diagnosis of skull base masses.
- Despite detection and treatment, prognosis remains poor and emphasis should be placed on consistent HCC surveillance.
- This case emphasizes that skull masses must be evaluated diligently as they can be the first sign of underlying liver malignancy.
- Given the morbidity and mortality associated with HCC, recognition of atypical manifestations can lead to a prompt diagnosis and initiation of life-saving treatment.