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A MYSTERIOUS INTRUDER IN THE ORBIT – METASTATIC HEPATOCELLULAR CARCINOMA

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ABSTRACT A 65-year-old male presented with progressive loss of vision since six months. Radioimaging suggested optic glioma. On biopsy, malignant melanoma and metastases of hepatocellular carcinoma (HCC) were considered. Positivity for pan-cytokeratin and HepPar markers confirmed the latter. Orbital metastases of HCC are associated with high mortality. Awareness of this rare entity can aid in intraoperative diagnosis.

KEYWORDS : orbit, metastases, hepatocellular carcinoma, glypican

INTRODUCTION

Hepatocellular carcinoma (HCC) is the most common primary liver cancer. Extrahepatic metastases represent a poor prognosis. Only 3-4% HCC cases show orbital metastases. [1,2]

Case Study

A 65-year-old male, complained of progressive loss of right eye vision for six months. Radio imaging revealed a non-invasive, 31x 21x 10 mm homogenous, contrast enhancing orbital mass suggestive of glioma.

Patient underwent lateral orbitotomy with piecemeal excision of the tumour. On intropeative squash cytology (**Figure 1a, 1b**) a differential diagnosis between malignant melanoma versus metastases of HCC was considered.

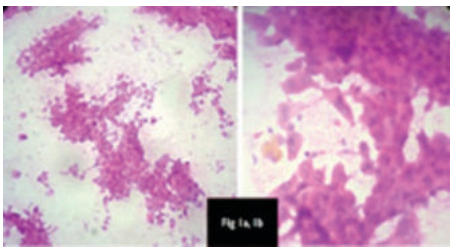

Figure 1a, 1b: Polygonal cells, abundant granular cytoplasmic with brown pigment, vesicular nuclei

Serum AFP and other serum liver markers were unremarkable. Ultrasonography did not reveal hepatic mass. On histopathology, tumor trabeculae were delineated by sinusoids with endothelial cells. Tiny glandular lumina showed brown pigment, which was negative for melanin and hemosiderina.

Primary hepatoid adenocarcinoma of the orbit was considered, but it shows strong positivity for Glypican 3. Our case however showed features of orbital metastases of HCC (**Figure 2a, 2b, 2c**). The patient expired within 6 months after the diagnosis.

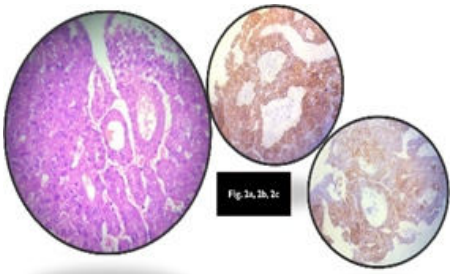

Figure 2 a: Trabecular & acinar pattern with endoluminal brown pigment. Tumor cells positive for pan cytokeratin (Fig. 2b) and Hep-Par (Fig, 2c), negative for HMB 45 and Glypican 3.

Extrahepatic metastases of hepatocellular carcinoma (HCC) occur in lungs, bones and lymph nodes. Only 3-4% cases show orbital metastases. Occult HCC metastases account for < 5% cases. These are usually found in advanced tumor stage. They tend to present with painful proptosis and vision loss. Palliative radiotherapy is often the therapy of choice.

Table 1: Literature studies of orbital HCC metastases

Age/ gender	Clinical presentation	Radiology findings	Risk factor	Reference
63/ F	Progressive diplopia, eyelid swelling	Nil	Nil	Alsberg JB et al [2]
53/F	Displaced eyeball	Orbital mass extending to the lower eyelid and temporal fossa.	HBs Ag +	Kim et al [3]
79/F	Pain in the eye, diminished vision	Nil	Chr. Hepatitis C	Font et al [4]
85/M	Pain in the eye, diminished vision	Nil	Nil	Tranfa et al [5]

CONCLUSIONS

Orbital metastases of HCC are associated with dismal prognosis and high mortality. Awareness of this uncommon metastatic site can aid in intraoperative diagnosis.

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