

# Unusual Metastases of Hepatocellular Carcinoma: 2 Cases

Nazneen Abdul Kader<sup>1,\*</sup>, Reema Miria Abraham<sup>2</sup>, Sathi PP<sup>3</sup>

## ABSTRACT

Most common sites of metastasis from hepatocellular carcinoma (HCC) are lung, bone and lymph nodes. Metastatic tumours are associated with very poor survival. We present two cases of metastatic HCCs to very rare sites.

**Key words:** Metastatic tumours, Orbital metastasis, Salivary gland tumour mimicker.

## INTRODUCTION

Hepatocellular carcinoma is the most frequent primary tumor of the liver. Metastatic spread occurs in 50 % of cases with lungs, lymph nodes and bones being the most common sites. Hepatocellular carcinoma metastasis to jaw and orbit are rare. Here, we report one case each of hepatocellular carcinoma metastasis to jaw and orbit.

### Case report 1

A 65 year old male, presented with swelling of right parotid region of insidious onset. It was slow growing and was not associated with pain, difficulty in opening mouth, salivation and hearing loss. There was no h/o hypertension, diabetes or significant illnesses in the past. On examination, he was pale. There was no jaundice, cyanosis, clubbing, edema or lymph node enlargement. Vitals were stable. A 3 × 4 cm hard, non tender, immobile swelling with indistinct borders was palpated, extending from mid mandible to the post auricular area. There were no features of facial nerve palsy or local lymph node enlargement. Oral cavity was normal. Hepatomegaly was present, 4 cm below the right costal margin. There was no splenomegaly/ascites.

Ultra sonogram of the parotid was suggestive of an inflammatory lesion. Fine needle aspiration cytology showed large pleomorphic cells as clusters and scattered. Many of these cells showed intracytoplasmic clear vacuoles and was reported as malignant salivary gland tumour, with possibilities of mucoepidermoid carcinoma and salivary duct carcinoma.

Computerised tomogram of neck showed a soft tissue density lesion, which is osteolytic in nature- destroying condyloid process and ramus of mandible (Figure 1A). The lesion showed invasion to adjacent masseter and pterygoid muscles. These features were suggestive of high grade neoplasm of mandible-possibly osteosarcoma and biopsy correlation was advised.

The clinician proceeded with trucut biopsy of the lesion and we received multiple bits of grey-white tissue, aggregate measuring 0.5x 0.5x 0.3 cm. Microscopically,

the cells were bizarre and highly atypical, arranged as sheets and showed multiple cytoplasmic vacuoles (Figure 1B), similar to those we saw in FNA. The cells were periodic acid-Schiff stain positive and were diastase sensitive-suggestive of intracellular glycogen. A remote possibility of hepatocellular origin of cells was thought of and hence, proceeded with immunohistochemistry. Hep-Par1 (Figure 1C) and AFP were done and the cells showed positivity and thus confirmed the hepatocellular origin. So, a final diagnosis of metastasis from hepatocellular carcinoma, clear cell variant, was given. The clinician proceeded with serum AFP and computerised tomogram of abdomen. Serum AFP was elevated (>400 IU/ml). CT abdomen confirmed the presence of hepatocellular carcinoma (Figure 1D). The patient finished palliative radio and chemotherapy. Swelling size got diminished and now is under palliative care.

### Case report 2

A 60 year old male presented with swelling in the left lateral aspect of eye. The swelling grew within two months and was associated with decreased vision, pain and watery discharge. He was diagnosed to have hepatocellular carcinoma (Figure 2A) one year back. His AFP and ALP was elevated and serum HBsAg was positive. Patient was on oral *T.sorafenib* but discontinued due to poor tolerance. On examination patient had pallor, jaundice and edema. The swelling was 3x3 cm, non tender, on the lateral aspect of left eye involving left upper eyelid. Vision was more decreased in left eye. Conjunctiva and cornea were unremarkable. Per abdomen examination showed ascites and hepatomegaly. Following presentation to ophthalmology department, biopsy was done, which we received as multiple bits of grey white tissue, aggregate m/s 1.5X1cm. The biopsy showed a neoplasm arranged as trabeculae (Figure 2B) which were more than three cells thick. The cells resembled hepatocytes (Figure 2C) and were Hepar1 positive (Figure 2D). Final diagnosis was orbital

Nazneen Abdul Kader<sup>1,\*</sup>,  
Reema Miria Abraham<sup>2</sup>,  
Sathi PP<sup>3</sup>

<sup>1</sup>Senior Resident, Department of Pathology, Government Medical College, Kozhikode, Kerala, INDIA.

<sup>2</sup>Junior Resident, Department of Pathology, Government Medical College, Kozhikode, Kerala, INDIA.

<sup>3</sup>Professor and Head, Department of Pathology, Government Medical College, Kozhikode, Kerala, INDIA.

## Correspondence

Dr. Nazneen Abdul Kader

Senior Resident, Department of Pathology, Government Medical College, Kozhikode, Kerala, INDIA.

Phone: +91 9496345856

Email: neenu\_eeman@yahoo.com

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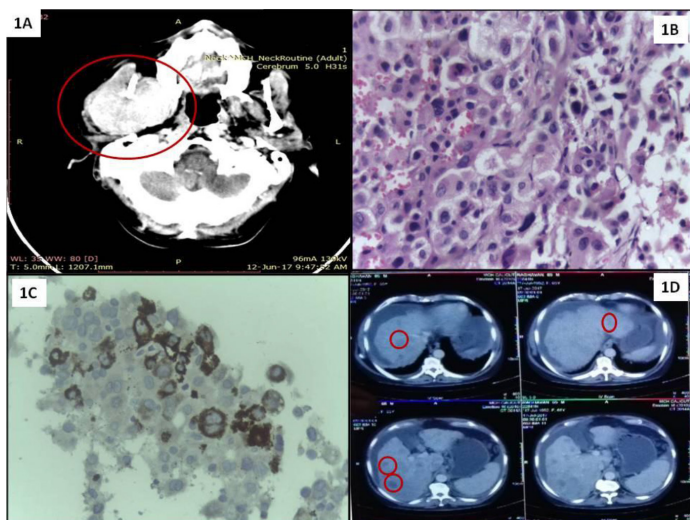
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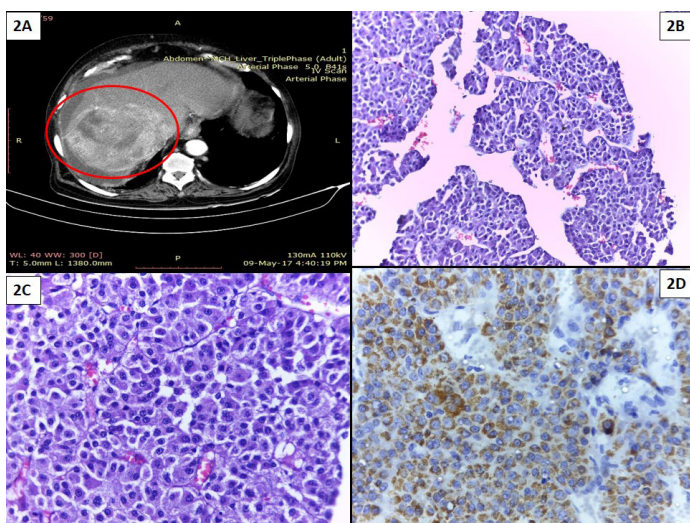
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**Figure 1A:** CT scan of neck showing high grade soft tissue density, osteolytic lesion (red circle) involving the mandible, with infiltration into adjacent muscles. **Figure 1B-** Biopsy from the mandible lesion showing bizarre atypical cells, arranged as sheets with multiple cytoplasmic vacuoles (40X) and cytoplasmic Hep-par1 positivity (**Figure 1C**). CT abdomen showing multifocal hepatocellular carcinoma (red circles) (**Figure 1D**)



**Figure 2A:** CT abdomen showing large solitary lesion (red circle) exhibiting characteristic contrast enhancing and washout pattern. Biopsy from the orbital lesion showing tumour arranged in trabeculae (**Figure 2B-20X**) Resembling well differentiated hepatocytes (**Figure 2C-40X**) and Hep-par1 positivity (**Figure 2D**).

metastasis from well differentiated hepatocellular carcinoma. Patient finished radiotherapy but died one month later.

## DISCUSSION

Metastasis of HCC (hepatocellular carcinoma) outside the liver occurs in about 30-50% of cases.<sup>[1]</sup> The most common sites of metastases are lung, lymph nodes and bones.<sup>[2]</sup> Tumour size >5cm, multiple tumor nodules, invasion of hepatic or portal veins, presence of cirrhosis, positivity for viral markers and elevated tumor markers were associated with the development of extra hepatic metastasis.<sup>[3]</sup> Tumor cells may circulate through the vena cava, heart, escapes the pulmonary filters, finally being distributed to the head and neck region. Tumor cells may also reach the head and neck by bypassing the lungs, possibly through the vertebral venous plexus.<sup>[4]</sup>

1% of oral cancers are metastatic in origin.<sup>[5]</sup> Most common primary tumours known to metastasize to the oral cavity are thyroid, lung and kidney. It is postulated that metastasis occurs by entrapment of malignant cells in the capillary network of chronically inflamed gingiva.<sup>[6]</sup> Jaw bones are more frequently involved than oral soft tissues.<sup>[7]</sup>

Metastasis to the orbital region is a rare phenomenon, the most common primary tumors being breast, lung and prostate cancers. In Japan HCC is the third most frequent cause of orbital metastasis, after lung and breast cancer.<sup>[8]</sup> The clinical features of such tumours are diplopia, proptosis, ptosis, strabismus, conjunctival hyperemia, pain and decreased vision, periorbital swelling and ophthalmoplegia.<sup>[9]</sup> Most of the cases were unilateral with no lateral preponderance.<sup>[8]</sup>

Diagnosis of HCC are usually straight forward with the typical appearance of a polygonal cells with acidophilic cytoplasm arranged in trabecular pattern. In difficult cases, HepPar1 is a relatively specific marker of hepatocytes and HCC. AFP is a specific but insensitive marker of HCC. Treatment for metastatic hepatocellular carcinoma is of limited efficacy.

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