

Case Report

A case of hepatocellular carcinoma in an elder man with metastasis to the nasopharynx

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Received January 17, 2015; Accepted March 19, 2015; Epub May 1, 2015; Published May 15, 2015

Abstract: The lung, bone, brain, etc are common metastatic sites of hepatocellular carcinoma. Nasopharynx metastasis of hepatocellular carcinoma rarely occurs and has not been reported yet. Here we report one case of nasopharynx metastasis from liver in a 50-year-old male patient who was diagnosed with primary hepatocellular carcinoma (nodular and diffuse-type) in 2014. 6 and underwent interventional therapy for two times afterward. However, he suffered from severe headache in 2014. 8, and head contrast-enhanced MRI scan did not show clues for brain or skulls metastasis. Then the lumbar puncture was performed to examine his cerebrospinal fluid (CSF). It showed that cerebrospinal fluid protein (AFP) was extremely higher than the normal level. Then, he developed left blepharoptosis, eye opening obstacle, impaired vision and dysphagia. Positron emission tomography CT (PET-CT) showed that there was multiple bone destruction in skull base, indicating the nasopharyngeal cancer which was proven to be the metastatic tumor from liver histologically by biopsy. Finally, this patient underwent radiotherapy (RT) of nasopharyngeal metastatic tumor and the local symptoms changed for the better.

Keywords: Hepatocellular carcinoma, nasopharynx metastasis

Introduction

Three leading sites of advanced hepatocellular carcinoma were: lung (median 44%), portal vein (35%), and portal lymph node (s) (27%) [1]. Nasopharyngeal metastases rarely occurs and among nasopharyngeal metastases, lung cancer [2], follicular carcinoma of the thyroid [3] and hepatocellular carcinoma [4] have been reported. Here, we reported a patient who developed nasopharyngeal metastases from the liver primary two months after diagnosis.

Case presentation

A 50-year-old man, a heavy smoker and alcoholic for more than 30 years, who suffered from hepatitis B for twelve years and right upper quadrant abdominal pain for about six months, was found to have extremely high level of alpha fetoprotein (AFP) in May, 2014. Then he was diagnosed with primary hepatocellular carcinoma (nodular and diffuse-type), according to the results of enhanced CT scanning and pathological examination in Jun (**Figure 1**), 2014 and underwent interventional therapy for two times afterward. However, he suffered from severe

headache in 2014. 8, and head contrast-enhanced MRI scan did not show clues for brain or skulls metastasis. Then the lumbar puncture was performed to examine his cerebrospinal fluid (CSF). It showed that cerebrospinal fluid protein was 11989 mg/L (200 mg/L-400 mg/L for normal standard), extremely higher than normal level, and tumor cells were not observed in the CSF. Then, he developed left blepharoptosis, eye opening obstacle, impaired vision and dysphagia. Positron emission tomography CT (PET-CT) showed that there was multiple bone destruction in skull base, indicating the nasopharyngeal cancer which was proven to be the metastatic tumor from liver histologically by biopsy (**Figures 2, 3**). Finally, this patient underwent radiotherapy (RT) of nasopharyngeal metastatic tumor (2 Gy/time; total, 70 Gy), the local symptoms got significant relief, and his general condition is fair so far.

Discussion

Hepatocellular carcinoma (HCC), the fifth most common cancers worldwide, has been shown to metastasize to the lung, portal vein, bone, portal lymph nodes, musculoskeletal regions,

Nasopharynx metastasis of hepatocellular carcinoma

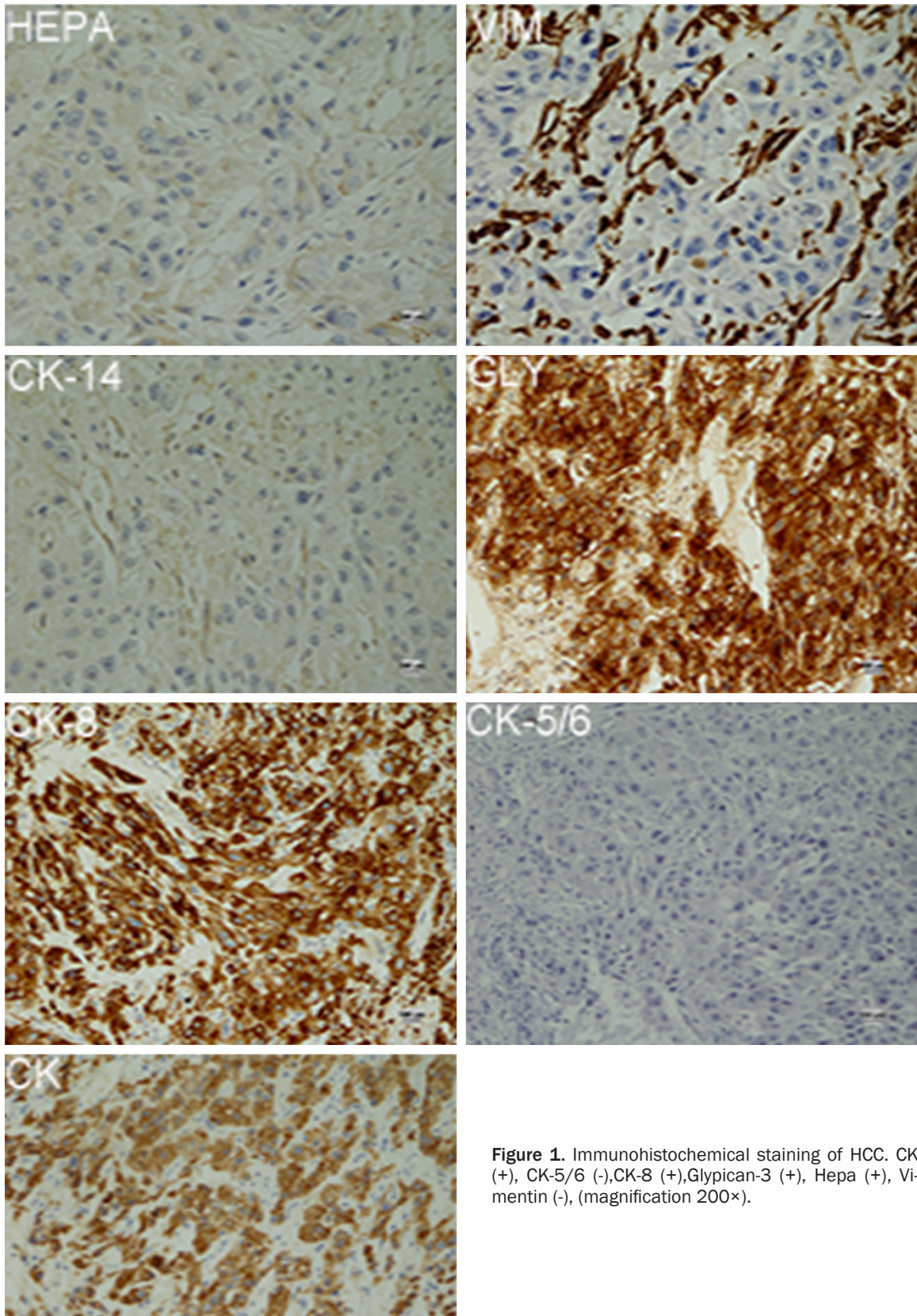


Figure 1. Immunohistochemical staining of HCC. CK (+), CK-5/6 (-), CK-8 (+), Glypican-3 (+), Hepa (+), Vimentin (-), (magnification 200 \times).

about 0.5% to 6% of HCCs metastasize to the gastrointestinal tract, and in some rare occur-

rences, HCC could metastasize to skeletal muscle [5], bronchus [6], the tip of the coracoid pro-

Nasopharynx metastasis of hepatocellular carcinoma

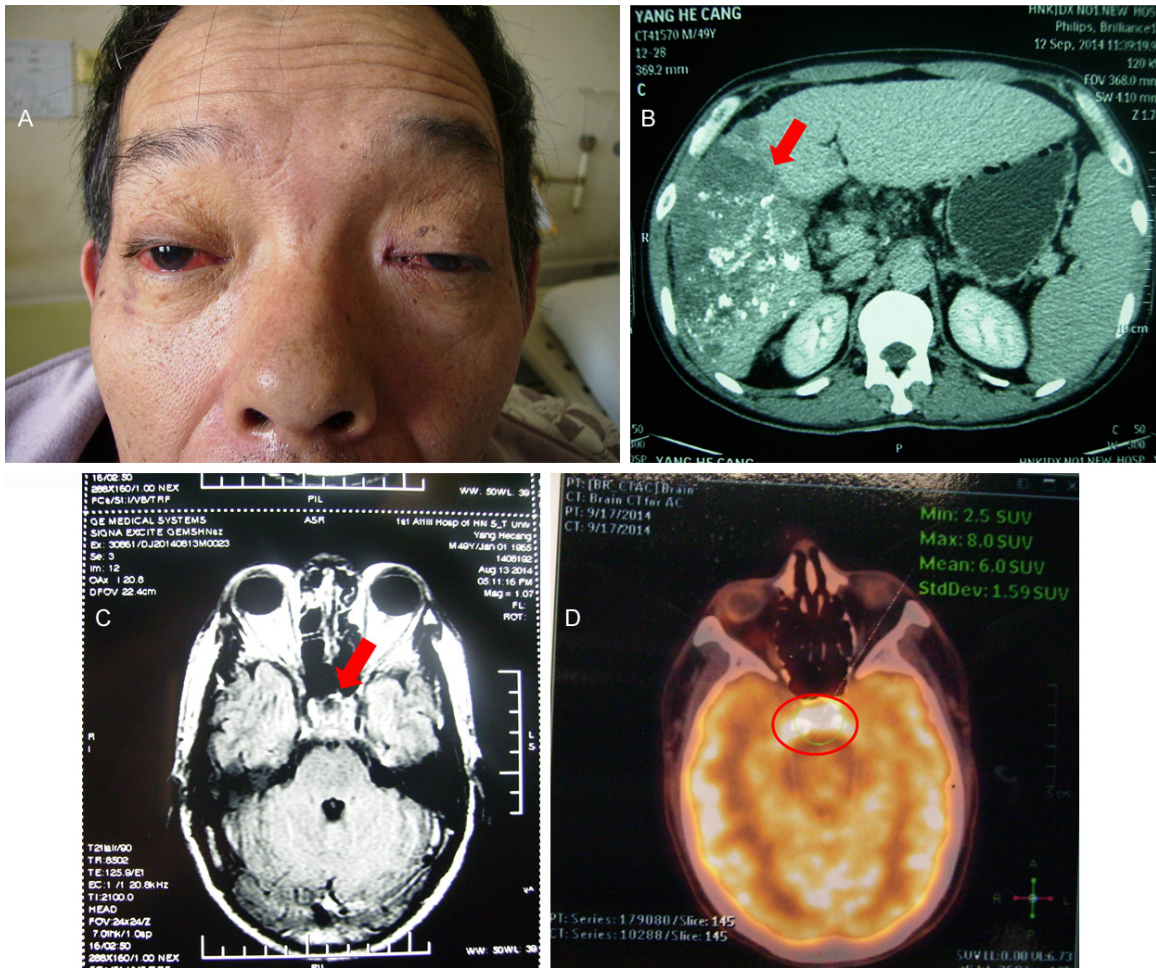


Figure 2. Nasopharynx metastasis from primacy. A. The patient suffered from left blepharoptosis, eye opening obstacle, impaired vision. B. Computed tomography (CT) scans of HCC after interventional therapy (red arrow). C. CT scan of nasopharynx metastasis (red arrow). D. Focal hypermetabolism on PET-CT scan in nasopharynx (red circle).

cess [7], maxilla [8], ventricle [9], sphenoid wing [10], frontal skull [11], skin [12] etc.

Isolated nasopharyngeal metastasis from malignant tumors primary is a rare condition. To date, several case reports have reported nasopharyngeal metastatic tumors. Wong RH et al reported a patient with stage 1B adenocarcinoma of the lung who underwent anatomical lung resection and was subsequently found to have solitary nasopharyngeal metastasis [13]; Patel TS et al described a rare case of metastatic thyroid carcinoma with clear cell change mimicking metastatic renal cell carcinoma in the nasopharynx [3]; A 36-year-old man who was diagnosed as lung adenocarcinoma was found to have polypoid tumors on the bilateral tonsils and nasopharynx, which were biopsied and diagnosed as poorly-differentiated adeno-

carcinoma [2]. More interestingly, a similar case reported by Abhay et al presented a case of a 70-year-old male who was referred to our institution with history of nasal obstruction and nasal bleeding which on further evaluation was diagnosed to have an isolated metastasis to nasopharynx from liver primary [4].

In this report, we described a patient who developed a nasopharynx metastasis from a hepatocellular carcinoma only two months after his initial diagnosis was made. Moreover, CT and whole-body nuclear medicine bone scanning (ECT) showed no cancer metastasis to other parts of the body. It is maybe that there were dormant cancer cells in the nasopharynx ever since the HCC was diagnosed given that symptoms such as left blepharoptosis, eye opening obstacle, impaired vision and dysphagia

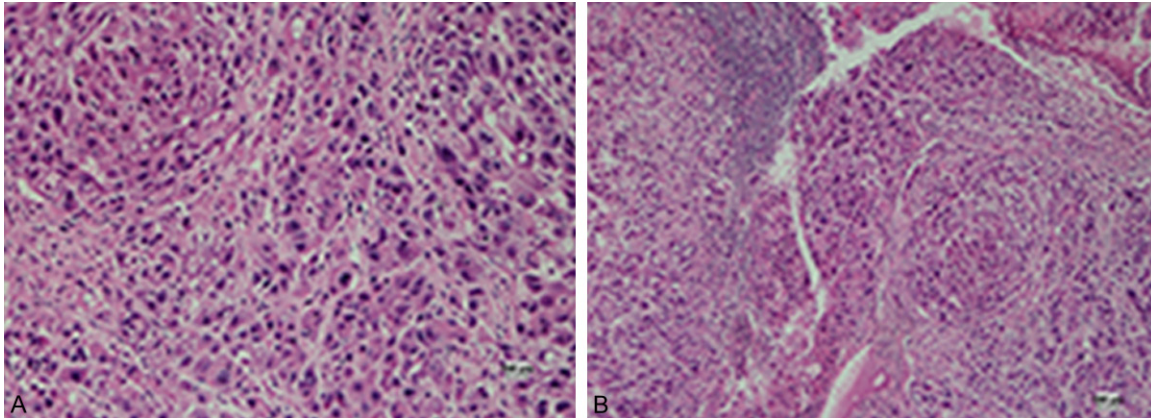


Figure 3. HE staining. HE staining of HCC (A) and nasopharynx metastasis from primary (B) (magnification 200 \times).

could occur only when the metastatic tumors grow to definite volume. Hence, PET-CT might be an effective method to detect minor nasopharynx metastasis loci in order to administer appropriate treatment to the patients and to prolong their survival time.

Therapy of extrahepatic metastasis is mainly depended on the clinical stage and metastasis loci in order to prolong the survival of patients as much as possible. Sugihara et al reported that for HCC patients with bone metastasis, combined treatment with radiation, zoledronate, and surgery, may possibly improve their quality of life resulting in a long clinical course [14]; a patient with metachronous lymph node metastasis and bile duct tumor thrombus due to hepatocellular carcinoma was successfully treated with repeated surgery [15]; a review showed that Median survival of the patients treated with surgical resection or surgical resection followed by whole-brain radiation therapy (WBRT) (25.3 weeks; range, 15.8-34.8 weeks) was longer than that of the patients treated with gamma knife surgery (GKS), WBRT, or GKS followed by WBRT (10.4 weeks; range, 7.5-13.3 weeks) [16]; and a patient with advanced HCC with bone metastasis treated with sorafenib plus zoledronic acid obtained complete response [17]. Generally speaking, focal metastatic tumors were treated with surgery, followed or not followed by radio therapy, target therapy or other conservative treatments. For the focal cases which were not appropriate for operation, radio therapy may be the optimal choice. Herein, this patient was performed radio therapy (2 Gy/time; total, 70 Gy) to relieve

some of the symptoms and the outcome was significant.

Conclusion

In this report, we have described a 50-year-old male patient with hepatocellular carcinoma had nasopharynx metastases two months after his initial diagnosis and interventional treatment, indicating that though nasopharynx metastasis of the hepatocellular carcinoma is relatively low, it really occurs. This patient underwent radiotherapy of nasopharyngeal metastatic tumor, the local symptoms got significant relief, and his general condition is fair so far. It suggested that comprehensive examination and to pay close attention to the patients' abnormal symptoms are crucial to discover the metastasis of malignancy, and appropriate treatment afterward could be a good prognostic factor for it.

Acknowledgements

Supported by National Natural Science Foundation of China, No. 81301763 and Henan provincial key scientific and technological projects (No. 142102310473).

Disclosure of conflict of interest

None.

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Nasopharynx metastasis of hepatocellular carcinoma

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