Primary manifestation of hepatocellular carcinoma as a cervical mass

Boyunda kitle ile ortaya çıkan hepatoselüler karsinom

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Metastasis of hepatocellular carcinoma to the head and neck region is unusual and its exact frequency is unknown. A 72-year-old male patient presented with a mass on the left side of the neck. Clinical examination showed multiple, painless, immobile lymphadenopathies in the cervical region. Computed tomography revealed both an irregular mass in the cervical region and hepatomegaly accompanied by a lobulated liver contour. The patient was diagnosed as having hepatocellular carcinoma following an excisional biopsy from the cervical mass and fine needle aspiration biopsy from the liver.

Key Words: Carcinoma, hepatocellular; head and neck neoplasms.

Hepatocellular carcinoma is the most common primary malign tumor of the liver in adults. It is associated with hepatitis B infection. Hepatocellular carcinoma may involve adjacent and distant regions by haematogenous and lymphogenous ways.1 Head and neck metastasis of hepatocellular carcinoma is unusual. We reported a patient presenting only with a mass localized in the upper cervical region. Systemic evaluation revealed multiple lesions both in the liver and adjacent lymph nodes. Histopathological comparison of excisional biopsy from the cervical mass and fine needle aspiration biopsy from the involved region of the liver revealed metastasis of hepatocellular carcinoma to the neck.

CASE REPORT

A 72-year-old male patient who was referred to our clinic, presented with a mass localized on the left side of the neck. The patient was neither a smoker nor a drinker and had no pertinent medical history. He had become aware of the mass three months before admission and stated that it had increased in size. Clinical
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examination revealed multiple lymphadenopathies on the jugulodigastric cervical region. They were painless, immobile and adhesive to adjacent tissue. The largest one was 3x2 cm in diameter. Endoscopic examination was performed and there was not significant pathological lesion in the nasopharynx, oropharynx, hypopharynx and larynx. Esophagoscopy examination did not reveal a pathological lesion. Cardiovascular, respiratory, abdominal and pelvic routine systemic examinations were normal.

Posterior-anterior thorax radiogram, routine blood biochemical tests, hemogram, erythrocyte sedimentation rate (ESR), C reactive protein (CRP), and prothrombin time (PT) results were within normal ranges.

Cervical and thorax computed tomography (CT) was performed. Cervical CT revealed solid masses on the left jugulodigastric cervical region which were 35x21x19.5 mm, 30x18x15 mm, 20x16x12 mm, 25x18x15 mm, 20x18.5x16 mm in diameter and close to each other and compatible with multiple lymphadenopathies. They had lobulated contours and showed peripheral contrast-enhanced (Fig. 1). Thorax CT revealed no pathology but the right hepatic lobe that was included in the cross-sections of the thorax CT had a non-homogeneous, hypodense view and lobulated contour. Hence, abdominal CT was performed and it showed that the parts of the liver that exhibited a lobulated contour were larger than normal. Left hepatic lobe passed the midline. The posterior segment of the right lobe was involved completely and extended to the dome (Fig. 2). Hypodense areas were determined in the lesion. These findings were compatible with hepatocellular carcinoma. Also, two similar hypodense lesions were determined in the anterior segment of the right lobe, the largest one with a diameter of 3x3 cm. They were evaluated as intrahepatic metastases. Multiple lymphadenopathies were determined in retrocrural, coeliac, retrocaval, intraaortacaval, left paraaortic regions, the largest one with a diameter of 4x3 cm. A detailed biochemical assessment was performed for hepatic functions; Aspartate transaminase (AST) 57 U/L, alanine aminotransferase (ALT) 49 U/L, gamma-glutamyl transpeptidase (G-GT) 194 U/L, alkaline phosphatase (ALP) 392 U/L, lactic dehydrogenase (LDH) 579 U/L, total protein 7.1 g/dl, alfa-fetoprotein (AFP) 300 ng/ml, total bilirubin 1.5 mg/dl, direct bilirubin 0.4 mg/dl. Blood urea, creatinine, total protein, albumin levels, PT and PTT measurements were within reference ranges.

Excisional biopsy of the cervical lymph node and fine needle aspiration biopsy from the liver guided by ultrasonography were performed under general anesthesia. Histopathological examination of cervical lymph nodes revealed low- differentiated carcinoma. Microscopic examination revealed large areas of necrosis, and tumor cells with hyperchromatic and pleomorphic nuclei, arranged around the capillary network (Fig. 3). LCA, CD3, CD20, cytokeratin 7 and cytokeratin 20 antibodies were assessed for a differential diagnosis. Negative results of immunos-
taining and morphological findings were indicative of hepatocellular carcinoma. Histopathological examination of fine needle aspiration from the involved region of the liver confirmed the presence of hepatocellular carcinoma (Fig. 4).

DISCUSSION

The most common primary malign tumor of the liver is hepatocellular carcinoma in adults. Hepatitis B virus (HBV) infection is a risk for increased incidence of hepatocellular carcinoma. HBV infections may be symptomatic but mostly they are asymptomatic and viral DNA eventually becomes incorporated into the host genome of infected hepatocytes which leads to malignant transformation and eventually hepatocellular carcinoma. The other etiological factors that enhance the development of primary liver carcinoma are alcoholic, postnecrotic and hemochromatic cirrhosis, ingested carcinogens ( aflatoxins and cycasin) and parasitosis (schistosomiasis or clonorchiasis). About 80% to 90% of all liver cell carcinomas develop in cirrhotic livers.

Metastasis of hepatocellular carcinoma to the head and neck region is unusual. However in most

Fig. 3 - Microscopic view of excised cervical lymph nodes (H-E x 200).

Fig. 4 - Microscopic view of fine needle aspiration of the hepatic region (H-E x 275).
of the reported cases, the first manifestations were metastatic lesions.\[13\] Our patient is an example for this situation. Hepatocellular carcinomas with extrahepatic metastases have been reported in 50% of all cases.\[7,10\] Distant metastases of hepatocellular carcinoma tend to occur in the lungs (51.6%), adrenal capsule (8.4%), and less frequently in bone, pancreas and kidneys.\[9-12\] Metastatic tumors in the head and neck regions are relatively rare.\[13\] Metastases to the head and neck can be haematogenous, lymphogenous or both.\[1,14\] In previous reports, hepatocellular carcinoma manifestations in the head and neck regions, presented with supravacular lymph node metastases, Virchow-Troisier’s lymph node,\[15\] metastases in the esophagus,\[16\] mandible,\[7,14\] oral cavity,\[6,14,17\] nasal and paranasal sinuses,\[7,20\] temporal bone,\[18\] zygoma\[19\] and orbita.\[20\] Most of these cases were the first manifestations of the carcinoma.

The exact frequency of metastasis of hepatocellular carcinoma to the head and neck is not known. These metastases can be haematogenous. Previous studies reported that the most readily apparent route for haematogenous spread is via the caval venous system, then through the pulmonary circulation and from the heart to the sinuses through the arterial vessels to the head and neck. Significant increments in the intrathoracic pressure cause a retrograde flow from the usual venous channels back to the thoracic duct. In the patient presented in this article, the lesion was placed in the upper deep jugular lymphatic chain (jugulodigastric region). To the best of our knowledge, refluxing up to this level from the thoracic duct without the involvement of supravacular lymph nodes has not been described previously in the literature.

Once metastasis of hepatocellular carcinoma to head and neck region has occurred, the prognosis of the patient is very poor.\[11\] Kanazawa and Sato\[21\] reported a mean survival rate of 21 weeks, ranging from two weeks to two years, after diagnosis of metastatic disease to the oral region. Our patient died one month after the operation during the chemotherapy period. Accordingly, in our opinion, the survival rate, which was reported for oral cavity metastases, may be applicable for all hepatocellular carcinoma metastases in the head and neck region.

REFERENCES
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