

## Two Cases of Cutaneous Metastasis from Hepatoma Mimicking Pyogenic Granuloma

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Metastatic cancers to the skin are rare and usually originate in the lung, breast, large intestine, or ovary. They commonly present with lesions in the area overlying the neoplasm, but the morphology, pattern and distribution may vary. Hepatoma metastasizes to the lungs, adrenal glands, regional lymph nodes, portal vein, gallbladder, pancreas, bone, hepatic vein, kidney, mediastinum, less commonly, the heart, peritoneum, diaphragm, and bone marrow. Cutaneous metastasis from hepatoma occurs very rarely and, if present, it usually presents as solitary or multiple nodules. We report two cases of cutaneous metastases from hepatoma.

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*Key Words* : Cutaneous metastasis, Hepatoma

Primary carcinoma of the liver is relatively common in our country. It usually metastasizes to the lungs and regional lymph nodes, but may metastasize widely to involve the adrenals, bone, spleen, kidney, heart, colon, brain and many other sites<sup>1-4</sup>. Cutaneous metastasis of hepatoma is very rare and a few cases have been reported in our country<sup>5-8</sup>. It is usually a late event, which points to a dismal prognosis.

We report two cases of skin metastases from hepatoma, which clinically mimic pyogenic granulomas.

### CASE REPORTS

#### Case 1

A 71-year-old male was consulted to our department for the evaluation of asymptomatic erythematous crusted nodule on his right cheek (Fig. 1). It

had been present for 2 months and had increased slowly in size. He had been diagnosed as hepatoma previously. The laboratory findings were as follows : GOT, 76 U/L ; GPT, 68 U/L ; AFP, 615.1 ng/ml ; Anti-HCV, reactive, platelet count,  $90 \times 10^3/\text{mm}^3$ . Biopsy specimen revealed sheets of neoplastic cells which mimicked liver cords (Fig. 2a). The individual cells were ovoid to polygonal in shape and had hyperchromatic nuclei. Immunohistochemical stain showed that tumor cells were positive for AFP and CEA (Fig. 2b and 2c). These were compatible with metastatic hepatocellular carcinoma.

#### Case 2

A 47-year-old male patient who had been diagnosed as hepatocellular carcinoma 3 years before was consulted to our department for the evaluation of his skin lesion. He presented with a 1-month history of dark reddish colored nodule on lower lip, which often easily bled even at the slightest touch (Fig. 3). The laboratory findings were as follows : GOT, 110 U/L ; GPT, 64 U/L ; HBs Ag, positive ; AFP, 177,013 ng/ml. platelet count,  $120 \times 10^3/\text{mm}^3$ . Skin biopsy specimen revealed undifferentiated neoplastic cells, which were arranged in solid growth pattern and mimicked liver cords, (Fig. 4a). In immunohistochemical stains, tumor cells were positive for AFP, but nega-

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**Fig. 1.** Solitary bluish-red,  $0.7 \times 0.5$  cm sized, crusted nodule on his right cheek area (case 1).

**Fig. 3.** Solitary dark reddish  $0.6 \times 0.3$  cm sized, crusted nodule on lower lip (case 2).

**Fig. 2a.** Biopsy specimen shows extensive infiltration of the dermis by undifferentiated polygonal cells with hyperchromatic nuclei, which mimic liver cords (H&E,  $\times 100$ ). **2b and 2c.** Tumor cells are positive for AFP and CEA ( $\times 200$ ).

**Fig. 4a.** Undifferentiated neoplastic cells are arranged in solid growth pattern, which mimic liver cords (H & E  $\times 200$ ). **b.** Tumor cells are positive for AFP ( $\times 200$ ).

tive for CEA (Fig. 4b).

Based on clinical and histopathological findings, we diagnosed these two cases as metastatic skin cancers from hepatoma. Both the patients died two months after the appearance of the skin lesions.

## DISCUSSION

Metastasis can be defined as the appearance of neoplasm remote from the site of the primary tumor, and it sometimes is the first sign of internal malignancies.

Cutaneous metastases from internal cancers have been reported to be 0.7-10% and mostly observed as a late occurrence in advanced cancer<sup>9,10</sup>. Actually, when the skin metastases are noticed, the tumor is already widely disseminated.

Cancers metastatic to the skin are uncommon and usually originate in the lung, breast, large intestine or ovary. According to Brownstein and Helwig, the lung was the most common primary site of carcinoma in men and the breast the most frequent primary site of carcinoma in women<sup>11-13</sup>. In our country, Kim et al<sup>5</sup> reviewed clinical records and histologic materials of 96 cases of metastatic skin cancers and they found that the frequent primary cancers in men were carcinomas of the stomach, lung, colorectum and pancreas and those in women were carcinomas of the breast, stomach, lung and uterine cervix in order.

Hepatoma metastasizes to the lungs, adrenal glands, regional lymph nodes, portal vein, gallbladder, pancreas, bone, hepatic vein, kidney, mediastinum, and less commonly, to the heart, peritoneum, diaphragm and bone marrow<sup>14</sup>.

Cutaneous metastases have a reported incidence of 3.4% in the cases of primary liver cancer<sup>15,16</sup>.

The skin metastases of liver cancer can take the forms of papules, nodules, indurated plaques or of inflammatory nodules, and sometimes the lesions may mimic pyogenic granuloma, which may easily bleed when injured or surgically incised<sup>17</sup>. Kato et al<sup>18</sup> reported a case of black nodules of the palm and sole which clinically mimicked malignant melanoma.

The face and scalp are the most common sites of involvement, followed by the torso, and then the extremities<sup>19</sup>. Sometimes metastatic skin lesions can be the presenting sign<sup>7,16,20</sup>. Proper diagnosis of such an unusual skin lesion can detect previously un-

recognized primary malignancies.

Metastases usually have similar histologic features to those of the primary cancer, but they are frequently more anaplastic. Metastases do not always permit one to identify the primary cancer except the clear cell carcinoma of the kidney, and in fact they are just designated as carcinoma or sarcoma. Histopathologically, metastatic carcinoma from the liver shows the arrangement of malignant hepatocytes in irregular columns and if there are acinar structures containing bile, the definitive diagnosis can be made<sup>21</sup>. In both of our cases, tumor cells consisted of undifferentiated polygonal cells with hyperchromatic nuclei, which mimicked liver cords. Immunohistochemistry also can help the correct diagnosis. In case 1, many of the tumor cells were positive for both AFP and CEA. This is a rare case with CEA-producing metastatic skin lesions from hepatocellular carcinoma. Most tumor cells were positive for AFP, but negative for CEA in case 2. AFP and CEA are useful markers for detection of internal malignancies. Hirai reported that AFP levels were high in patients with hepatocellular carcinoma, but their CEA levels were lower than those in patients with gastrointestinal carcinomas<sup>22</sup>.

Based on histories of hepatoma, clinical findings of skin lesions, histopathologic and immunohistochemical findings, we diagnosed these two cases as metastatic skin cancers from hepatoma. The skin metastases are usually seen as a late occurrence in the advanced state and can be indicative of progression by the primary tumor and early fatal termination.

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