

# A Case of Cutaneous Metastasis from Esophageal Carcinoma

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We report a case of cutaneous metastatic carcinoma from an esophageal carcinoma in a 54-year-old male who complained of several pinhead-sized erythematous tender papules on the upper chest. He had been admitted to the department of internal medicine for esophageal carcinoma. Radiological examinations revealed a luminal narrowing below the level of carina on esophagography, and a mass on the mid esophagus, left atrium and pulmonary vein on the chest CT scan. On endoscopy, about 30cm from the central incisor, a huge polypoid mass with a central ulceration and dirty surface margin was noted. Histopathological examination of the skin and esophageal biopsies showed the same atypical squamous cells with distinctive nucleoli, nuclear membrane and intercellular bridge, which were consistent with the squamous cell carcinoma of nonkeratinizing large cell type, suggesting these cutaneous lesions were metastasized from the esophageal carcinoma. (*Ann Dermatol* 11(4) 267~270, 1999).

*Key Words* : Cutaneous metastasis, Esophageal carcinoma.

Cutaneous metastases from internal malignancies are relatively rare in comparison with metastases to other organs of the body<sup>1</sup>. The frequency of skin metastases have ranged from 0.2 to 9%<sup>2,4</sup>. The lung is the most common primary site of metastatic carcinomas in men, and the breast in women<sup>2,5</sup>. The most common clinical picture of cutaneous metastasis is that of aggregate of discrete, firm, nontender flesh colored nodules that suddenly appear in a particular area of the body, rapidly grow, attain a certain size, and then remain stationary<sup>3,6,10</sup>. Cutaneous metastases from esophageal carcinomas are quite rare and the chest is the most common site. Di-

rect invasion from esophageal carcinoma to cutaneous, to our knowledge, has not been reported until now. Herein, we report a case of direct cutaneous metastatic carcinoma from the esophageal carcinoma.

## CASE REPORT

A 54-year-old male was admitted to the department of internal medicine with advanced esophageal carcinoma. He had been diagnosed with esophageal carcinoma stage III(T<sub>4</sub>M<sub>0</sub>N<sub>x</sub>) for 2 years and had 9 sessions of chemotherapy. He complained of a painful right cervical mass and insomnia. He was referred to the department of dermatology for evaluation of painful cutaneous papules of 3 days duration. A skin finding showed several pinhead-sized erythematous papules on the upper chest(Fig. 1).

Laboratory findings were as follows: the white blood cell count was  $13.7 \times 10^9/L$ ; the potassium electrolyte level was 2.9mEq/L(3.6-5.5mEq/L); the total protein/albumin level was 5.6/2.8g/dl(6.5-8.2/3.3-5.3g/dl); routine urinalysis was normal;

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**Fig. 1.** Several pinhead-sized erythematous papules and vesicles on the upper chest.

**Fig. 2.** Esophagography demonstrates luminal narrowing below the level of carina.

VDRL was nonreactive. Esophagography showed luminal narrowing below the level of carina(Fig. 2), and on endoscopy, about 30cm from the central incisor, a huge polypoid mass with central ulceration and dirty margin was noted. A chest CT scan showed a midesophageal mass which invaded the left atrium and pulmonary vein(Fig. 3). An aspiration biopsy of the palpable supraclavicular lymph node and post cervical lymph node showed squamous cell infiltration. Histologic examination of the biopsy specimen from the esophageal lesion and cutaneous papules showed that of the same atypical

**Fig. 3.** Chest CT shows a midesophageal mass which invaded the left atrium and pulmonary vein.

**Fig. 4.** Biopsy specimen from the esophagus shows squamous cells, with distinctive nucleoli, nuclear membrane and intercellular bridge(H&E stain,  $\times 400$ ).

squamous cells, all of which had distinctive nucleoli and nuclear membrane(Fig. 4, 5). Mediastinal lymph node enlargement was not noted.

Fig. 5. Skin biopsy specimen taken from the cutaneous papule reveals similar findings to the original site(H&E stain,  $\times 400$ ).

The cutaneous metastasis of esophageal carcinoma was diagnosed, but he was treated conservatively because of his poor general condition. During the treatment, swelling on the right arm and face developed and he experienced headaches(superior vena cava syndrome). He died 2 months after the appearance of the cutaneous lesion.

## DISCUSSION

The most common primary site of metastatic tumors in men is the lungs and breasts in women<sup>2,6,18</sup>. In Korea, the frequency of primary carcinoma with metastatic skin tumors is lung(31.8%), stomach(11.4%) and liver(11.4%) in men and breast(39.1%), uterine cervix(17.4%) and ovary(13%)<sup>4</sup> in women. Cutaneous metastases are clinically presented as nodular, inflammatory(carcinoma erysipelatoides), sclerodermoid(carcinoma en cuirasse or schirrous carcinoma) metastatic lesions<sup>3,6,9,13,16</sup>. Nodular type is the most common form. Our case clinically showed several pinhead-sized tender papules on the chest. Cutaneous metastasis may occur in one of the following ways; 1)direct spread from underlying tumors, 2)direct spread through lymphatics, 3)dissemination through the blood stream 4)accidental implantation of the tumor cells through the surgeon's glove or instruments<sup>8,14</sup>. In our case, cervical/supraclavicular lymph node involvement showed continuous extension of primary tumor cells through lymphatics. But the development of superior vena cava syndrome was thought to be due to the direct spread

from esophageal carcinoma to adjacent tissues as well as the skin of the chest because mediastinal lymph node enlargement was not noted in the radiological examination.

Histologically, there are good correlations between the primary lesion and metastatic lesion. Metastatic lesions in the skin show a wide range of histologic patterns. The histologic features of the metastatic lesions are of some value in recognizing the site of the primary tumor, but more accurate correlation is achieved by relating it to clinical information, particularly the sex of the patient and localization of the metastatic growth<sup>6,17</sup>.

Esophageal carcinoma is uncommon and the overall incidence was 3.9 person per 100,000 in 1987 and 18% of the esophageal carcinoma patients have distinct metastases at presentation<sup>3</sup>. Overall metastases are most commonly diagnosed in abdominal lymph node(45%), followed by liver(35%), lung(20%), cervical/supraclavicular lymph node(18%) and skin(1%). Histologically, they are classified as adenocarcinoma, squamous cell carcinoma, and undifferentiated carcinoma. In the upper esophagus, the primary histologic type of original tumor is squamous cell carcinoma and in the mid and lower esophagus, adenocarcinoma. Upper esophageal tumors have spread infradiaphragmatically to the liver, less frequently to the cervical/supraclavicular lymph node. Mid esophageal tumors show a greater propensity to metastasize to the cervical/supraclavicular lymph node as compared with the lower esophagus. Lower esophageal tumors show a greater propensity to metastasize to the liver compared with mid esophageal tumors. Adenocarcinoma more commonly metastasizes to the liver, compared with squamous cell cancer, which shows more propensity to the cervical/supraclavicular lymph node as compared with adenocarcinoma<sup>3</sup>. Our case was mid esophageal squamous cell carcinoma and metastasized to the cervical/supraclavicular lymph node.

Metastatic skin tumors are indicative of the progression of the primary tumor and the duration of life is 6 months after the appearance of the skin tumor<sup>4,13-15</sup>. In our case the patient died 2 months after the appearance of the cutaneous lesion.

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