A Case of Skin Metastasis Manifested as a Presenting Sign of Pancreatic Tail Cancer

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A 68-year-old male patient visited our clinic complaining of a single skin lesion on the left shoulder for 5 months. The lesion was a bluish to pigmented, bean-sized nodule. No subjective symptoms and signs accompanied it. Histologically, the tumor mass was composed of some tumor emboli in the vessels and moderately differentiated neoplastic glands lined by anaplastic cells. These findings were consistent with the metastatic adenocarcinoma. Abdominal sonography and CT scanning showed a mass at the tail of the pancreas. Therefore, we diagnosed this skin lesion as a metastatic adenocarcinoma originating from the pancreatic tail.

We report herein a rare case of skin metastasis from pancreatic tail cancer, in which the cutaneous involvement was the first sign of the internal malignancy.

Key Words: First sign, Pancreatic cancer, Skin metastasis.

Cutaneous metastases from internal malignancy are uncommon, especially in pancreatic cancer. The majority of skin metastases from internal malignant tumors appear as firm nodules in the skin. They are single or multiple and usually resemble the primary tumor in color and consistency, varying in size up to several centimeters. Cutaneous metastases are seen usually as a late event in advanced cancer; death often occurs within a few months. At the time the skin metastases are noticed, the tumor is usually already widely disseminated. Most metastases to the skin occur in patients between 50 and 70 years of age, which may be merely the reflection of the higher incidence of malignancies in elderly patients13. Skin metastases are uncommonly present at the first time of diagnosis of an internal malignant tumor. Rarely, it may be the first sign or the chief complaint of internal cancer and may provide clear evidence of the malignant tumor4.

We report a rare case of skin metastasis manifested as a presenting sign of a pancreatic tail cancer.

REPORT OF A CASE

A left hemiparetic 68-year-old man visited our department because of a bluish pigmented nodule on his left shoulder of 5 month duration. He had no subjective symptom and no family history. There was no history of previous treatment. He had a 5-year history of hypertension and left hemiparesis.

On systemic review, he had left shoulder pain, anorexia, constipation, weight loss (3kg/6months), but had no fever, jaundice, abdominal pain, nausea, vomiting, diarrhea or melena. Physical examination revealed an asymptomatic, bluish to dark pigmented nodule on the left shoulder and the lesion had slowly grown to a bean-sized (1 x 1 cm) without prior bleeding, ulceration or crust (Fig. 1). There were no findings of hepatomegaly, abdominal palpable mass and ascites. Our impression was sebor-
Fig. 1. Asymptomatic, bluish pigmented, bean-sized (1 x 1 cm) nodule on the left shoulder.

Fig. 2. The infiltrated tumor tissue in the dermis and subcutis is composed of some tumor emboli (arrow) in the vessels (H & E, × 100).

Fig. 3. Moderately differentiated neoplastic glands (arrows) is lined by the anaplastic cells (H & E, × 200).

Fig. 4. Abdominal CT scan showed the pancreatic tail cancer (asterisk) invading the stomach, liver and retroperitoneum.

rhoeic keratosis or verruca vulgaris at first.

A biopsy specimen from the left shoulder revealed infiltrated tumor tissue in the dermis and subcutis. The tumor mass was composed of tumor emboli in the vessels (Fig. 2) and moderately differentiated neoplastic glands lined by anaplastic cells (Fig. 3). These findings were consistent with a metastatic adenocarcinoma.

At that time, laboratory tests including complete blood cell count, liver function test, serum electrolytes, urinalysis and stool examination were performed. The abnormal laboratory findings were total bilirubin 1.16 mg/dl (reference range, 0.2 to 1.1 mg/dl), GPT 52 IU/L (reference range, <40 IU/L) and alkaline phosphatase 821 IU/L (reference range, 39 to 117 IU/L). The rest of laboratory data were within normal limit or negative. Chest roentgenogram was normal. Roentgenogram of the left shoulder showed the finding of capsulitis and a brain CT revealed a cerebral infarction of right basal ganglia. For the localization of primary cancer, we performed an abdominal sonography and CT scanning. The findings were a mass at the tail of the pancreas and direct invasion to the adjacent organs and hematogenous spread to the liver (Fig. 4). Final diagnosis of the skin lesion was made as a metastasis from the pancreatic tail adenocarcinoma. We managed him with supportive measures and intermittent examinations.

**DISCUSSION**

The prevalence of cutaneous metastases from
Internal malignancies is low, being 5% of all cancer patients, and distant metastases to skin are uncommonly present at the time of diagnosis (1.3%) and even less commonly, they are the chief complaint or the first sign of primary cancer (0.8%), especially in pancreatic cancer (0.1%)³⁴.

In Korea the mean age of patients with cutaneous metastatic cancer is 54 years old and the most frequent primary sites of cancer are the lung and stomach in men and the breast and lung in women. Sites of cutaneous metastasis are the head, abdomen, back and chest, in order of frequency. Cutaneous metastases ordinarily occur in association with disseminated cancer, and in these circumstances they carry a poor prognosis and patients generally die within 1 year of the appearance of cutaneous metastasis⁵.

Pancreatic cancers appear to occur more frequently in males than females and rarely develop before the age of 50. More than 90 percent of pancreatic cancers are ductal adenocarcinoma, with islet cell tumors constituting the remaining 5 to 10 percent. Pancreatic cancers occur twice as frequently in the pancreatic head (about 70% of cases) as in the body (about 20%) or tail (about 10%) of the gland. The incidence of skin metastasis is reported in 8.4% of pancreatic cancer. The initial symptoms associated with pancreatic cancer are abdominal pain, weight loss and anorexia which are present in more than 75 percent of patients⁶⁷. In our case the patient had the symptom of anorexia, constipation and weight loss, but he did not complain of abdominal pain.

The clinical appearance of metastatic skin lesions of pancreatic cancers is frequently not distinctive. They usually resemble the primary tumor in color and consistency, varying in size up to several centimeters. Freely movable cutaneous or subcutaneous nodules may be discrete, hard, indolent, skin-colored, bluish-pigmented or erythematous. They may be single or multiple and may mimic epidermal cyst, lipoma, neurofibroma, adnexal tumor, cylindroma, polyp, pyogenic granuloma, Kaposi’s sarcoma, cicatrical morphea- like plaque, and lymphoma. On the scalp, metastases may cause circumscribed hair loss, so-called alopecia neoplastica⁸⁹.

The microscopic picture of cutaneous metastases varies considerably. In general, the metastasis resembles the primary tumor but often has a more anaplastic pattern. Nodular lesions have masses of tumor cells, and these may show a glandular pattern, especially in lesions of a gastrointestinal origin⁹⁰. In our patient the skin biopsy specimen revealed tumor tissues composed of moderately differentiated neoplastic glands and some tumor emboli in the vessels. These findings suggested a metastatic adenocarcinoma.

Metastatic adenocarcinoma of the skin from an internal malignant tumor includes a wide variety of primary sites. Adenocarcinomatous deposits can be found in metastases originating from the breast, lung, colon, rectum, stomach, prostate, pancreas, endometrium, ovary, and endocervix. Dissemination may occur by lymphatic or hematogenous spread⁹¹. Diagnosis of skin lesions in the cases of metastases from internal malignant tumors is very difficult. Histopathological examination and identification of primary cancer is necessary for diagnosis.

In laboratory findings of pancreatic cancer, the elevated alkaline phosphatase, the elevated SGOT, hyperbilirubinemia, and anemia were frequently found in order of frequency⁹⁵. For the identification of primary cancer, we performed laboratory tests and special diagnostic procedures. The abnormal laboratory findings were total bilirubin 1.16 mg/dl (reference range, 0.2 to 1.1 mg/dl), GPT 52 IU/L (reference range, <40 IU/L) and alkaline phosphatase 821 IU/L (reference range, 39 to 117 IU/L). The rest of the laboratory data were within normal limit or negative. Abdominal sonography and CT scanning for primary cancer showed a mass at the tail of the pancreas, direct invasion to the adjacent organs and hematogenous spread to the liver. On the basis of the above histopathologic and laboratory findings including the blood chemistry, abdominal sonography and CT scanning, we diagnosed this skin lesion as a metastatic adenocarcinoma originating from the tail of the pancreas.

Skin metastases from internal malignancy are uncommon, and even less commonly, they represent the chief complaint or the first sign of primary cancer as in our case. Despite this low frequency, vigilance should be maintained and a biopsy of any nonhealing ulcer, persistent indurated erythema, and all skin nodules of undetermined cause is needed to detect these uncommon but important skin manifestations of internal cancers⁹.
REFERENCES


