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Accepted 23 October 2000.

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Unusually Large Cutaneous Metastases of Renal Cell Carcinoma

Sir,

Renal cell carcinoma (RCC) accounts for 2–3% of visceral malignant tumors and occurs with a male:female ratio of 3:1. Most cases of sporadic RCC develop in the 5th–7th decades of life, although younger patients may be affected by inherited forms. Metastases of RCC are present at the time of diagnosis in 10–45% of cases and preferentially involve the lung, bones and contralateral kidney (1). Cutaneous metastatic lesions have been reported in 2.8–6.8% of cases, with the most common sites being the head/neck region and the trunk (2). In the majority of patients, skin metastases of RCC develop in the late stage of the disease and are associated with visceral involvement. We describe here a young man with a history of RCC who presented with cutaneous metastases of unusually large size with a rapid and fatal clinical course.

CASE REPORT

A 35-year-old man was examined for the presence of multiple, rapidly growing cutaneous and subcutaneous masses in the head and neck



Fig. 1. Cutaneous metastases of renal cell carcinoma presenting as large nodules in the head and neck region.

region. One year earlier the patient had undergone right radical nephrectomy for a sporadic clear-cell adenocarcinoma ($T_{3b}N_0M_X$). At that time the patient refused any chemotherapy and radiation therapy, preferring to undergo an “alternative” treatment, which was not described in detail. Physical examination revealed three red–purplish masses, 3–7 cm high with a 5–7 cm base. One was coniform and located on the forehead, the second was lobulated and present on the left oral commissure and the third was roundish and located in the left parietal region (Fig. 1). In addition, a subcutaneous mass was evident on the left temporal area and multiple solitary papules and nodules were scattered over the face and neck. Histopathologic examination of a skin biopsy specimen showed a monomorphous infiltrate, located in the entire dermis and subcutaneous tissue, composed of irregular aggregates of large-sized neoplastic cells. Cytomorphologically, tumor cells were polyhedral with a central pale nucleus and abundant clear cytoplasm. Periodic acid–Schiff-positive granules were detected within the cytoplasm of the clear cells before, but not after, digestion with diastase. Immunohistochemical staining with anti-pan-cytokeratin, epithelial membrane antigen and vimentin antibodies was positive. These findings were consistent with the diagnosis of cutaneous metastases of renal cell adenocarcinoma. Routine laboratory investigations revealed hypochromic anemia and high levels of serum creatinine (4.2 mg/dl; normal range: 0.60–1.20 mg/dl), urea nitrogen (190 mg/dl; normal range: 10–50 mg/dl) and uric acid (15.5 mg/dl; normal range: 4–7 mg/dl). A chest X-ray showed multifocal lung metastases. The patient was treated with palliative therapy (blood transfusions and narcotic analgesics) and died of widespread disease 2 weeks later.

DISCUSSION

Cutaneous metastases of RCC most frequently occur as asymptomatic, pink to red to purplish, rapidly growing, cutaneous and/or subcutaneous nodules (3). They are often pulsatile but rarely ulcerated. An unusual presentation as a hyperkeratotic lesion mimicking a cutaneous horn has been described (4). The size of individual cutaneous metastatic lesions, as reported in the literature, varies greatly from 0.5 to 5.6 cm in diameter although most of the lesions measured <3 cm. In our patient, unusually large, exophytic cutaneous lesions, 3–7 cm high with a 5–7 cm base, were observed.

Clinical differential diagnosis of skin metastases of RCC may include pyogenic granuloma, angioma, Kaposi's sarcoma and cutaneous lymphoma. Histopathologically, differentiation between sebaceous tumors, ballooniform cell melanoma and vascular tumors may be difficult. However, a cytomorphologic feature highly suggestive of metastatic RCC is the presence of

clear, pale-staining cells filled with intracytoplasmic lipid and glycogen embedded in a fibrous and highly vascular stroma.

The occurrence of cutaneous metastases of RCC represents a poor prognostic factor, as observed in our patient. The 5-year survival rate is 13–50% if a single lesion is present and 0–8% in patients with multiple lesions (5). Surgical excision of a solitary metastatic skin lesion has been proposed as palliative treatment, whereas chemotherapy is recommended in patients with multiple lesions.

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Accepted December 14, 2000.

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