Zosteriform Cutaneous Metastases arising from Adenocarcinoma of the Colon: Diagnostic Smear Cytology from Cutaneous Lesions

Sir,

Cutaneous metastases arising from internal malignancy are uncommon, and a zosteriform pattern is very rare. We report a case of colonic adenocarcinoma metastasizing to the left lower extremity in a zosteriform pattern. No herpetic cytopathic changes were noted, and cohesive malignant cells in the papulo-vesicular lesions were observed on a Tzanck smear. Mucin production from tumour cells is the most likely source of the vesicular appearance.

CASE REPORT

In December 1990 a 65-year-old man underwent a palliative colostomy for sigmoid colon cancer with spreading to the peritoneum. In January 1995 he noticed swelling of the left thigh, and he received local radiotherapy and chemotherapy. The patient was referred to our dermatology clinic 1 month later for evaluation of skin lesions on his left leg. In July 1995, he noticed painless, erythematous inflammatory papules and nodules. Because of the dermatomal distribution of the lesions, the diagnosis was thought to be herpes zoster. He was started on oral acyclovir but did not improve.

Examination revealed several firm papules and nodules in an L-1 to L-3 dermatomal distribution on his left thigh. The numerous lesions were grouped, infiltrated, erythematous and crusted papules, or translucent (Fig. 1). There was marked non-pitting oedema on his left leg. Material from the base of a translucent papule, obtained by curettage with a scalpel, was smeared onto a glass slide, and stained with Giemsa's stain. Although the smear showed no herpetic balloon cells, atypical cells occurred in cohesive groupings or in a papillary structure. Those cells had round, ovoid nuclei and small to moderate amounts of clear cytoplasm (Fig. 2a). The cytoplasm in those cells stained positive for carcinoembryonic antigen (CEA). Well-differentiated metastatic adenocarcinoma was suspected. Laboratory data revealed a normal complete blood count (cbc). The chemistry profile was found to be within normal limits. Serum CEA level and CA. 19-9 level were 98 ng/ml (normal; 0–5), and 57 U/ml (normal; 0–30), respectively. Computed tomography (CT) of the abdomen showed marked lymphadenopathy in the left inguinal and para-aortic lymph nodes.

Histological examination of a skin biopsy showed numerous tumour nests in the papillary and reticular dermis (Fig. 2b). The lumina of these granular configurations contained necrotic debris. Mucin in the columnar tumour cells and the stroma stained with colloidal iron stain. Furthermore, poorly differentiated cells with pleomorphic nuclei infiltrated among the collagen bundles in Indian file formation. No dilated dermal lymphatics with tumour cells in their lumen were observed. Immunoperoxidase stains for CEA and CA 19-9 gave positive results. The morphological and immunohistological findings were consistent with metastatic adenocarcinoma of the colon.

The patient died 5 months later. An autopsy was not performed.

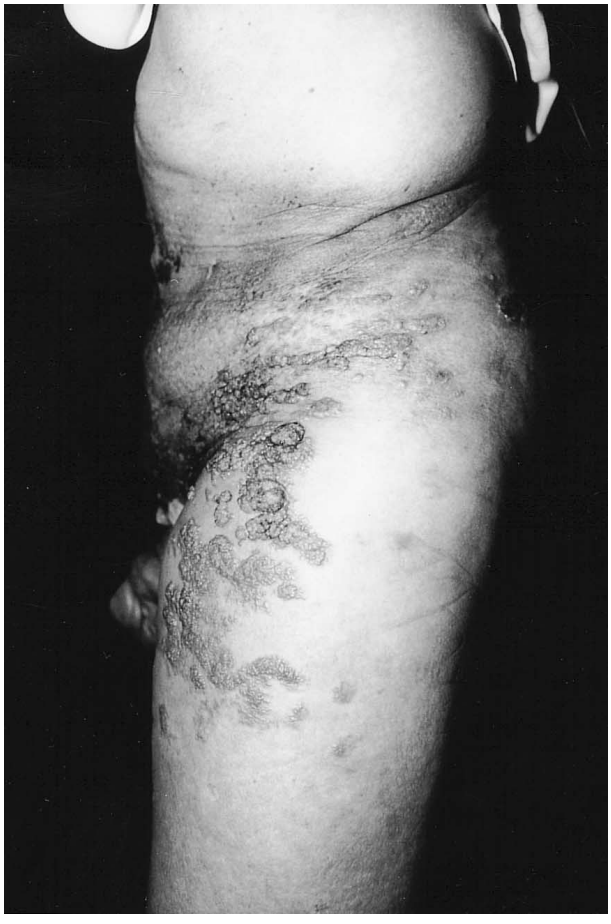

Fig. 1. Cutaneous nodules and vesiculo-papules on the left thigh in a zosteriform pattern.

DISCUSSION

Patients with colonic adenocarcinoma have been shown to reveal metastases to the skin in 4.4% of all cases (1). Certain internal malignancies appear to metastasize to specific sites. Because the malignant cell may spread by direct extension from the underlying tumour or dissemination to local sites through the lymphatics, the abdominal wall is the most frequent site of colonic metastases. A review of the literature has not shown any cases of cutaneous metastases from colonic ade-

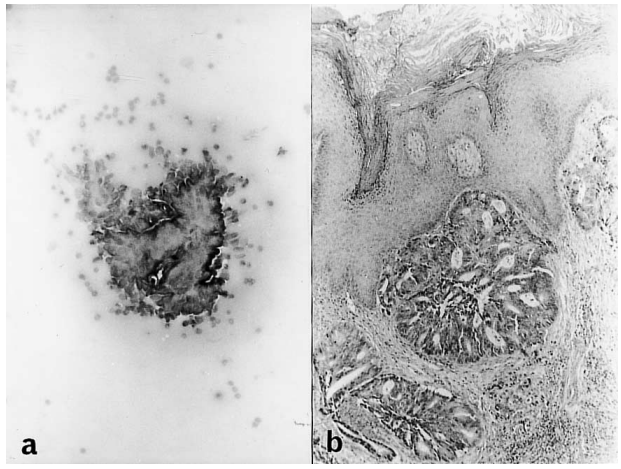

Fig. 2. Cytological presentation from a papule on the cutaneous lesions revealing (a) well-differentiated adenocarcinoma and (b) histopathology showing a proliferation of well-differentiated adenocarcinoma cells forming solid nests of varying sizes and shapes in the upper dermis.

nocarcinoma to the leg, as occurred in the case described here. The dermatomal distribution of the lesions accompanied by neuralgia and hyperaesthesia led the physician to conclude that the patient had herpes zoster.

This rare type of metastases has been reported in several cases to date (2, 3). The primary tumours with zosteriform metastases were located in the breast, carcinoma of the lung, carcinoma of the bladder, carcinoma of the renal pelvis, and carcinoma of the ovary. The frequent histopathological type of this metastasis is adenocarcinoma, and rarely transitional cell carcinoma. To our knowledge, this seems the first case of zosteriform cutaneous metastasis from a colonic adenocarcinoma. The vesicular appearance in our case may have been due to mucin production by adenocarcinoma. Some authors explain this phenomenon as being caused by lymphoedema (2) and other authors by epidermotropic metastasis (3). The tumour cells may have been disseminated on the left lower extremity by lymphatic spread in the case described, because direct lymphatic infiltration of the tumour cells was not proven histologically and an obstruction in the left inguinal and paraaortic lymph nodes had been shown in a CT scan.

Easy and prompt diagnosis of cutaneous metastases can be made because skin lesions often mimic the primary tumour cytologically. In this case, tumour cells occurring in cohesive groupings or in a papillary structure were observed and the immunostaining studies displayed tumour cell reactivity for CEA, favouring intestinal adenocarcinoma as the primary source in a Tzanck smear. Unlike non-cutaneous metastases, cutaneous lesions can be readily seen with careful visual examination (4). Manteaux et al. described a patient who developed epidermotropic metastases (3). A Tzanck smear showed large atypical cells which had been misinterpreted as herpetic balloon cells. Skin biopsy revealed discohesive malignant cells within the subepidermal and intraepidermal vesicles.

Smear cytodiagnosis is a rapid, accurate means of establishing a diagnosis of metastatic disease, especially in cases in which the lesions localize in the epidermis or subepidermis, and application of immunoperoxidase may qualify the cytological diagnosis and location of the primary tumour.

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Erythema Elevatum Diutinum in a Patient with Human Herpesvirus 6 Infection

Sir,

Several cases of erythema elevatum diutinum (EED) have recently been found to be associated with human immunodeficiency virus (HIV) infection (1 – 3), supporting the hypothesis that an infectious agent plays a role in its aetiology (4). We describe here an HIV-negative patient with evidence of human herpesvirus 6 (HHV-6) infection who developed EED.

CASE REPORT

In September 1996 a 50-year-old white woman in apparently good health developed a papulo-nodular eruption on the limbs. On examination, she exhibited a symmetrical, diffuse papulo-nodular eruption on the outer surface of thighs (Fig. 1), buttocks and finger joints, and some plaques over the knees and elbows. The ear lobes and face were also involved (Fig. 2). The lesions were indurated, circinate or oval with central atrophy, purplish to reddish-brown in colour. Neither arthralgia nor other subjective complaints were noted.

A biopsy specimen showed a dense perivascular leucocytoclastic infiltrate in the papillary and reticular dermis consistent with EED. Direct immunofluorescence was negative. Laboratory tests including blood cell count, renal and liver functions were within normal ranges. There was no evidence of streptococcal infection. Chest X-rays and abdominal ecography were also normal. Paraproteinaemia and cryoglobulins were absent and tumoural markers negative.

Immunological investigations showed only a faint ANA positivity on HEP2 cells (1/40 speckled IgM and IgG). Anti-HHV-6 were positive (IgM 1/80 and IgG 1/20), while antibodies against other viruses were negative or indicative of immunity.

When first examined, the patient had been taking 30 mg deflazacort daily for 1 month. The lesions had worsened, however, and the treatment was stopped. In the absence of any treatment, the lesions began to improve and 1 month later the anti-HHV-6 IgM titre was 1/20 and anti-HHV-6 IgG 1/80.

Treatment with 100 mg dapsone daily was started. One month later, the skin lesions had clearly improved and the anti-HHV-6 IgG titer decreased to 1/40. IgM were still 1/20. The drug was reduced to 50 mg daily and, 1 month later, discontinued. The disease did not relapse.

DISCUSSION

EED is a rare chronic form of cutaneous vasculitis of unknown aetiology that is considered an immune-complex mediated reaction. The disease may be associated with streptococcal infections, inflammatory bowel disease, haematological disorders (4) and, less frequently, with other pathologies (4, 5) including HIV infection (1 – 3).

In the patient described here, an infectious cause may be suggested by the exacerbation of her lesions with the steroidal therapy and by their prompt amelioration with the corticosteroid discontinuation (6).

In addition, this patient disclosed specific anti-HHV-6 IgM