Epiluminescence Microscopy in Cutaneous Larva Migrans

Sir,
Elsner et al. (1) diagnosed cutaneous larva migrans (CLM) in a patient by means of epiluminescence microscopy (EM). We have evaluated the usefulness of this method in a group of Caucasian patients with clinically suspected CLM who had returned from trips to tropical and sub-tropical countries. We examined 18 patients (10 men and 8 women, aged 20–68 years) in whom the diagnosis of CLM was based on history and clinical picture. EM ($\times 10$ magnification) was carried out in all lesions of the patients. Skin biopsies were not performed.

In 14 patients, at least 1 foot was involved. Other localizations were breast, abdomen, thighs, lumbar region, buttocks and calf. CLM was characterized by multiple tracks in 9 patients; in total, we counted approximately 60 tracks in 18 patients. One larva was observed in 1 lesion of 1 patient (5.5%). In total, EM was positive in 1 out of 60 tracks (1.6%).

In the last few years, EM has been demonstrated to be a simple, non-invasive, rapid and effective method to confirm the clinical diagnosis of parasitic diseases of the skin, in particular scabies (2). However, on the basis of our results, EM appears not to be useful to confirm the clinical diagnosis of CLM. At least 4 hypotheses may be advanced to explain these observations: (a) larvae were already dead when EM was performed; (b) living larvae were localized in deeper layers of the skin, beyond the resolution power of EM; (c) $\times 10$ magnification is not sufficient to detect the larvae (this is the most likely hypothesis); and (d) we are unable to use EM properly! We believe that careful clinical history and dermatological examination remain today the most important findings to make a diagnosis of CLM.

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Plasmacytosis: Systemic or Cutaneous, are They Distinct?

Sir,
Systemic plasmacytosis is a disorder consisting of dark-brown, multiple skin plaques which show dense plasma cell infiltration in the dermis, lymphadenopathy, polyclonal hypergammaglobulinemia and occasional involvement of other organs (1). The term cutaneous plasmacytosis, on the other hand, is mainly used for a disorder which accompanies similar skin eruption but lacks systemic involvement (2, 3). "Systemic" or "cutaneous", however, may not be clearly divided into 2 different entities, as there could be occult systemic involvement in patients with "cutaneous" plasmacytosis. We describe a case initially diagnosed as cutaneous plasmacytosis, which turned out to have systemic involvement when the patient underwent lymph node dissection together with gastrectomy for gastric cancer, who otherwise would not have been diagnosed as systemic plasmacytosis.

CASE REPORT

A 73-year-old Japanese male was referred to our department with asymptomatic eruptions on his trunk, which had gradually increased during the past 3 years. On physical examination, multiple, well-demarcated, dark-brown cutaneous plaques, sized 1–4 cm in diameter, were scattered on his chest and back (Fig. 1). Neither hepatomegaly nor splenomegaly was detected and the superficial lymph nodes were not palpable. Biopsy specimens from the back revealed mild acanthosis and basal pigmentation in the epidermis and dense perivascular and periadnexal infiltrates, composed mainly of mature plasma cells, in the superficial and deep dermis. Atypical plasma cells were not found. Immunohistochemical study showed polyclonal plasma cell infiltrations which expressed κ and λ light chains. Laboratory studies were as follows: erythrocyte sedimentation rate, 118 mm/h; hematocrit, 30.2%; hemoglobin, 9.8 g/dl; a normal white blood cell count and differential; and a platelet count of 338,000/l. Urinalysis revealed 2+ of protein but no Bence–Jones protein. Chemical analyses revealed hyperproteinemia 9.1 g/dl (normal 6.3–7.8 g/dl), and evidence of renal dysfunction; urea nitrogen 25.8 mg/dl, creatine 1.5 mg/dl. Serum immunoelectrophoretic analysis demonstrated polyclonal hypergammaglobulinemia; IgA 978 mg/dl (normal 107–363 mg/dl), IgM 134 mg/dl (normal 46–260 mg/dl), IgG 3914 mg/dl (normal 739–1649 mg/dl). Serological examinations for syphilis, hepatitis virus type B, C, and HIV were negative. Anti-DNA antibody was also negative. The serum level of interleukin-6 (IL-6) was 17.8 pg/ml (normal <4.0 pg/ml). Renal biopsy revealed interstitial nephritis without prominent infiltration of plasma cells. Bone X-ray and bone marrow aspiration showed no signs of myeloma. Computed tomography of the chest and abdomen revealed no lymph node enlargement. Ga scintigram and abdominal echogram were normal. Esophagogastroscopy revealed II c-type early gastric cancer (well differentiated adenocarcinoma) and distal gastrectomy with regional lymph node dissection was performed. All 36 specimens from the abdominal lymph nodes showed normal lymph node architecture with proliferation of mature plasma cells but no invasion of carcinoma cells (Fig. 2). These cells expressed either κ or λ light chains, the ratio being almost equal. We diagnosed this patient as systemic

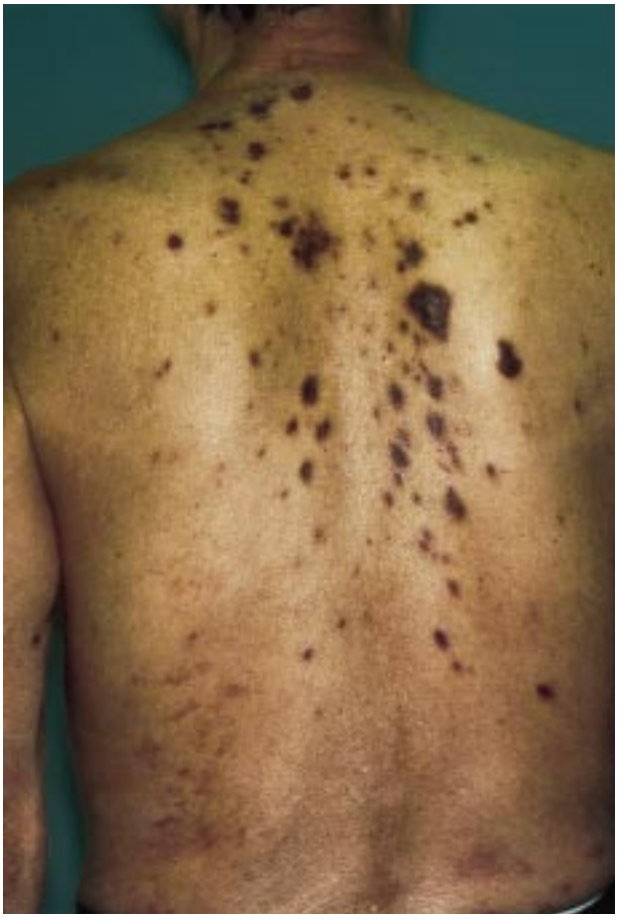

Fig. 1. Red–brown plaques up to 4 cm in diameter on the back.

plasmacytosis but due to his gastric cancer, immunosuppressive therapy was not performed. Clinical and laboratory findings have revealed no change during the year following the operation.

DISCUSSION

The pathogenesis of plasmacytosis is unknown. It has been proposed that it is a consequence of overreaction to unknown stimuli, which include malignancies. Although the gastric cancer in this case may have been pathogenetic, we consider it an incidental coincidence due to the lack of clinical improvement after removal of the cancer. The initial diagnosis of the present case was cutaneous plasmacytosis, because we could not detect any systemic involvement. However, lymph node specimens which were resected with his gastric cancer revealed remarkable infiltration of plasma cells, which made us rediagnose this case as systemic plasmacytosis. We reviewed 68 reported cases of plasmacytosis with cutaneous manifestations, mainly from the Japanese literature. Out of 68 cases, 38 cases were reported to have swollen lymph nodes and 30 cases (44%) (3–9) had no palpable lymph nodes. Four of the 30 cases which did not have palpable lymph nodes were subjected to blind lymph node biopsy and they all exhibited prominent invasion of plasma cells in the lymph nodes. This suggests that there may be more cases of systemic plasmacytosis which have been incorrectly diagnosed as cutaneous plasmacytosis because of the lack of palpable lymph nodes. The prognosis of systemic plasmacytosis is less favorable than that of cutaneous plasmacytosis, due to systemic complications such as renal dysfunction and malignant lymphoma. Systemic steroids (6, 8), cyclophosphamide (2) and other chemotherapies (10) have been reported to be effective to a certain extent in systemic plasmacytosis and it is of value to diagnose systemic plasmacytosis at an early stage to start effective therapy. The lymph nodes involved in our case were abdominal lymph nodes and superficial lymph nodes were not investigated. We suspect that this case also had superficial lymph node involvement.

Blind biopsy of superficial lymph nodes would help detect systemic involvement. We propose that superficial lymph node biopsy be performed to detect systemic involvement in all cases of cutaneous plasmacytosis. Routine lymph node biopsy would increase the chances of detecting lymph node involvement, which would lead to a more accurate diagnosis.

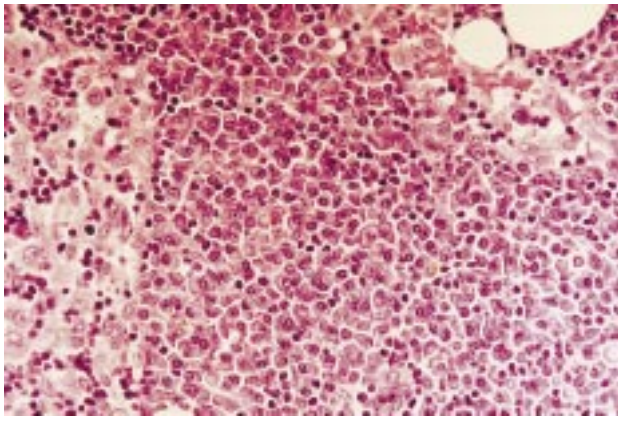

Fig. 2. Biopsy specimen of a lymph node. Proliferation of plasma cells in the interfollicular area is prominent. No mitotic figures or cellular atypia is seen. (Hematoxylin–eosin stain, ×400).

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Syphilitic Chancre Despite Use of Condoms: "Condom Chancre"

Sir,

The primary stage of syphilis is characterized by a chancre at the site of inoculation. In men, genital chancres are usually located on the coronal sulcus, the glans penis, the frenulum or the prepuce. Less common genital sites are the shaft of the penis and the pubic region (1). The use of condoms is generally considered to protect against sexually transmitted syphilis (2, 3). However, we report here on 2 male patients who were infected with syphilis by sexual contact with female prostitutes and subsequently developed penile chancres behind the area protected by a condom. We suggest the designation "condom chancre" to draw attention to the fact that condoms do not always provide sufficient protection against syphilis.

CASE REPORTS

Case 1

A 30-year-old heterosexual man consulted the clinic for sexually transmitted diseases with a solitary, indolent ulcer close to the radix penis. The ulcer had appeared 5 weeks after sexual contact with a foreign prostitute. A condom had been used and no defects had been observed. The ulcer was indurated, regularly edged, measuring 10×20 mm. Unilateral indolent inguinal lymph nodes were present. The clinical findings raised the suspicion of a syphilitic chancre and the diagnosis was confirmed by positive serology (WR 5, RPR 4, FTA-ABS IgM 0, IgG 4) and histological examination of a skin biopsy. No treponemes could be detected by dark-field microscopy. The patient was treated with procain penicillin at a dose of 600,000 units/day intramuscularly for 10 days.

Case 2

A 34-year-old heterosexual man presented with a penile lesion suspicious of a syphilitic chancre. The lesion developed 1–2 weeks after sexual intercourse with a foreign prostitute. A condom had been used during intercourse. The lesion was located near the radix of penis on an area not covered by the condom. It was a solitary, indolent, indurated ulcer with a regular edge and an oval shape, approximately 10 mm in diameter (Fig. 1). Regional adenopathy was present. A diagnosis of syphilis was established by dark-field microscopy, positive serology (WR 0, RPR 4, FTA-ABS IgM 2, IgG 3) and histology of a skin biopsy showing treponemes in the epidermis and the upper part of dermis (silver impregnation (Whartin Starry) and immunostaining with Borrelia burgdorferi polyclonal antibody (cat. number 1439-9406, Genesis)). The patient was treated with doxycycline at a dose of 100 mg orally every 12 h for 3 weeks.

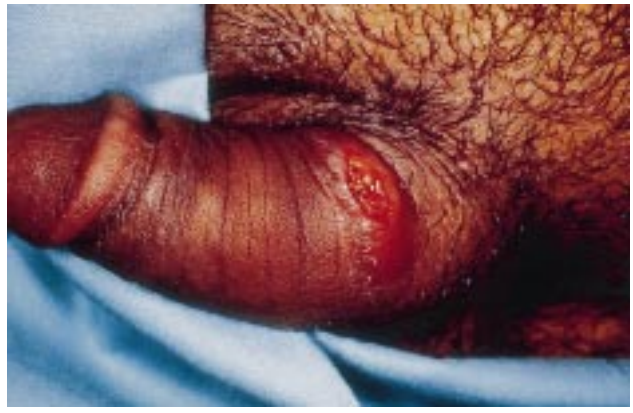

Fig. 1. Penile chancre close to the radix penis, which is an area behind the protection of a condom.

DISCUSSION

The 2 cases were infected with T. pallidum in spite of the fact that condoms had been used during sexual activity. Syphilitic chancres developed proximally on the penis shaft close to the radix penis, which is an area outside the protection of a condom. The term "condom chancre" may therefore be appropriate (1). T. pallidum can probably penetrate intact skin and mucous membranes, but transmission is facilitated by defects in the skin barrier (1). Mechanical friction and stricture of a rubber condom may induce minor skin lesions and thereby facilitate the transmission of treponemes. Exposure to a high number of treponemes may be a prerequisite for developing such a chancre on otherwise intact skin.

Russian female prostitutes were regarded as the sources of infection in these 2 cases. Syphilis occurs worldwide, and the incidence varies with geographic location (4, 5). Of special concern is a large increase in the incidence of syphilis in the previous Soviet States (6). Here the incidence of syphilis has increased 15–60 times during the last 5–6 years, resulting in incidences of 200 and 280 cases per 100,000 inhabitants in 1997 in Russia and White Russia, respectively (6). For comparison, the number registered cases of syphilis in Denmark has remained below 59 per year since 1993, with