Zosteriform Lichen Planus without Evidence of Herpes Simplex Virus or Varicella-zoster Virus by Polymerase Chain Reaction
Report of Two Cases

Sirs,

Several dermatoses, including lichen planus, may appear with a dermatomal or zosteriform pattern. We describe 2 patients with zosteriform lichen planus. To ascertain whether occult viral infection might be involved in the pathogenesis of the eruption, we used polymerase chain reaction (PCR) to analyze tissue from lesional skin in both patients for varicella-zoster virus and herpes simplex virus. In both patients, these studies did not demonstrate evidence of viral infection.

MATERIAL AND METHODS

Six unstained tissue sections (25 μm each) from a lesional skin biopsy specimen from each of the 2 patients were fixed on glass slides. Deparaffinization, DNA extraction, PCR amplification for herpes simplex virus and varicella-zoster virus and detection of amplified DNA were accomplished by the methods previously described at our institution by Espy et al. (1, 2). Positive and negative control tissues were tested appropriately.

CASE REPORTS

Case 1

A 69-year-old man presented with a rash near the left waistline. The skin eruption had begun 5 months earlier and was mildly pruritic. The patient said that similar lesions had appeared over the ventral surfaces of both forearms during the initial outbreak of the eruption. These areas cleared with application of betamethasone cream. He had had varicella as a youth.

Physical examination revealed discrete lichenoid papules with mild scaling in a zosteriform distribution on the left side of the abdomen near the waistline (Fig. 1). Residual hyperpigmentation was noted on the upper extremities. A few scattered violaceous papules were also present on the forearms. No nail changes were apparent. A biopsy specimen from a waistline lesion revealed changes consistent with lichen planus. Analysis by PCR was negative for evidence of varicella-zoster or herpes simplex virus.

Case 2

A 68-year-old man was referred because of an asymptomatic skin eruption across the right side of the abdomen and a solitary lesion on the glans penis, both of 2 weeks' duration. His medical history was significant for varicella in early adulthood.

Physical examination revealed multiple 2- to 3-mm, tan-to-violet, flat-topped papules in a zosteriform distribution on the right side of the thorax. The glans penis contained a 1-cm annular lesion with a slightly red-violaceous hue. No other lesions were noted. Specifically, the oropharynx and nails were unremarkable. Biopsy specimens from a lesion on the trunk and from the penis lesion demonstrated the histologic features of lichen planus. The specimen from the trunk was analyzed by PCR for varicella-zoster virus and herpes simplex virus. These viruses were not detected.

DISCUSSION

Although previously reported (3, 4), zosteriform lichen planus is a rare entity. The zosteriform pattern has also been described in various other dermatoses and neoplasms. In theory, a koebnerization phenomenon from a subclinical herpes zoster infection could account for the rare dermatomal distribution of lichen planus. To date, a relationship between zosteriform lichen planus and varicella-zoster virus (or herpes simplex virus) has not been explored.

Nahass et al. (5) reported that fixed tissue specimens were excellent substrates for PCR testing to detect both varicella-zoster virus and herpes simplex virus. In 14 of 16 documented cases of varicella-zoster, paraffin-embedded skin biopsy specimens were positive for specific viral DNA by PCR analysis. In 5 of 6 documented cases of herpes simplex, specimens analysed by PCR exhibited herpes simplex viral DNA sequences. Our negative results for varicella-zoster and herpes simplex viral DNA suggest that these viruses do not cause the lesion described. A Koebner reaction from scratching is a possibility.

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REFERENCES

Lupus Erythematosus as an Occupational Disease

Sir,

The isomorphic or Koebner's phenomenon is unusual in discoid lupus erythematosus (DLE). We describe a patient with minor DLE in the face, who developed severe DLE lesions on the hands. These were induced and aggravated by manual work and caused considerable disability. Even minor tasks at home became impossible.

CASE REPORT

A 57-year-old male presented with progressive complaints of pain and burning sensation in his hands since several months. Erythematous bluish indurated areas, sometimes slightly scaling, were present on the palms and volar aspects of the fingers and on the knuckles of the metacarpophalangeal joints and proximal interphalangeal joints. His left cheek, forehead and eyebrows showed lenticular pink red plaques.

Immunofluorescence examination of a skin biopsy of the hand showed granular depositions of IgM and C3c to a less extent of C1q along the basement membrane of the vessels. A skin biopsy of the forehead showed an atrophic epidermis with focal degeneration of the basal keratinocytes. In the dermis an inflammatory infiltrate was present, which was perivascular and perifollicular. Both immunofluorescence and histopathology were consistent with the diagnosis of lupus erythematosus (LE). Antinuclear factors and Scl 70 were negative. Patch tests with the European standard series and an additional series were positive (+ +) for nickel sulfate after 72 h.

Our patient worked with an aircraft company in the maintenance of airplane seats. His task was to tear off old seat-coverings, which requires moderate force.

After a 2-month period of sick leave his complaints gradually subsided and only a violaceous hue on the hands remained visible. The lesions in the face but not the hands showed a good response to clobetasol cream. At home he did not perform any tasks requiring the use of his hands. Even changing lightbulbs induced aggravation of his complaint. On the tips of his thumb and second finger of the right hand some pain remained, which he attributed to the daily winding of his watch. Some months later he performed some minor reparations in his home, and promptly extensive plaques developed on his palms and fingers. This necessitated therapy with hydroxychloroquine, so to which he responded well. However, mechanical pressure invariably induced the recurrence of the lesions.

DISCUSSION

Irritants, burnings, herpes zoster, mechanical trauma, vaccination and allergic contact dermatitis can induce DLE (1-4).

The interval between the incident and the onset of DLE varied from immediately to several years. A causal relationship between trauma and DLE development was assumed but not formally proven in these cases.

In our patient, with previous cutaneous LE in the face, repetitive mechanical exposure most probably induced the LE lesions of the hands. During a period of sick leave of 2 months an almost complete cure was achieved, except for the fingers he used to wind his watch. He reported prompt pain and itch following minimal use of his hands. After resuming his work the DLE plaques in the palms gradually appeared again, preventing him from continuing his job. DLE is normally not considered to be an occupational disease, but in this case work conditions elicited or at least aggravated LE.

To some extent our case resembles a recently described patient with lichen planus/LE overlap syndrome, who developed lichen planus on the palms possibly because of a Koebner phenomenon (5). Lesions on the palms and soles occur in 6% of patients with DLE (6). It remains unclear why the Koebner phenomenon develops only in a small proportion of patients.

REFERENCES


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