

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

Report of Two Cases

Sir,

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 tissue 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



Fig. 1. Unilateral, flat-topped lichenoid papules near the waistline in case 1. A biopsy specimen revealed changes of lichen planus.

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 penile 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.

ACKNOWLEDGEMENT

The authors thank the staff of the Mayo Clinic Molecular Biology Laboratory for performing the polymerase chain reaction analysis.

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Accepted June 2, 1997.

Michael E. Lutz¹, Charles Perniciaro² and Katherine K. Lim¹
¹Department of Dermatology, Mayo Clinic and Mayo Foundation, Rochester, Minnesota, and ²Department of Dermatology, Mayo Clinic Jacksonville, 4500 San Pablo Road, Jacksonville, FL 32224, U.S.A.
