

ASSOCIATION OF LICHEN PLANUS WITH HUMAN HERPESVIRUS TYPE 6 – NEW IMPLICATIONS FOR THERAPY

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INTRODUCTION

The etiology of lichen planus (LP) is unknown. It affects the skin and mucosa, and is one of the most common dermatological conditions involving the oral cavity. Commonly this disease displays a self-limiting course. LP remission was shown to be associated with a decrease of human herpes virus-7 (HHV-7) protein expression in dendritic cells. The goal of this study was to explore a possible association of beta-herpesvirus HHV-6 with LP, based on immunohistochemical analysis of LP skin samples.

REFERENCES

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RESULTS

We found that the most affected LP keratinocytes, localized in the basal layer, displayed lowered reactivity as compared with the stratum spinosum. The constituents of the band-like infiltrate which basically occupied the epidermal and dermal interface region revealed moderate reactivity, whereas, strong expression was constantly observed in the sweat glands. Moreover, we found that the HHV-6 expression, both dermal and epidermal, correlated with the S100 protein immunoreactivity demonstrated in dendritic cells.

CONCLUSIONS

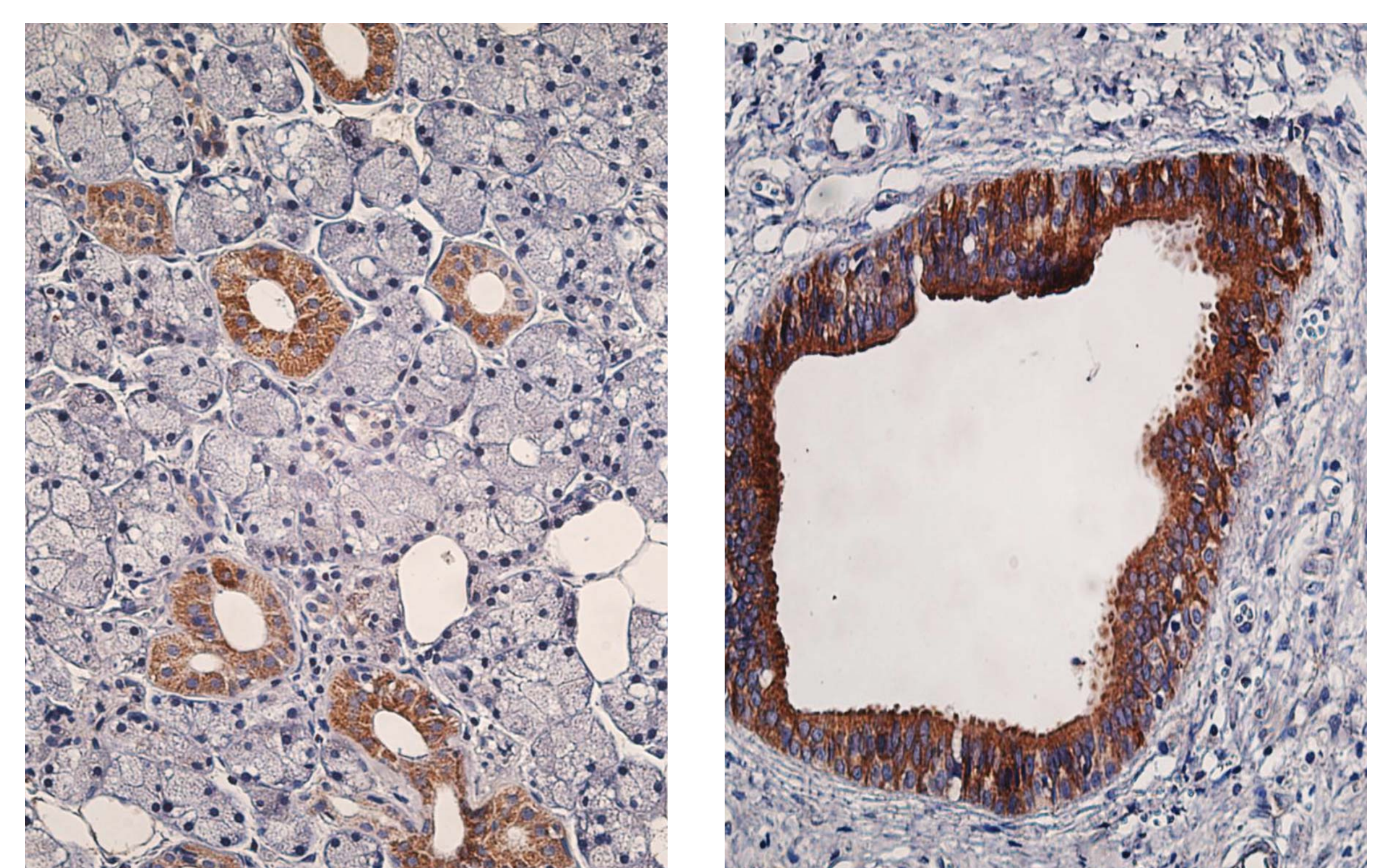
We conclude that HHV-6 might be involved in pathogenesis of LP. The sweat glands could function as a reservoir for HHV-6 infection, thus resembling salivary glands. A latent form, in turn, can persist in connective tissue occupying dermal and epidermal interface. These preliminary data suggest a necessity of further research on this topic of interest and provide an insight into new implications of therapy.

MATERIALS AND METHODS

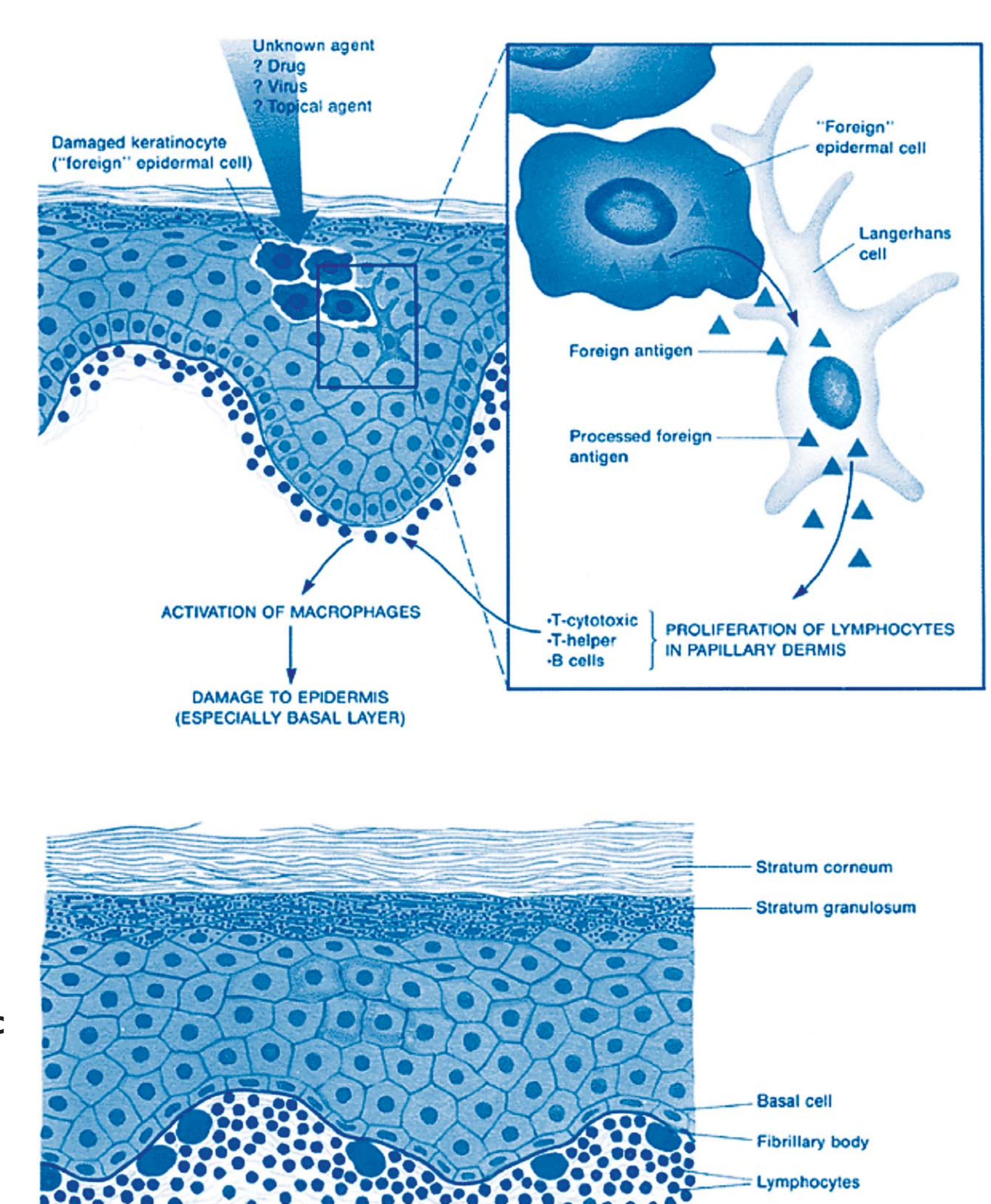
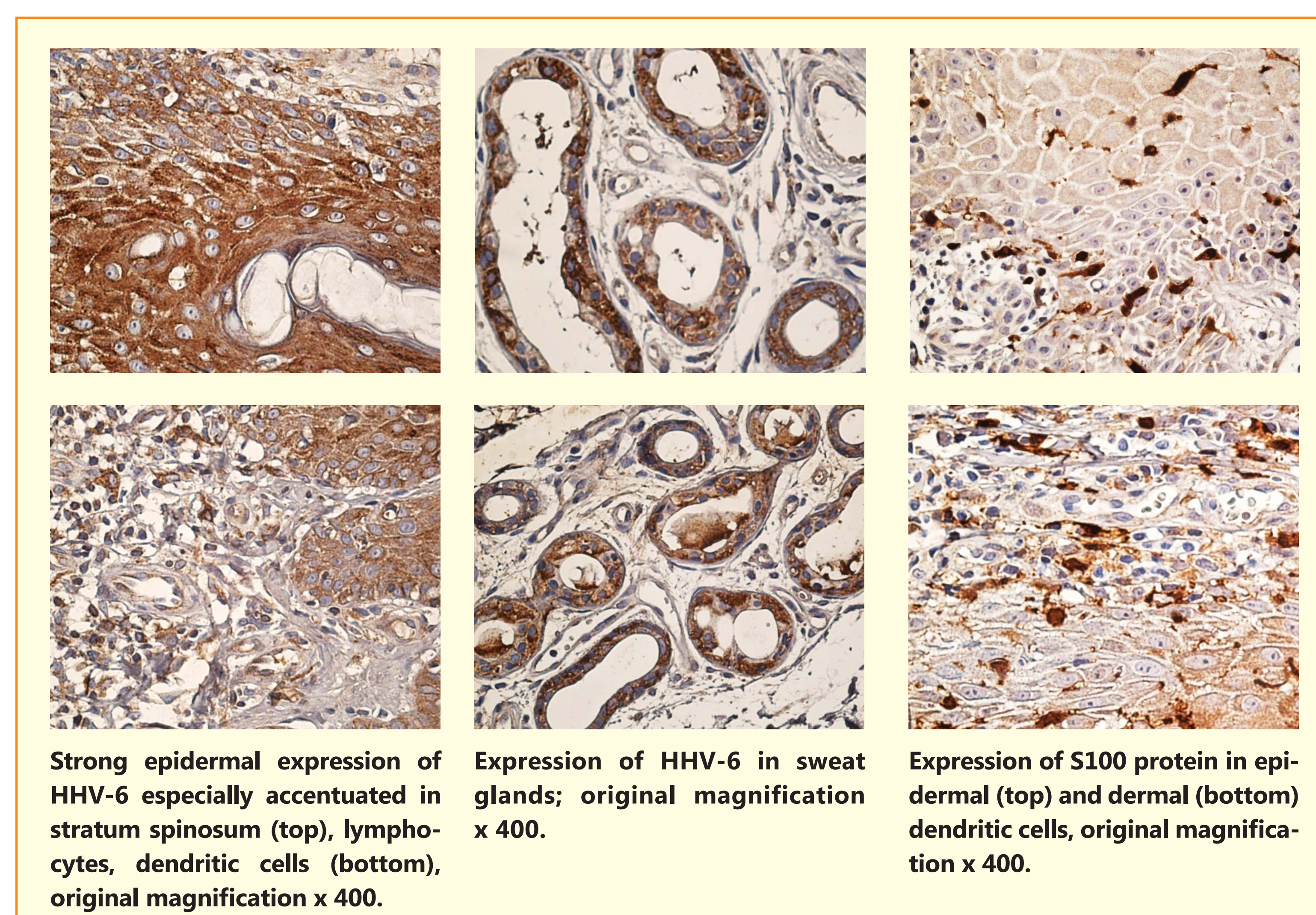
Our target group, patients aged from 48 up to 69 years, had visible characteristic LP eruptions. All the patients were off any topical or systemic LP medications. Tissue samples obtained by punch biopsy were fixed and processed conventionally. Immunostaining of HHV-6 was identified by brown stain confined to the cell cytoplasm, and the levels of immunoreactivity were scored semiquantitatively.

Expression of HHV-6 and S100 in case of lichen planus.

Skin structure		Horny layer	Granular layer	Spinous layer	Basal layer	Infiltrate	Hair follicle	Sebaceous gland	Blood capillaries	Sweat gland
Antigen	HHV-6	0	0	+++	++	++/+++	+/++	0	0/+	+++
	S100	0	0	++/+++	+++	++/+++	+/++	0	+	0



Light microscopy micrographs demonstrating immunopositivity for HHV-6 in the striated and interlobular ducts of salivary gland, original magnification x 250.



Outlines of pathogenetic events, modified from Rubin's Pathology: Clinicopathologic Foundations of Medicine