

These tumors show a normal analytical profile, although 1 incidental case with elevated carcinoembryonic antigen has been published.<sup>7</sup>

Pathology studies have shown an epithelial growth in the upper half of the reticular dermis consisting of cells with a pale eosinophilic cytoplasm arranged in nests or tubules and surrounded by a sclerotic stroma. The tubular areas contain basophilic granular cells and ductal differentiation with central lumens lined with a compact eosinophilic cuticle. Epithelial growths in the form of a "tadpole's tail" or "comma" is characteristic.<sup>8</sup> The variant known as clear-cell syringoma is more common among diabetics and is characterized by glycogen-laden cells.

Immunohistochemical studies of this tumor show positivity for EKH-6, which would support the eccrine ductal origin. The description of eczematous lesions that leave eruptive syringomas as sequelae would raise the hypothesis that the classic eruptive form is actually a reactive hyperplasia against inflammatory processes in the sweat gland ducts.<sup>9</sup>

The histological differential diagnosis should be done with milia, microcystic adnexal carcinoma, and desmoplastic trichoepithelioma.

These tumors may benefit from physical treatments such as superficial

cryotherapy, fulguration, and electrodesiccation, or from chemical agents such as isotretinoin, tretinoin, adapalene, or a 1% aqueous topical solution of atropine. At present, the best treatment is considered to be ablation with ultrapulsed CO<sub>2</sub> laser and preliminary treatment with trichloroacetic acid to minimize scarring.<sup>10</sup> None of these treatments are considered satisfactory or prevent recurrences.

Because of the age at onset, the fact that the condition did not always appear in outbreaks, and that it affected various skin areas, including the eyelid, we considered our patient to present a form of multifocal generalized syringomas that started on the eyelid.

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## Psoriasis at the Site of Healed Herpes Zoster: Wolf's Isotopic Response

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*To the Editor:*

A wide variety of dermatological processes can occur at the site of healed herpes zoster, mainly granulomatous processes, lymphomas, pseudolymphomas, and primary skin tumors or metastasis.<sup>1</sup> These conditions occasionally appear in

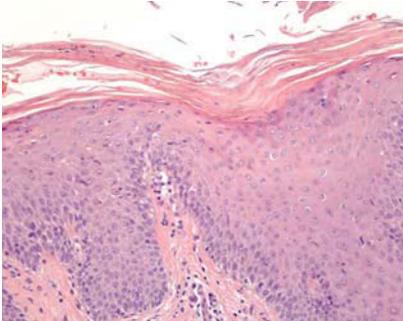
immunosuppressed patients with neoplasms or human immunodeficiency virus infection, but in other patients there may be no underlying disease. The interval between viral infection and second disease is extremely variable, from days to years.<sup>2</sup> We describe a patient with

paroxysmal nocturnal hemoglobinuria who developed guttate psoriasis lesions on the site of previous herpes zoster.

A 41-year-old man who had undergone allogeneic transplantation of bone marrow for paroxysmal nocturnal hemoglobinuria and received



**Figure 1.** Cluster of erythematous-desquamative lesions with a zosteriform distribution.



**Figure 2.** Epidermal hyperplasia and neutrophil clusters in areas of parakeratosis (hematoxylin-eosin,  $\times 40$ ).

treatment with tacrolimus and mycophenolate mofetil consulted for a rash that had been present for 1 week in the area corresponding to right thoracic dermatomes T6 and T7. The rash was characterized by asymptomatic, erythematous, desquamative papules of less than 1 cm in diameter. These symptoms were at the same site where the patient had presented herpes zoster 4 months earlier that had been treated with intravenous acyclovir. Residual hyperpigmented macules were still visible in this region, along with the new erythematous desquamative lesions (Figure 1). A skin biopsy of the new lesions showed acanthosis, hyperkeratosis, and alternating parakeratosis, with isolated neutrophil microabscesses (Figure 2). The papillary dermis was edematous with dilated capillaries. There was no evidence of herpetic cytopathic changes. Polymerase chain reaction for varicella-zoster virus (VZV) in the biopsy material revealed no viral DNA.

Psoriasis was diagnosed on the site of a healed herpes zoster lesion. The patient denied any personal or family history of psoriasis. He was treated with topical corticosteroids, with complete whitening of the lesions within 2 months.

The isotopic response, defined by Wolf et al<sup>2</sup> as the onset of a new cutaneous disease at the site of another, already healed disease to which it is unrelated, would explain the appearance of psoriasis at the site of herpes zoster<sup>3</sup> or varicella.<sup>4</sup>

Herpes zoster is the disease most commonly presenting as the initial condition in an isotopic phenomenon.<sup>2</sup> Although herpetic cytopathic alterations are not observed in a biopsy of the second disease, it has been suspected that virus particles persisting in the tissue could be responsible. Nevertheless, viral DNA has only been detected in post-zoster cutaneous lesions when they occurred in the first few weeks, and not found if the new process appeared months later, as occurred in our patient.<sup>1</sup> However, it has been suggested that viral infection could alter local cutaneous immunity, and that such a change would favor hyperreactivity and, consequently, cause granulomas, pseudolymphomas, vasculitis, or eczematous reactions, or immunosuppression that would facilitate the onset of skin cancer and bacterial, mycotic, or viral infections.<sup>5</sup> We suggest that tumor necrosis factor  $\alpha$  (TNF- $\alpha$ ) may have a role in the Wolf isotopic response.

TNF- $\alpha$  is an essential cytokine in defense mechanisms, with broad effects in both the innate and adaptive immunity and with well-established antiviral activity.<sup>6,7</sup> TNF-related cytokines are critical effector molecules in the immune response against viral pathogens. TNF receptor binding activates apoptotic and nonapoptotic mechanisms that have antiviral effects. This cytokine is elevated in the primary immune response against VZV infection, in re-exposure to this virus, and during herpes zoster episodes.<sup>8,9</sup> Furthermore, TNF alteration has been

implicated in a wide variety of inflammatory diseases, including psoriasis,<sup>10</sup> and its role in inducing and maintaining granulomas at multiple levels is also known.<sup>11</sup>

Because granulomatous processes, such as granuloma annulare, sarcoid granuloma, tuberculoid granuloma, vasculitis, and granulomatous folliculitis, are the conditions most commonly reported after herpes zoster,<sup>1,2,5</sup> we suggest that a TNF alteration or overexpression, induced locally by VZV infection, could play a crucial role in the pathogenesis of these complications. Such local TNF production would also explain psoriasis cases described following VZV infections in genetically predisposed individuals.

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## Malignant Degeneration of Linear Hidroacanthoma Simplex

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### To the Editor:

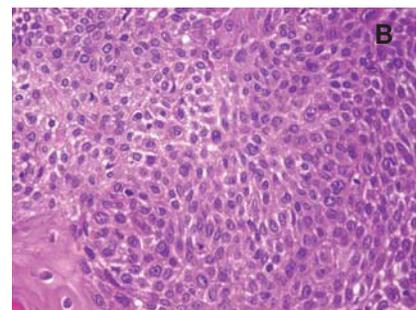
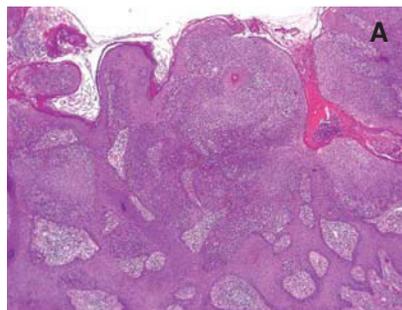
We describe an 88-year-old woman with various lesions in the right submammary region that had remained stable for more than 40 years. She reported rapid growth and ulceration of one of the lesions in the past year. The examination showed a firm tumor of diameter 7 cm below the right breast. The surface of the tumor was keratotic at the periphery and ulcerated in the middle with foul-smelling serous exudate. Adjacent to the lesion, there were various smaller erythematous

brownish tumors with a velvety surface, and with a linear distribution (Figure 1). No enlarged local or regional lymph nodes were palpated. Laboratory workup, chest x-ray, electrocardiogram, bilateral mammography, and right axillary ultrasound were all normal. An incisional biopsy of the larger tumor and another biopsy of one of the adjacent lesions were taken. In the first case, the hematoxylin-eosin stain showed irregular, anastomosed islets composed of intraepidermal tumor cells, some of them pigmented, with a clearer

cytoplasm than the surrounding keratinocytes. Abundant atypical cells with large, irregular, hyperchromatic nuclei were observed inside the tumor masses. In some sections, cystic spaces within these nests of basaloid cells could be seen. The epidermis presented hyperkeratosis, foci of parakeratosis, and irregular acanthosis (Figure 2 A and B). A biopsy of the smaller lesion showed well-defined nests of uniform cuboidal cells with rounded, basophilic nuclei showing no atypia, and with cystic structures in the interior (Figure



**Figure 1.** Ulcerated, exudative tumor with pigmented, keratotic surface at the periphery and ulceration in the middle, and various smaller tumor lesions with a linear distribution pattern.



**Figure 2 (A y B).** Acanthotic epidermis containing tumor-cell nests that show atypias and mitotic figures. (A, Hematoxylin-eosin,  $\times 20$ ; B, hematoxylin-eosin,  $\times 100$ .)