

## NOTES &amp; COMMENTS

**Concurrent presentation of tumid lupus with herpes zoster infection: A variant of Wolf isotopic response?**



*To the Editor:* We read with special interest the case discussed by Ali et al<sup>1</sup> in the August 2018 issue of *JAAD Case Reports* that reported a 54-year-old woman with a history of varicella zoster infection (VZV) on the breast, who presented with annular lesions with central vesicles on her abdomen. Based on her clinical presentation, granuloma annulare was diagnosed, whereas Tzanck smear and direct fluorescent antibody confirmed VZV infection. The authors posited that simultaneous occurrence of both dermatoses should still be considered a presentation of Wolf isotopic response. We respectfully disagree with the authors' conclusion and present a similar case that, we will argue, is distinct from Wolf isotopic response.

Wolf isotopic response is defined by the occurrence of a new skin disorder at the site of a previously well-healed and unrelated skin disorder.<sup>2</sup> There are more than 100 reported cases in the literature, and most cases feature herpes simplex or VZV as the antecedent skin disorder.<sup>3,4</sup> Numerous hypotheses exist to explain the etiology of this response, but none have been conclusively proven.<sup>4,5</sup>

We report a case of co-occurring dermatoses, including VZV. A 44-year-old woman with a history of Crohn's disease, treated with vedolizumab, presented with a 10-day history of a painful eruption on the temple. Examination found numerous erythematous, dermal papules coalescing into a tender plaque (Fig 1).

Histopathologic examination found a superficial and deep perivascular and periadnexal lymphocytic infiltrate, and multinucleated keratinocytes that stained positively for VZV on immunohistochemistry, confirming a diagnosis of zoster. An alcian blue pH 2.5 stain found increased dermal mucin, whereas a CD123 found dermal aggregates of plasmacytoid dendritic cells (Fig 2). Mucin deposition and perivascular lymphocytic inflammation can be seen in VZV infections,<sup>6</sup> but the constellation of those



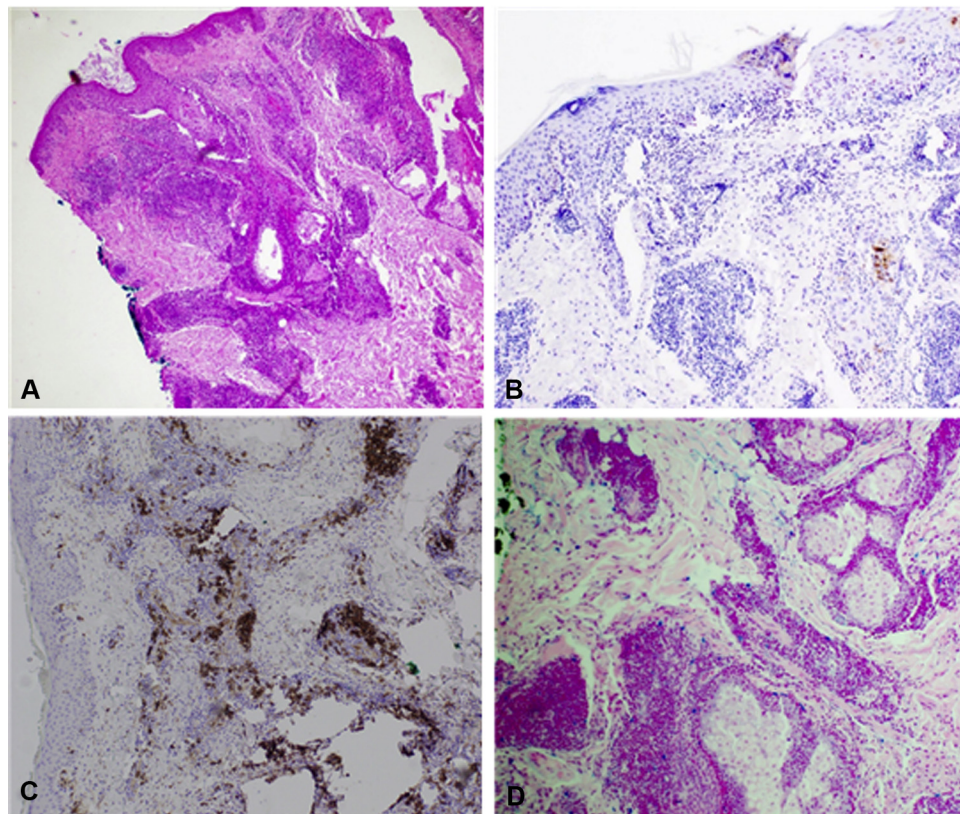
**Fig 1.** Edematous, erythematous papules coalescing into a plaque on the temple in a V<sub>2</sub> distribution.

findings plus prominent plasmacytoid dendritic cells and an edematous pink facial plaque strongly suggested an additional diagnosis of tumid lupus.<sup>7</sup>

Because the patient presented 10 days after symptom onset, she did not receive antiviral therapy. Workup for systemic lupus with an antinuclear antibody was negative. She was started on 200 mg of hydroxychloroquine, which was titrated up to 400 mg twice daily, resulting in clinical resolution within 3 months.

This co-occurrence of tumid lupus presenting concurrently with VZV infection may have been coincidental or secondary to another underlying trigger. However, the co-localization of 2 distinct diseases does raise suspicion that one caused the other, as in Wolf isotopic response. In contrast to an isotopic response however, in this example concurrent conditions are noted.

We respectfully argue that neither this patient nor the patient presented by Ali et al<sup>1</sup> meet the requirement for an isotopic response because of the simultaneous onset of both diseases. Indeed, Wolf and Wolf<sup>8</sup> have since reiterated the sequential nature of the 2 dermatoses and encouraged clinicians to refrain from distorting their original definition. Two similar cases of co-occurring dermatoses being reported in the space of a year indicate that this may be an underdiagnosed phenomenon. We propose that new terminology, *concurrent isotopic response*, is needed to better understand and accurately represent this phenomenon in the literature.



**Fig 2.** **A**, Hematoxylin-eosin stain with perivascular and periadnexal lymphocytic infiltrate. **B**, VZV immunohistochemical stain. **C**, CD 123 immunohistochemical stain. **D**, Alcian blue pH 2.5 stain positive for mucin. (Original magnifications: **A**,  $\times 4$ ; **B**, **C**, and **D**,  $\times 10$ .)

Anna Tappel, BS,<sup>a</sup> Merrick Kozak, MD,<sup>b</sup> Richard Flowers, MD,<sup>b</sup> and Arturo Saavedra, MD, PhD, MBA<sup>b</sup>

University of Virginia School of Medicine<sup>a</sup> and the Department of Dermatology, University of Virginia Health System.<sup>b</sup>

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Correspondence to: Anna Tappel, BS, 852 W Main Street, Apt 233D, Charlottesville, VA 22903.

E-mail: [act4rb@virginia.edu](mailto:act4rb@virginia.edu)

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