Reduction in new pityriasis rosea diagnoses during the COVID-19 pandemic: Evidence in support of a viral etiology

To the Editor: Pityriasis rosea (PR) is an acute, self-limiting papulosquamous dermatosis, and has an inconsistent association with human herpesvirus 6 (HHV-6) and/or 7 (HHV-7). Previous studies have failed to confirm a causal relationship by isolating viral DNA in skin biopsies, blood, and pharyngeal and rectal swabs. However, flu-like prodromal symptoms, including headache, malaise, chills, and arthralgia, have been reported days before the characteristic eruption of ovoid erythematous plaques of scale on the trunk, sometimes surrounding a larger plaque, referred to as the “herald patch.”

Remarkably, the COVID-19 pandemic may indirectly provide dermatologists further insight into the debate on the etiology of PR. COVID-19-associated isolation and social distancing has resulted in reduced transmission of numerous viral infections, evidenced by a significant decrease in flu diagnoses and deaths in 2020 compared with those in 2019. The diagnoses of infections caused by enteroviruses, rhinoviruses, and adenoviruses were also significantly reduced during the lockdown. Infections caused by herpes simplex virus (types 1 and 2) and varicella zoster virus reactivation increased among patients with COVID-19; however, no available data have been collected and published regarding pandemic trends in the diagnosis of infections caused by the Herpesviridae family among those without COVID-19.

If the etiology of PR is dependent on or associated with HHV-6 and/or HHV-7, the number of diagnoses for PR should be similarly reduced relative to other viral infections during the pandemic isolation. This study compared the rates of diagnoses of PR before and during the COVID-19 pandemic while controlling for the rates of other inflammatory skin diseases to evaluate the HHV-6 and/or HHV-7 hypothesis.

A retrospective analysis was conducted using the TriNetX database, wherein the encounter rates for PR, acne vulgaris, atopic dermatitis, psoriasis, and lichen planus were captured using the International Statistical Classification of Diseases, Tenth Revision codes. This cohort was stratified into 2 time periods: the prepandemic period (March 2018 to February 2020) and the pandemic period (March 2020 to May 2021). The prepandemic period was further broken down into quarterly intervals, and the Student t test was performed at each interval for comparison. In total, 2,844,253 patients were assessed between March 2018 and May 2021. Since the start of the COVID-19 pandemic, the rates of PR dropped by 21%, compared to the prepandemic rates (P < .001); this was the largest change relative to the other inflammatory skin conditions evaluated (Fig 1). The greatest decrease in the diagnoses of PR was between March 2020 and May 2020, when lockdown and isolation measures were initiated. A statistically insignificant reduction was observed in the diagnoses of lichen planus and atopic dermatitis. Conversely, an insignificant increase was observed in the diagnoses of acne vulgaris and psoriasis. Statistical analyses revealed that the diagnoses of PR significantly declined compared with those of other inflammatory dermatoses during the COVID-19 pandemic (P < .001).

The observed reduction in the diagnoses of PR must be considered in the context that PR has a relatively mild disease course and dermatologists may not have encountered this condition during the pandemic because of office closures and patient preference; however, the rapid implementation of telemedicine overcame some of these limitations. Additionally, controlling for other inflammatory dermatoses lends more credibility to the aforementioned hypothesis. Although these data contribute to and support the proposed viral etiology of PR, more research needs to be...
conducted to confirm this relationship and potential consequences.

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Conflicts of interest
None disclosed.

REFERENCES

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