Clinical, Cosmetic and Investigational Dermatology

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LETTER

Comment on "Trends and Associations of Chilblains Prevalence with Connective Tissue Diseases, Including COVID-19 Incidence" [Letter]

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Dear editor

While the study[1] provides valuable insights into the prevalence of chilblains and its associations with connective tissue diseases (CTDs) and COVID-19, several limitations and areas for improvement should be noted. Firstly, the study's reliance on data from a single healthcare system in the northeastern United States limits its generalizability. The demographic and environmental factors specific to this region, such as colder climates and a predominantly white population, may not be representative of other regions or countries. To address this, future studies should include data from multiple geographic locations with diverse climates and ethnic compositions. Collaborating with international healthcare systems could provide a more comprehensive understanding of chilblains' epidemiology and its associations.

Another significant limitation is the lack of detailed clinical data on the severity and duration of chilblains. Understanding the clinical course of chilblains, including factors that influence its persistence or resolution, could provide deeper insights into its pathophysiology and its association with CTDs and COVID-19. Future studies should collect detailed clinical data, such as the duration of symptoms, treatment responses, and long-term outcomes. This information would be valuable for clinicians in managing patients with chilblains and associated conditions.

Furthermore, the study does not adequately address the potential confounding effects of medications used to treat CTDs or COVID-19. Many patients with CTDs are on immunosuppressive therapies, which could influence the development or progression of chilblains. Similarly, the use of antiviral or immunomodulatory treatments in COVID-19 patients might affect the occurrence of chilblains. Future research should include an analysis of medication use and its impact on chilblains prevalence. This could involve adjusting for medication use in statistical models or conducting subgroup analyses based on treatment regimens.

Lastly, while the study highlights a rare association between chilblains and COVID-19, it does not explore the potential mechanisms underlying this association. The authors suggest that further research is needed to elucidate these mechanisms, but a more detailed discussion of possible pathways, such as immune dysregulation or vascular changes induced by the virus, would have strengthened the paper. Future studies should incorporate molecular and immunological analyses to explore these mechanisms. For example, investigating cytokine profiles or endothelial dysfunction in patients with chilblains and COVID-19 could provide valuable insights.

In conclusion, while the study contributes to the understanding of chilblains and its associations with CTDs and COVID-19, its findings are limited by regional bias, potential underreporting, and a lack of detailed clinical and mechanistic data. Future research should aim to address these limitations by including more diverse populations, validating diagnoses through multiple data sources, and exploring the clinical and molecular mechanisms underlying these associations.

Received: 7 February 2025
Accepted: 12 February 2025
Published: 18 February 2025

Disclosure

The authors report no conflicts of interest in this communication.

Reference

1. Argobi Y. Trends and Associations of Chilblains prevalence with connective tissue diseases, including COVID-19 incidence. *Clin Cosmet Invest Dermatol*. 2025;18:339–344. PMID: 39911214; PMCID: PMC11796437. doi:10.2147/CCID.S486402

https://doi.org/10.2147/CCID.S521256