

Anveden et al¹ examined the effects of oral prednisone for the treatment of chronic ICD. In the ICD group, there was no significant difference between placebo and oral prednisone. On the other hand, the allergic contact dermatitis group treated with oral prednisone experienced a significant reduction in the number of reactive tests on patch testing.

Although corticosteroids remain widely used by many dermatologists as an adjunct therapy for alleviating signs and symptoms of dermatitis, this systematic review demonstrates that their efficacy for ICD treatment seems limited. Similar findings were demonstrated in a recent review,⁶ in which topical corticoids were not effective for alleviating symptoms of acute ICD. For practitioners who opt to use topical corticosteroids, it remains important to carefully monitor patients for any beneficial effects.

Limitations of the published studies include irritant's solubility, molecular weight, and melting point, as well as regional and anatomic areas. Studies are largely limited to experimentally induced dermatitis.

The re-examination of the evidence regarding topical corticoid use is of clinical importance and highlights the need for studies exploring alternative anti-inflammatory agents that could be of therapeutic potential for such treatment.

Jalal Maghfou, MD

Department of Medicine, Tulane University
School of Medicine, New Orleans, LA
jmaghfou@tulane.edu

Howard Maibach, MD

Department of Dermatology,
University of California San Francisco

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Is Periorbital Dermatitis an Early Sign of COVID-19 Infection in Children?

To the Editor:

COVID-19 infection is caused by a recently identified pathogen—the severe acute respiratory syndrome coronavirus 2.¹ The respiratory system is the primary site of COVID-19 infection. Symptoms range from a mild flu-like syndrome to fulminant pneumonia and lethal respiratory distress. Recently, several cutaneous manifestations of severe acute respiratory syndrome coronavirus 2 infection have been reported in the literature. The dermatologic findings include macular or maculopapular, vesicular, and urticarial rashes. Vascular lesions, including livedo, purpura, and necrosis, have also been reported. Pseudo-chilblains have been linked to COVID-19 infection in a select subset of patients. Timing of rashes ranges from a few days before to almost 2 weeks after diagnosis.² Kalner and Vergilis³ have previously reported the case of a child with COVID-19 infection who presented with periorbital dermatitis. We are writing to describe a second case of periorbital dermatitis associated with COVID-19 infection that was diagnosed in our practice.

A 3-year-old White child, who was otherwise healthy, came to our department for evaluation of acute-onset periorbital dermatitis manifesting as erythematous, nonpruritic periorbital plaques. There was no conjunctival injection, and the child was asymptomatic (Fig. 1A). He had not taken new medications, and his medical history was negative to allergies/atopy or other chronic skin disorders. Neither the child nor any family member was known to have COVID-19 infection. We initiated therapy with tacrolimus 0.1% ointment twice daily and scheduled a telemedicine follow-up. Two days after the visit, the mother reported that the child had developed fever, sore throat, and cough. Laboratory examinations included a complete blood count showing a mildly elevated white blood cell count, a C-reactive protein level of 8 mg/L (0.5–10 mg/L), and an erythrocyte sedimentation rate of 27 mm/h (0–21 mm/h), and the COVID-19 nasopharyngeal polymerase chain reaction test result was positive. Ten days after initial presentation, both the infection and the COVID-19 symptoms resolved according to the child's parents, and they decided to stop the therapy with tacrolimus ointment. The remission was confirmed by examination and negative nasopharyngeal COVID-19 polymerase chain reaction test result on day 14 (Fig. 1B).

Cutaneous manifestations can be important clues to underlying infectious disease, especially when they appear in advance of fever and systemic symptoms. The pathogenesis of cutaneous features of COVID-19 is not well understood. Theories include viral

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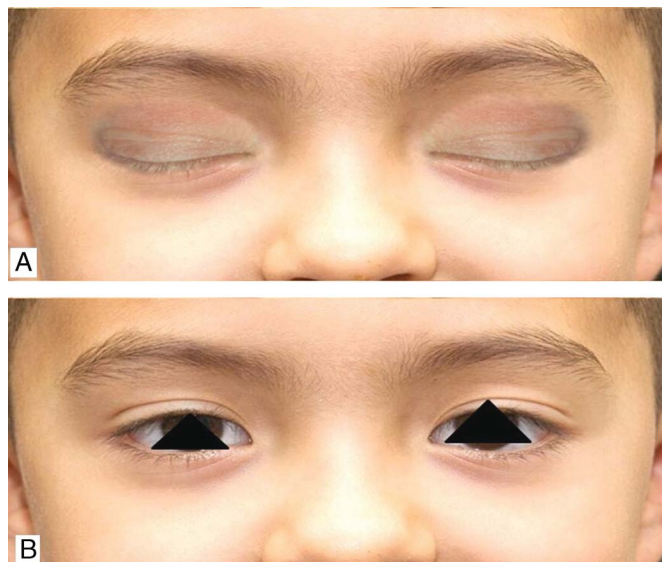


Figure 1. A, Scaly red nonpruritic periorbital dermatitis. There was no conjunctivitis or other ocular symptoms. B, Resolution of cutaneous symptoms after 14 days.

particles in vessels triggering lymphocytic vasculitis and consequent cytokine cascade. Moreover, it has been hypothesized that the virus targets Langerhans cell activation, inducing vasodilation and spongiosis.⁴ Furthermore, COVID-19–associated coagulation dysfunction produced small blood vessel occlusion, creating acral lesions resembling chilblains. Livedo reticularis, limb ischemia, and petechiae may be observed.⁵ In our case, as hypothesized by Kalner and Vergilis,³ the periocular dermatitis that our patient showed may be a part of coagulation dysfunction in the periocular vessels.

The appearance of dermatologic manifestations that precede fever and other symptoms of COVID-19 may help identify carriers who can be contagious earlier. We believe that examination for periocular dermatitis may be an additional useful screening tool in the early identification of COVID-19 infection.

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Giulia Calabrese, MD

Dermatology Unit, Department of Mental and Physical Health and Preventive Medicine, University of Campania Luigi Vanvitelli
Naples, Italy

Gaetano Licata, MD

Dermatology Unit, Department of Mental and Physical Health and Preventive Medicine
University of Campania Luigi Vanvitelli
Naples, Italy
gaetano.licata89@gmail.com

Alessio Gambardella, MD

Dermatology Unit, Department of Mental and Physical Health and Preventive Medicine

University of Campania Luigi Vanvitelli
Naples, Italy

Roberto Alfano, MD

Department of Anesthesiology, Surgery and Emergency
University of Campania Luigi Vanvitelli
Naples, Italy

Giuseppe Argenziano, MD

Dermatology Unit, Department of Mental and Physical Health and Preventive Medicine, University of Campania Luigi Vanvitelli
Naples, Italy

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An Assessment of the Components of Dental Implant Materials

Dental implants have been developed to replace diseased or damaged teeth. Whereas traditional dental materials, such as gold crowns or mercury-containing amalgams, are well known causes of allergic contact dermatitis (ACD), dental implants are often made of titanium alloys. Dental implants consist of 3 parts: a fixture, an abutment, and a crown. During the surgical phase, the fixture is inserted into bone and is fitted with a healing cap during osseointegration. Once the tissues heal (approximately 4 months), the cap is removed and replaced with an abutment onto which a crown or a bridge is mounted.

In 2019, the dental implant industry had a market value of more than \$4 billion and is estimated to grow by 5% annually between 2020 and 2026.¹ Case reports of ACD manifesting as localized mucositis or burning mouth symptoms to titanium, palladium, or cobalt have been reported.^{2–4} In vitro and in vivo studies have shown that titanium alloys are susceptible to corrosion in the

Address reprint requests to Walter Liszewski, MD, Suite 1600, 676 N St Clair St, Chicago, IL 60610. E-mail: wjliszewski@gmail.com.

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