Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Juvenile Dermatomyositis Triggered by SARS-CoV-2

We read with interest the article by Kaur et al. describing transverse myelitis in a child with COVID-19.[1] We wish to describe a child who developed juvenile dermatomyositis (JDM) associated with a severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. This infection has been associated with various inflammatory/autoimmune symptoms and the presence of autoantibodies.[2-4]

This four-year-old previously healthy girl presented five days after developing pain and progressive weakness in the legs. She had an erythematous-violaceous rash of the eyelids and malar region and multiple cobblestone-like papules on the knuckles bilaterally (Fig). Capillaroscopy showed dilated capillaries. Laboratory testing showed aspartate transaminase 114 IU/dL, alanine aminotransferase 64 IU/dL, and creatine phosphokinase 403 mg/dL; positive antinuclear antibody 1:320; anti-RNP/Sm, anti-Scl-70, and anti-Sm antibodies; and positive RT-PCR for SARS-CoV-2. Nerve conduction velocities suggested an axonal motor neuropathy, and electromyography showed a myopathic pattern in the tibialis anterior and deltoid muscles. Magnetic resonance imaging suggested myositis of the thighs and gluteal muscles. Esophageal manometry showed ineffective esophageal motility and hypotonia. We diagnosed JDM and administered intravenous immunoglobulin 1 g/kg and methylprednisolone 0.7 mg/kg/day. She developed respiratory deterioration, dysphagia, and nasal voice; mechanical ventilation was required for 72 hours. Tomography of the lungs revealed no alterations of coronavirus disease 2019 (COVID-19). We administered four methylprednisolone pulses (30 mg/kg/day) and an additional intravenous immunoglobulin 1 g/kg dose. We added hydroxychloroquine, prednisone, subcutaneous methotrexate, and cyclosporine. Her condition gradually improved.

An increase in cases of JDM associated with COVID-19 has been suggested,[4] as well as other autoimmune diseases. Ours is the first pediatric patient with JDM associated with COVID-19 and concomitant peripheral nervous system involvement (neuromyositis). Our patient provides additional evidence that SARS-CoV-2 is prone to trigger autoimmune responses.[2]

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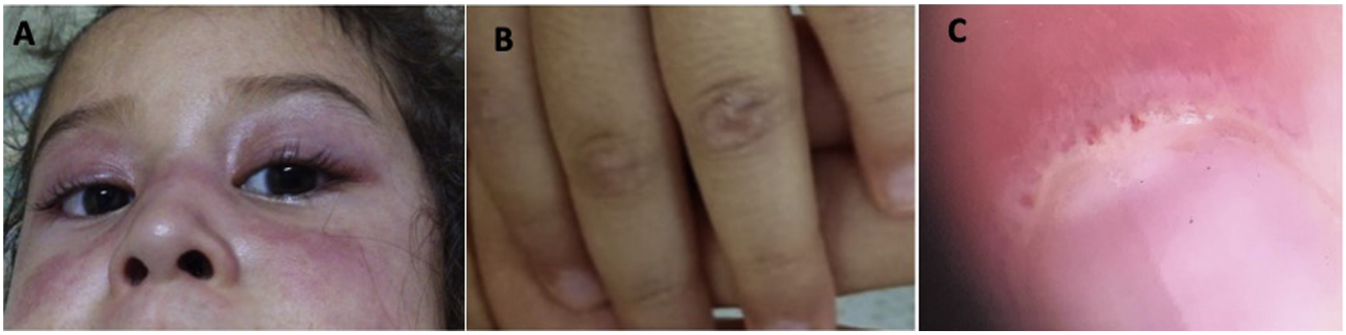

FIGURE. (A) Erythematous-violaceous periocular and malar rash, (B) Gottron papules, and (C) capillaroscopy showing dilated hairpin-like capillaries. The color version of this figure is available in the online edition.

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