

COVID-19 "long-haulers" in Dermatology? Duration of dermatologic symptoms in an international registry from 39 countries

Devon McMahon, Antonia Gallman, George Hruza, Misha Rosenbach, Jules Lipoff, Seemal Desai, Lars French, Henry Lim, Jason Cyster, Lindy Fox, Marlys Fassett, Esther Freeman

Introduction

During the COVID-19 pandemic, multiple studies have reported SARS-CoV-2 associated dermatologic manifestations. However, information on duration of dermatologic COVID-19 symptoms is lacking. Patients infected with SARS-CoV-2 who experience prolonged symptoms have been termed "long haulers." Using an international registry of COVID-19 dermatologic manifestations, we evaluated the duration of dermatologic symptoms of COVID-19 and assessed for the presence of patients with persistent "long hauler" skin symptoms.

Material and Methods

In collaboration with the International League of Dermatological Societies and the American Academy of Dermatology, we established an international registry for COVID-19 dermatologic manifestations in April 2020. Physicians and other healthcare providers entered confirmed or suspected COVID-19 cases with dermatologic symptoms, including PCR test results, antibody test results, and total symptom duration when known. Additionally, providers were contacted in June and August to update COVID-19 laboratory test results and COVID-19 dermatologic symptom duration. Laboratory tests for SARS-CoV-2 including nasopharyngeal swab PCRs and serum antibody tests (IgM, IgG, and IgA) were reported, when available. We defined "long haulers" as anyone with dermatologic symptoms of COVID-19 that persisted ≥ 60 days (Carfi et. al., Persistent Symptoms in Patients After Acute COVID-19, JAMA doi:10.1001/jama.2020.12603)

Results

From 8 April-26 August 2020, 990 total cases and 303 laboratory-confirmed or suspected COVID-19 cases with dermatologic manifestations were reported to the registry from 39 countries. Of these, 224 total cases and 90 laboratory confirmed cases had information on dermatologic symptom duration. Median duration of symptoms was 12 days (IQR 7-21) for all symptoms, and 7 days (IQR 5-14) for the subset of patients with lab confirmed disease (Figure 1). Morbilliform and urticarial eruptions lasted a median of 7 days and 4 days respectively for patients with lab-confirmed COVID-19 with a maximum duration of 28 days. Papulosquamous eruptions lasted 20 days (IQR 14-28) in lab-confirmed cases, with one confirmed long-hauler eruption lasting 70 days. Pernio/chilblains lasted a median of 15 days (IQR 10-28) in patients with suspected COVID-19, and 10 days (IQR 7-21) in lab confirmed cases (Figure 1 and 2). Five patients with pernio/chilblains were "long haulers" with toe symptoms lasting ≥ 60 days. One of these long-hauler patients seroconverted to anti-SARS-CoV-2 IgM and IgA positivity about a month after pernio onset, and continued to experience severe pernio and fatigue for >133 days (Figure 2B).

Figure 1: Duration of dermatologic symptoms in A) all patients with suspected or confirmed COVID-19; B) limited to COVID-19 laboratory-confirmed patients.

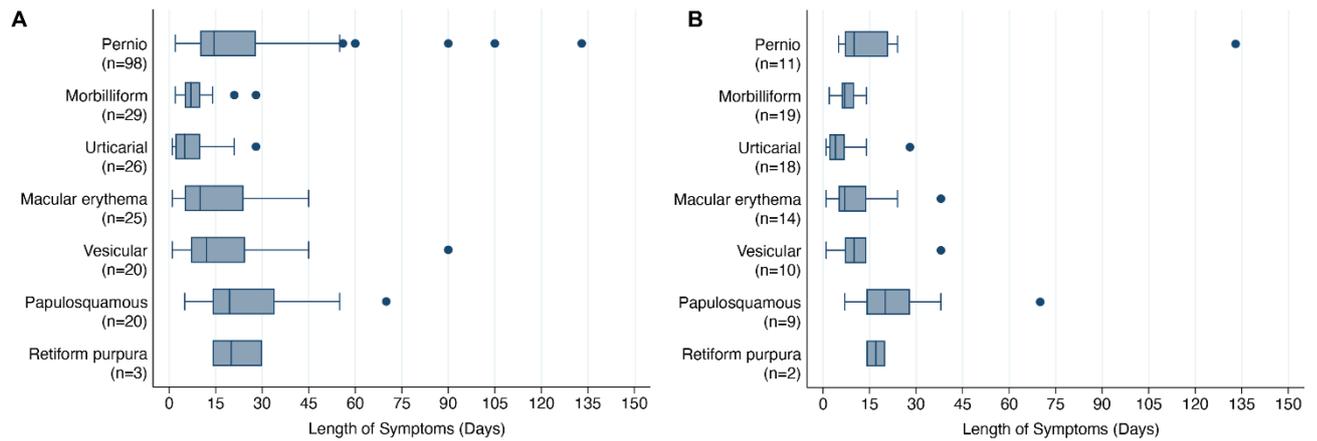
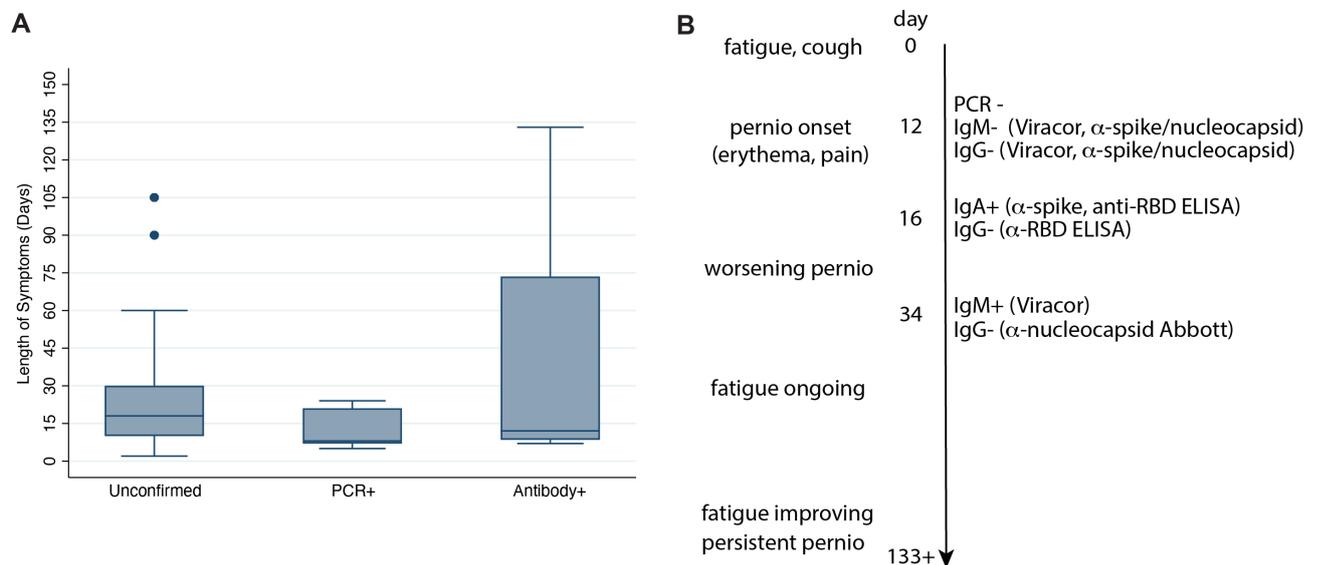


Figure 2: A) Duration of pernio/chilblains symptoms stratified by COVID-19 testing (unconfirmed, PCR-confirmed, antibody-confirmed); B) Chronology of an IgA+IgM+ pernio/chilblains long-hauler patient.



Discussion

Nine months after the onset of the COVID-19 pandemic, there is increasing appreciation for persistent morbidity beyond the acute phase of disease. Here we present the largest dataset to-date on persistent skin symptoms of COVID-19. We measured the duration of symptoms for a number of distinct skin manifestations. Urticarial and morbilliform eruptions were relatively short in duration, while pernio/chilblains and papulosquamous eruptions were longer lasting. Notably, this analysis revealed a previously unreported subset of patients who experience “long-hauler” symptoms in dermatology-dominant COVID-19.