

## Cutaneous Findings Reported in COVID-19

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### ■ Non-specific Rash or Viral Exanthem

- “Rash” 0.2-1.2% in 1099 patients with laboratory-confirmed Covid-19 from 552 hospitals in 30 provinces, autonomous regions, and municipalities in mainland China through January 29, 2020 (*Guan et al. NEJM, 2020 Feb 28*).
- Cutaneous rashes, primarily non-specific and similar to cutaneous involvement occurring during common viral infections, were seen in 18/88 (20.4%) hospitalized patients directly evaluated by dermatologists (*Recalcati, JEADV, 2020 Feb 21*)
  - Onset -- 8 patients developed cutaneous involvement at the onset, 10 patients after the hospitalization.
  - Cutaneous manifestations were: erythematous rash (14 patients), widespread urticaria (3 patients) and chickenpox-like vesicles (1 patient)
- 2/4 infants born to mothers with COVID-19 had a non-specific rash (*Chen et al. Frontiers in Pediatrics. 2020 Mar 16;8:104.*)
- Fever and whole body rash as initial presentation of COVID-19 in the Emergency Department (*Hunt et al. Clinical Practice and Cases in Emergency Medicine. 2020 Mar 28.*)
- Can appear more **livedo** (net-like) in appearance.
- Rash can appear more **petechial (dengue-like) in the setting of low platelets** (*Joob B, et al. JAAD, 2020 March 22*)



### ■ Microthrombotic Presentations:

#### ■ Pernio-like Lesions aka “Acro-ischemia” aka. “Acrosyndromes”

- **Acro-ischemia lesions** reported to be occurring largely in **asymptomatic** children and adolescents with COVID-19; they mainly affect the feet and

sometimes the hands; the toes and fingers are typically affected, but in some cases also the plantar region; the lesions affect not all toes and fingers, on average 3, often separated by unaffected toes and fingers; the lesions are sometimes rounded, a few millimeters in size and multiple or affect the entire finger usually with a clear demarcation at the metatarsophalangeal level; initially they have a reddish-purple or bluish color; they can become bullous or present blackish crusts in the subsequent evolution; they are usually painful and evolve within 2 weeks with *restitutio ad integrum*.

(Mazzota F et. al. *Dermatologica Pediatrica*, 2020 April 11.)

- **Acrosyndromes** (appearance of pseudo-frostbite of the extremities), sudden onset persistent, sometimes painful redness, and transient hives lesions of the digits. It is important for patients who have such skin problems to consult a dermatologist (teleconsultation or other). ***We alert the population and the medical profession to detect these as soon as possible potentially contagious patients (without necessarily respiratory signs).*** (National Syndicate of Dermatologists (FRANCE) – Venereologists. 2020, April 11.)

**EARLY LESIONS:**



**WITH 7 DAY PROGRESSION:**



### ■ Livedoid Pattern and Cutaneous Vasculitis

- Reports coming out of the U.S. of livedo and cutaneous vasculitis patterns -- likely associated with the microthrombotic nature of the virus



### ■ Digit Ischemia

- Digit ischemia associated with development of antiphospholipid antibodies which can arise transiently in patients with critical illness/viral infections. The presence of these antibodies may rarely lead to thrombotic events that are difficult to differentiate from other causes of multifocal thrombosis in critically patients, such as disseminated intravascular coagulation, heparin-induced thrombocytopenia, and thrombotic microangiopathy. (Zhang, NEJM, 2020 April 11)

**\*\*DISCLAIMER: These collated data on patterns are based on descriptive studies (small case series/case reports) reported across the world and are not based on large, prospectively validated studies.**

#### RELEVANT LABORATORY:

Antiphospholipid antibodies and antiphospholipid syndromes can also arise transiently in patients with critical illness and various infections – patients are being described with clinically significant coagulopathy, antiphospholipid antibodies, and multiple infarcts. The presence of these antibodies may rarely lead to thrombotic events that are difficult to differentiate from other causes of multifocal thrombosis in critically patients, such as disseminated intravascular coagulation, heparin-induced thrombocytopenia, and thrombotic microangiopathy. (Zhang, NEJM, 2020 April 11)

- DIC labs
- Elevated d-dimer
- Low platelets
- Elevated CRP
- anticardiolipin IgA antibodies
- anti- $\beta_2$ -glycoprotein I IgA and IgG antibodies

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