

# SKIN SIGNS OF COVID-19

SKIN MANIFESTATIONS HAVE BEEN REPORTED IN UP TO 20% OF COVID-19 PATIENTS <sup>1</sup>

Skin signs are not specific for COVID-19 infection and these are the preliminary findings from published literature globally. Other clinically relevant differentials should be considered at the time of assessment

Please contribute cases to the AAD Dermatology COVID-19 Registry  
<http://www.aad.org/member/practice/coronavirus/registry>

## ACRAL PERNIO-LIKE LESIONS <sup>2-5</sup>



### Acute self-healing acro-ischaemia

- Thought to be due to microthrombosis secondary to viral-induced endothelial damage. Various causes have been postulated.
- Can occur without respiratory changes
- 2 patterns described
  - Chillblain-like <sup>3-5</sup>
  - Erythema multiforme-like <sup>5</sup>
- Acral-located, painful lesions <sup>5</sup>
  - Toes affected in 3/4
  - Fingers affected in 1/4
- Starts with reddish-purple or bluish color, which can evolve into bullae/eschars
- Resolves within 2 weeks
- Histology is similar to chillblain lupus <sup>3</sup>



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## SMALL VESSEL VASCULITIS<sup>6</sup>



- May occur in asymptomatic children and adolescents
- Symptoms: itching, burning, pain, hand stiffness
- Affects extremities
- Multifocal and asymmetrical
- Develops gradually with a few lesions every 2-3 days
- Evolves from erythema to infiltration/exudation/ecchymosis
- Feet: more severe lesions, blisters, bruising and superficial necrosis
- Self resolve in 12-20 days

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THE AUSTRALASIAN COLLEGE  
OF DERMATOLOGISTS

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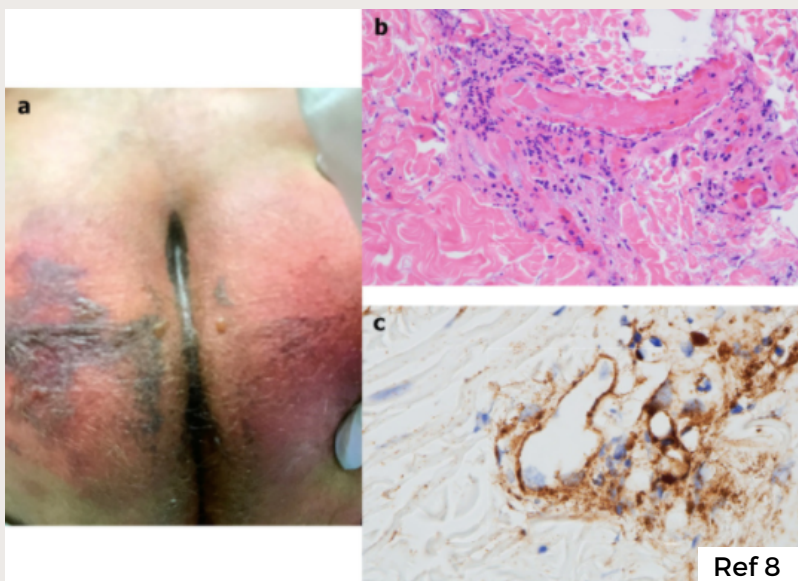
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## LIVEDOID RETICULARIS <sup>7</sup>



- Transient COVID-19 unilateral livedoid eruption
- Reported in patients with mild to moderate COVID-19 infection
- Lasts between 20 mins to 24 hours, self resolving
- Non blanching, not painful
- Possibly related to microthrombosis

## RETIFORM PURPURA <sup>8</sup>



- Severe COVID-19 case with respiratory failure.
- A striking retiform purpura with surrounding inflammation on the buttocks.
- Histology show extensive pattern pauci-inflammatory vascular thrombosis with endothelial cell injury.
- Prominent deposits of C5b-9 seen within the microvasculature.

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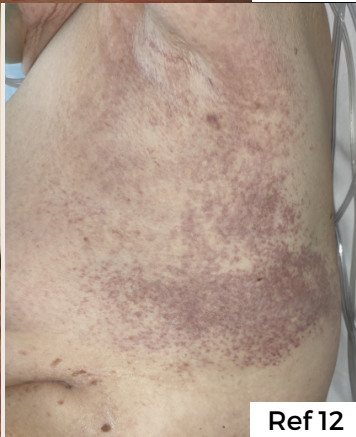
## VIRAL EXANTHEM



Ref 9



Ref 9

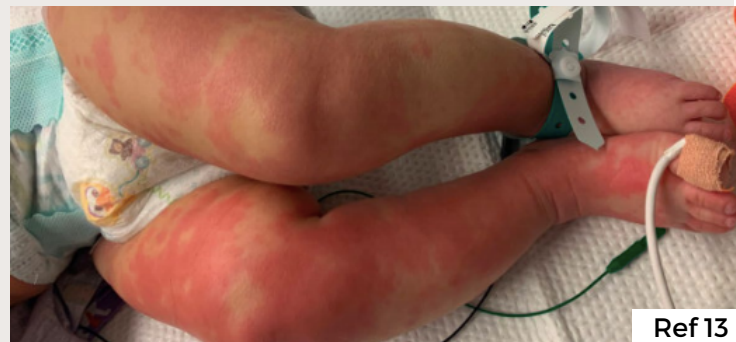


Ref 12

- No correlation with disease severity

### Described patterns

1. Varicelliform exanthem<sup>1,9</sup>
  - site: centrally located
  - appear 3 days after systemic symptoms and disappear within 8 days
  - unlike varicella, there is minimal to no pruritus and no scarring upon rash resolution
2. Morbilliform eruption<sup>10</sup>
3. Dengue like eruption with petechiae due to low platelet count<sup>11</sup>
4. Pruritic purpuric flexural eruption reported in a COVID-19 patient with bilateral pneumonia<sup>12</sup>
5. Possible association between toxic shock syndrome and Kawasaki disease in severe COVID-19 paediatric cases reported.<sup>13,14</sup>



Ref 13

## URTICARIAL ERUPTION

- Reported in 3 Italian patients and 1 French patient<sup>1,15</sup>
- Can be generalised or localised
- Urticaria reported to occur prior to onset of COVID-19 symptoms<sup>15</sup>
- NB: Urticaria is a common dermatological condition but consider COVID-19

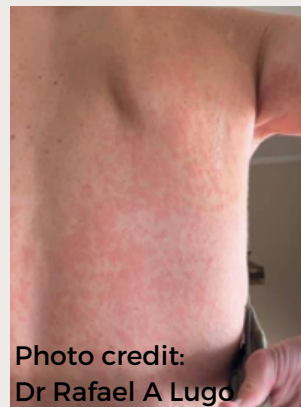
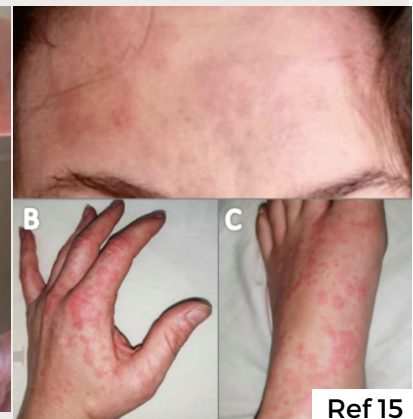


Photo credit:  
Dr Rafael A Lugo



Ref 15

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## REFERENCES

1. Recalcati S. Cutaneous manifestations in COVID-19: a first perspective. *J. Eur. Acad. Dermatol. Venereol.* 2020 Feb 21.
2. Mazzotta F., Troccoli T. 2020. Acute acro-ischemia in the child at the time of COVID-19. *Eur. J. Pediat. Dermatol.* 2020, Apr. 6 [Online ahead of print].
3. Kolivras A, Dehavay F, Delplace et al. Coronavirus (COVID-19) infection induced chilblains: a case report with histopathological findings, *JAAD Case Reports.* 2020, doi: <https://doi.org/10.1016/j.jdcr.2020.04.011>.
4. Alramthan A, Aldaraji W. A case of COVID-19 presenting in clinical picture resembling chilblains disease. First report from the Middle East. *Clin. Exp. Dermatol.* 2020 Apr 17.
5. Fernandez-Nieto D, Jimenez-Cauhe J, Suarez-Valle A, et al. Characterization of acute acro-ischemic lesions in non-hospitalized patients: a case series of 132 patients during the COVID-19 outbreak, *J. Am. Acad. Dermatol.* 2020, doi: <https://doi.org/10.1016/j.jaad.2020.04.093>.
6. Mazzotta F., Troccoli T., Bonifazi E. A new vasculitis at the time of COVID-19. *Eur. J. Pediat. Dermatol.* - pd online, Monday's case. 2020 Apr. Accessed at: <https://www.ejpd.com/images/nuova-vasculite-covid-ENG.pdf>
7. Manalo IF, Smith MK, Cheeley J, Jacobs R. A Dermatologic Manifestation of COVID-19: Transient Livedo Reticularis. *J. Am. Acad. Dermatol.* 2020 Apr 10.
8. Magro C, Mulvey JJ, Berlin D, et al. Complement associated microvascular injury and thrombosis in the pathogenesis of severe COVID-19 infection: A report of five cases. *Transl Res.* 2020 Apr 15.
9. Marzano AV, Genovese G, Fabbrocini G, et al. Varicella like exanthem as a specific COVID-19-associated skin manifestation: multicenter case series of 22 patients, *J. Am. Acad. Dermatol.* 2020, doi: <https://doi.org/10.1016/j.jaad.2020.04.044>.
10. Najarian DJ, Morbilliform Exanthem Associated with COVID-19, *JAAD Case Reports.* 2020, doi: <https://doi.org/10.1016/j.jdcr.2020.04.015>.
11. Joob B, Wiwanitkit V. COVID-19 can present with a rash and be mistaken for Dengue. *J. Am. Acad. Dermatol.* 2020 Mar 22, doi: <https://doi.org/10.1016/j.jaad.2020.03.036>
12. Jimenez-Cauhe J, Ortega-Quijano D, Prieto-Barrios M, et al. Reply to "COVID-19 can present with a rash and be mistaken for Dengue": Petechial rash in a patient with COVID-19 infection, *J. Am. Acad. Dermatol.* 2020, doi: <https://doi.org/10.1016/j.jaad.2020.04.016>.
13. Jones VG, Mills M, Suarez D, et al. COVID-19 and Kawasaki disease: novel virus and novel case. *Hosp Pediatr.* 2020, doi: 10.1542/hpeds.2020-0123
14. PICS Statement: Increased number of reported cases of novel presentation of multisystem inflammatory disease, Paediatrics Intensive Care Society, 2020 Apr 27. Accessed at: <https://picsociety.uk/wp-content/uploads/2020/04/PICS-statement-re-novel-KD-C19-presentation-v2-27042020.pdf>
15. Henry D, Ackerman M, Sancelme E, et al. Urticarial eruption in COVID-19 infection. *J. Eur. Acad. Dermatol. Venereol.* 2020 Apr 15.