


Table 2 Final diagnosis of skin lesions in different genders, age groups, hospitalization statuses and disease outcomes

Feature	Gender			Hospitalization status			Age			Disease outcome			
	Male	Female	P	ICU	Non-ICU	P	<30	30–60	>60	P	Recovery	Death	P
Final diagnosis: Pityriasis rosea like frequency (%)	1 (6.3)	0 (0)	0.4	0 (0)	1 (4.8)	0.4	0 (0)	1 (6.3)	0 (0)	0.5	1 (5)	0 (0)	0.14
Herpes labialis	1 (6.3)	1 (7.7)		0 (0)	2 (9.5)		0 (0)	1 (6.3)	1 (8.3)		2 (10)	0 (0)	
Herpes zoster	0 (0)	2 (15.4)		1 (14.3)	1 (4.8)		0 (0)	2 (12.5)	0 (0)		1 (5)	0 (0)	
Maculopapular viral exanthema	2 (12.5)	1 (7.7)		1 (14.3)	1 (4.8)		0 (0)	2 (12.5)	0 (0)		2 (10)	0 (0)	
Drug reaction	1 (6.3)	2 (15.4)		0 (0)	3 (14.3)		0 (0)	0 (0)	3 (25.0)		2 (10)	0 (0)	
Livedo reticularis/rasemoca	1 (6.3)	3 (23.1)		2 (28.6)	2 (9.5)		1 (100)	2 (12.5)	2 (16.7)		1 (5)	3 (50)	
Acral peeling	4 (25.0)	0 (0)		0 (0)	4 (19.0)		0 (0)	3 (18.8)	1 (8.3)		3 (15)	1 (16.7)	
Contact dermatitis	1 (6.3)	2 (15.4)		2 (28.6)	1 (4.8)		0 (0)	1 (6.3)	2 (16.7)		1 (5)	1 (16.7)	
Urticarial viral rash	2 (12.5)	0 (0)		0 (0)	2 (9.5)		0 (0)	1 (6.3)	1 (8.3)		2 (10)	2 (33.3)	
Other	3 (18.8)	2 (15.4)		1 (14.3)	5 (19.0)		0 (0)	3 (18.8)	2 (16.7)		5 (25)	5 (83.3)	

and the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent

All patients or their legal guardians signed informed consent regarding publishing their data and photographs.

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Retiform purpura and extensive skin necrosis as the single manifestation of SARS-CoV-2 infection

Dear Editor,

It is known that dermatological manifestations of SARS-CoV-2 infection are heterogeneous and have been a subject of increasing discussion. Most common clinical patterns include maculopapular rash, perniois, urticaria, vesicular eruption, livedo reticularis and retiform purpura.^{1–3} The latter has been exclusively described in critically ill patients, often requiring invasive ventilation for massive pulmonary involvement.^{4–6} Retiform purpura can arise in additional circumstances, such as calciphylaxis, cutaneous vasculitis, purpura fulminans and warfarin-induced necrosis.⁷ We report a case of SARS-CoV-2 infection with associated extensive necrotic retiform purpura and no other organ involvement.

A 44-year-old man sought our emergency department due to the appearance of large (>15 cm) patches with retiform configuration and central necrosis, predominantly involving both thighs, compatible with retiform purpura (Fig. 1). The lesions appeared a week before and had progressively worsened despite treatment with oral prednisolone. He was otherwise asymptomatic, with no fever. Peripheral oxygen saturation was 98% on room air. His past medical history included only untreated type 2 diabetes mellitus. There was no history of previous medications, such as warfarin, or illegal drugs, including cocaine. Initial workup revealed minor leucocytosis and slightly elevated C-reactive protein (10 mg/L) and D-dimers (354 ng/dL). Haemoglobin levels, platelet count, renal function, liver enzymes and coagulation studies were normal. Although otherwise symptomless, a nasopharyngeal polymerase chain reaction for SARS-



Figure 1 Skin findings at presentation, showing large plaques with retiform configuration and central necrosis affecting both thighs. (a) Lateral aspect of the right thigh; (b) anterior aspect of both thighs; and (c) lateral aspect of the left thigh.

CoV-2 test was made as a routine procedure, which rendered a positive result.

The patient was admitted for 12 days for further investigation and monitoring of skin and other potential manifestations of disease. Oral prednisolone dose was increased, and therapeutic enoxaparin was started. Additional laboratory investigations revealed only increased glycosylated haemoglobin levels (7.7%), elevated erythrocyte sedimentation rate (59 mm/h) and positive antinuclear antibodies. Phospho-calcium and parathyroid hormone levels, antiphospholipid, anticardiolipin and antineutrophil cytoplasmic antibodies, C3 and C4 levels, cryoglobulin and fibrinogen were normal. Investigation for congenital and acquired thrombophilias, urinalysis and chest X-ray were unremarkable. Urine cocaine levels were negative. A skin biopsy revealed thrombosis of small and medium calibre vessels of the dermis and hypodermis, consistent with thrombotic vasculopathy, without fibrinoid necrosis, calcium deposits or infectious agents. Direct immunofluorescence revealed deposits of fibrinogen, IgG, IgM and C1a. Throughout admission, all previously diagnosed lesions stabilized, and no additional signs or symptoms of other organ involvement were observed.

The patient was discharged and has been receiving regular dressing care in our department, three times per week, with remarkable evolution (Fig. 2). Initially, necrotic tissue was removed through mechanical and enzymatic debridement. The subsequent ulcer has been under local treatment with povidone-iodine-containing dressing with polyethylene glycol base.

Retiform purpura in COVID-19 has been exclusively described in critically ill patients with multisystemic severe

disease.^{4–6,8,9} In this case, retiform purpura with extensive skin necrosis was the presenting and single manifestation of SARS-CoV-2 infection, with no pulmonary or additional impairment. Laboratorial findings were unspecific and excluded other possible causes of such cutaneous findings. Histological features were similar to previous cases of COVID-19-associated retiform purpura. Uncontrolled diabetes mellitus could be a risk factor for such extensive disease, but the paucity of other clinical and laboratorial findings further corroborates the heterogeneous outcomes of SARS-CoV-2 infection.

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The patient in this manuscript has given written informed consent to the publication of their case details.

Conflict of interest

Margarida Brito Caldeira, Mafalda Pestana, Ana Luísa João, Cândida Fernandes, Alexandre João and Nélia Cunha have no conflicts of interest to declare.

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Figure 2 Skin findings at 6 weeks of treatment, showing central ulcer with granulation tissue and surrounding epithelization area and wound contraction, maintaining original configuration. (a) Lateral aspect of the right thigh and (b) lateral aspect of the left thigh.

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Cutaneous reactions to inactivated SARS-CoV-2 vaccine and ChAdOx1-S (recombinant) vaccine against SARS-CoV-2: a case series from the Philippines

Dear Editor,

The Philippines remains one of the countries with the highest number of new COVID-19 cases in the Western Pacific region.¹