Heterogeneous red–white discoloration of the nail bed and distal onycholysis in a patient with COVID-19

Editor
The severe acute respiratory syndrome, coronavirus 2 (SARS-CoV-2) disease (COVID-19) that emerged in China, was declared a pandemic on 11 March 2020, by the World Health Organization. Numerous cutaneous symptoms such as pseudo-pernio, maculopapular, vesicular and urticarial rashes, livedoid or purpura-like vascular rashes, erythema multiforme-like rashes have been reported in COVID-19. There are also case presentations mentioning nail symptoms related to COVID-19. Reports include half-moon-shaped transversal red bands, Beau lines, leukonychia in addition to Beau lines and red half-moon nail signs. This case report describes nail symptoms detected in a patient who applied to the dermatology outpatient clinic.

A 23-year-old male patient applied to the dermatology outpatient clinic with a complaint of discoloration in his nails. He stated that he had been isolated at home with the diagnosis of COVID-19 together with his parent and sister and had complaints of fever, sore throat and joint pain, but used no medications, 4 months ago. He also remarked that a red–white discoloration occurred in his nails during the disease, and he noticed a whiteness on the edge of his nails one month later. There was no history of trauma, disease or medication use. In his dermatological examination, heterogeneous red–white discoloration in all his nails, and two round onycholytic areas surrounded by erythema in the distal part of the second nail on the left hand were detected (Fig. 1). In the Wood’s lamp examination, onycholytic areas were observed only in the distal part of the second nail on the left hand only (Fig. 2). This clinical picture detected in the case reminded to Terry’s nail, and it was wanted to be presented because it could be associated with COVID-19.

Terry’s nail is a type of apparent leukonychia described as having a ground-glass appearance in the whole nail, loss of lunula and a pink discoloration in the nail distal. Although Terry’s nail can also occur with the normal ageing process, it can be an indicator of diseases such as cirrhosis, chronic kidney failure and congestive heart failure. The overgrowth of connective tissue due to the change in nail bed vascularity has been held responsible for the incidence. Telangiectasia in the distal band has been reported in the nail bed biopsy.

In the case presented here, heterogeneous red–white discoloration and distal onycholytic areas have been detected in the whole nail. In patients with COVID-19, it has been stated that pericapillary oedema, dilatation, folding and density decrease in capillaries have been detected in nail-fold examinations by videocapillaroscopy. The role of COVID-19 could not be clearly evaluated in this patient; however, heterogeneous red–white discoloration in the nail bed has been associated with possible oedema and inflammation. In biopsies taken from cutaneous lesions associated with COVID-19, there have been reports of epidermal characteristics such as acantholysis, multinuclear balloononed keratinocytes, dyskeratosis and necrosis and histopathological features such as dermal vascular damages including lymphocytic vasculitis and, endothelitis especially in the presence of severe thrombosis.

In the patient, a nail biopsy could not be taken due to cosmetic apprehension. It was considered that round onycholytic areas surrounded by erythema reminiscent of the psoriasis nail could be an indication for a localized microvascular damage. This nail image, which has not been previously reported, should be presented as it may be associated with COVID-19.

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**Figure 2** Onycholytic areas (yellow arrows) in the distal part of the nail in the Wood’s lamp examination.

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