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LETTER

COVID-19-related chilblain-like lesions and idiopathic perniosis: Additional variables possibly influencing dermoscopic pattern

Dear Editor,

I read with great interest the paper by Jindal et al in which dermoscopic and histological features of idiopathic perniosis (IP) observed in a cohort of Indian patients before SARS-CoV-2 emergence were retrospectively analyzed to explore possible differences with chilblain-like lesions (CLLs) reported in the literature over the ongoing COVID-19 pandemic.[1-3]

Although several limitations were clearly highlighted by the authors, mainly including the lack of a statistical comparative analysis due to the absence of a CLLs control group and heterogeneity of available literature data,[1] I would like to bring to the reader's attention some additional issues that should be considered in the interpretation of dermoscopy of IP and CLLs.

In this study, the authors concluded that the presence of keratinocyte necrosis and severe dermal edema would be indicative of IP, while fibrin thrombi with involvement of both superficial and deep dermal vessels would favor CLLs.[1] Additionally, the evidence of irregular, linear or branching vessels, red/ purple dots or clods, and gray brown reticule on dermoscopy would support CLLs, whereas white dots/clods and lines would be associated with IP.[1] However, according to published data (not reported by Jindal et al),[4,5] dermoscopy of CLLs commonly reveals white lines (likely related to altered collagen in the dermis), especially in acute lesions, whereas IP may display linear-irregular and dotted vessels (corresponding to subpapillary and papillary vessels dilation, respectively) as well as purpuric spots (representing erythrocytes extravasation).

The above-reported contrasting data could result from two main factors, that is, possible influence of lesion duration on dermoscopic pattern and variability of dermoscopic features according to skin phototypes.

In fact, as suggested by Fabbrocini et al,[4] dermoscopy of CLLs may vary based on lesions "age" due to diverse histological background, with those in acute stage more commonly showing vessels and yellow background compared with resolving lesions. This is also expected in IP as histological features may change over the time, with vessels dilation/erythrocytes extravasation (related to vessels and purpuric structures on dermoscopy) and hemosiderin deposits (corresponding to coppery areas on dermoscopy) being more common in early and late phases, respectively.[5,6]

Furthermore, it has been demonstrated that dermoscopic findings of inflammatory diseases remarkably vary according to the skin phototype, with vessels/purpuric structures and fibrotic white structures respectively being less and more common in dark skin compared with fair phototypes.[7] Such a point could explain the higher prevalence of white structures (dots/clods and lines) and lower evidence of vessels/purpuric structures observed in IP by Jindal et al as available data on dermoscopy of both CLLs and IP has been drawn from Caucasian patients.[2-5]

In conclusion, even though it is still unclear if CLLs may be directly related to SARS-CoV-2 infection, the remarkable increase in the incidence of such lesions over the current COVID-19 pandemic seems to support a possible link.[2,9] In this regard, dermoscopy might help clarify if CLLs are a distinctive SARS-CoV-2-related reactive condition or classic chilblains triggered by the new coronavirus, similarly to other viral infections.[4] However, studies should be performed following a case-control design and a structured dermoscopic approach[8] as well as taking into account all the variables potentially affecting dermoscopic patterns of such lesions.

CONFLICT OF INTEREST

The manuscript is an original unpublished work and it is not submitted for publication elsewhere. All writers and contributors who participated in the preparation of the manuscript are listed as authors. There are no financial disclosure and conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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