Informed consent

The patients have given written informed consent to the publication of the case details.

Conflicts of interest

None of the authors have any conflict of interest to disclose.

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Data availability statement

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

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‘COVID nose’ – A unique post–COVID pigmentary sequelae reminiscing Chik sign: A descriptive case series

Sir,

The novel coronavirus 2019 (COVID-19)-induced pandemic, attributed to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has been rampaging across the globe since last 2 years. A myriad of mucocutaneous manifestations have been observed with COVID-19 infection.[1] In this descriptive case series, we describe six Indian patients who developed localized freckle-like nasal hyperpigmentation following COVID-19 infection. We propose the term ‘COVID nose’ to delineate this unique delayed pigmentary outcome attributed to COVID-19.

Six patients presented to our dedicated post-COVID clinic over the course of this pandemic with facial pigmentation (Table 1). Institutional Ethics Committee approval and written informed consent from all these patients were obtained. They comprised of four females and two males (age range: 25–65 years, mean: 44 years). Accompanying comorbidity (diabetes mellitus-1, hypothyroidism and COPD-1) was noted in two patients (33%). History regarding medications, pre-existing dermatoses and arthritis was not elicited in any patient. Apart from the aesthetic disturbance owing to pigmentation, the condition was asymptomatic in majority of patients (5, 83%). All patients had experienced only mild COVID-19 symptoms, from which they had recovered with standard supportive care without any systemic complications. The interval between onset of COVID-19 symptoms and appearance of nasal pigmentation ranged from 15–27 days (mean 23.2 days). On cutaneous assessment, multiple discrete and few coalescing dark brown-to-black freckle-like macules was observed to be localized mainly over the tip and ala nose in most cases (100%) with occasional involvement of malar area (2, 33%) (Fig. 1a–c). Dermoscopy [DermLite DL4, contact/polarized, 10×] revealed areas of light-to-dark brown reticular pigment network over light brown background with perifollicular pigment clumping (Fig. 1d) Histopathological examination could not be carried out as the patients refused consent for biopsy. Routine blood parameters was within normal levels and serological tests for dengue and chikungunya viruses was negative. Treatment with topical skin-lightening agents (azelaic acid and hydroquinone) coupled with sunscreen led to significant resolution of pigmentation in 10–16 weeks.

Pigmentary alteration has rarely been directly attributed to SARS-CoV-2.[1] In China, there were televised reports of two COVID-19 affected physicians who developed darkening of

Table 1 Clinical profile of patients with COVID-19 induced nasal pigmentation

Sl. No.	Age	Sex	Comorbidities	Cutaneous complaint	Interval between onset of COVID-19 symptoms and pigmentation (days)	COVID-19 disease severity	Treatment received for COVID-19	Treatment offered	Resolution of pigmentation (weeks)
1	28	F	Hypothyroidism, COPD	–	30	Mild	azithromycin, doxycycline, ivermectin, vitamin C, zinc, short course oral prednisolone, bronchodilators	20% azelaic acid cream, sunscreen	12
2	54	M	–	–	18	Mild	azithromycin, doxycycline, ivermectin, vitamin C, zinc	20% azelaic acid cream, sunscreen	14
3	39	F	Diabetes mellitus	–	24	Mild	azithromycin, doxycycline, ivermectin, vitamin C, zinc	2% hydroquinone* cream, sunscreen	10
4	65	F	–	Mild pruritus	15	Mild	azithromycin, doxycycline, vitamin C, zinc	20% azelaic acid gel, sunscreen	13
5	46	M	–	–	25	Mild	azithromycin, doxycycline, ivermectin, vitamin C, zinc	10% azelaic acid cream, sunscreen	16
6	32	F	–	–	27	Mild	azithromycin, doxycycline, vitamin C, zinc	20% azelaic acid gel, sunscreen	14

Abbreviation: COPD, chronic obstructive lung disease.
*Hydroquinone was chosen as the patient reported irritation with azelaic acid.

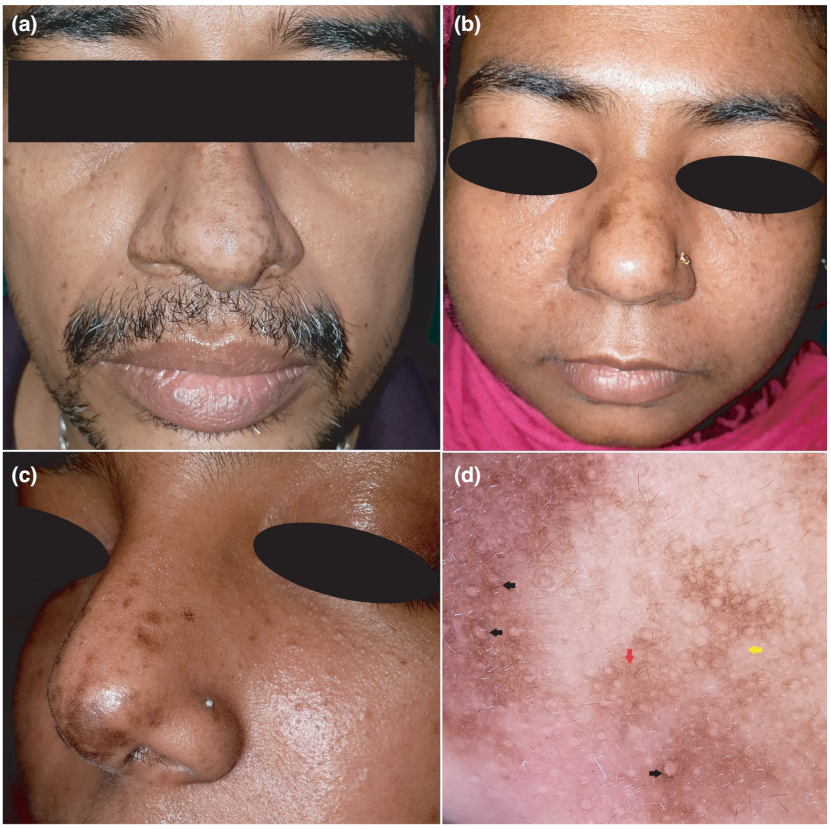

Fig. 1 (a–c) Clinical pictures of patients showing discrete and coalescing freckles-like hyperpigmented macules over the nose and centrofacial skin ('COVID nose'); (d) Dermoscopy [DermLite DL4, contact/polarized mode, 10×] revealed areas of light-to-dark brown reticular pigment network (red arrow) over light brown background (yellow arrow) with perifollicular pigment clumping (black arrow).

skin. The cause was subsequently found to be iatrogenic – polymixin B was prescribed to both patients to treat multidrug resistant bacterial infection.[2] The localized hyperpigmentation involving the centrofacial area that we observed in our patients was reminiscent of the 'Chik sign'.[3] In resource-limited settings, this classic pigmentary sequelae serves a cutaneous clue in making a retrospective diagnosis of chikungunya fever and rarely dengue.[4,5] The underlying pathology remains speculative. On histopathology, increased basal layer pigmentation, pigmentary incontinence and dermal melanophages with perivascular inflammatory infiltration have been observed. Thus, an increased intraepidermal melanin dispersion/retention triggered by the virus has been postulated as a cause for pigmentation.[6] Predominant affection of the centrofacial area indicates the possible role of ultraviolet radiation exposure in this patterned distribution of pigmentation. As a postviral event, this mechanistic reasoning may explain the pigmentary outcome in SARS-CoV-2-infected patients. Interestingly, accompanying postfebrile arthritis is a feature common to both the viral aetiologies (SARS-CoV-2 and chikungunya).[7] Thus, making a serological diagnosis is imperative in such cases. After excluding the common causes and given the temporal relation with COVID-19, the cause of the nasal pigmentation in these patients was attributed to SARS-CoV-2 infection.

Hyperpigmentation associated with chikungunya fever (CF) usually develop after 1–3 weeks after fever defervescence.[6,8] In our set of patients, a slightly longer time gap was noted. Therapeutic measures like photo-protection, sunscreen and topical usage of hypopigmenting agents of hydroquinone cream with or without short course topical steroids for a month have shown good response in treating hyperpigmentation in CF patients.[4,9] For our patients, we had to continue topical therapy for nearly 3–4 months for clinical improvement to be appreciable.

In conclusion, we highlight here a unique series of patients where a pigmentary sequelae ('COVID nose') was directly ascribed to COVID-19. 'Chik sign', which is considered a feature quite unique to CF, should also raise the suspicion of a preceding COVID-19 infection. We further implore clinicians to broaden the list of differentials for this presentation to include other viral aetiologies.

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Data availability statement
The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Development of eruptive pseudoangiomatosis following immunization with COVISHIELD vaccine in an adult

Editor,
Eruptive pseudoangiomatosis (EPA) is a rare paraviral exanthem characterized by sudden appearance of multiple millet-sized discrete angioma-like lesions surrounded by a pale halo. Herein, we report an interesting case of EPA following COVISHIELD vaccine (Oxford-AstraZeneca) in a 36-year-old male patient with pemphigus vulgaris on long-term immunosuppression.

A 36-year-old male patient, who was a diagnosed case of pemphigus vulgaris, presented to dermatology outpatient