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Funding sources: none.

Conflicts of interest: the authors declare they have no conflicts of interest.

Response to ‘COVID-19-associated multisystem inflammatory syndrome in adults with Kawasaki disease-like cutaneous manifestations’

DOI: 10.1111/bjd.20590

Linked Article: Razmi T et al. Br J Dermatol 2021; 185:e35.

Dear Editor, The article by Razmi T et al.1 was read with great interest regarding Kawasaki disease (KD)-like cutaneous features in multisystem inflammatory syndrome in adults (MIS-A). KD-like cutaneous features have been reported more from the paediatric age group, and data from adults are limited. The article raises some questions to be elucidated and some additional information to be appended.

Firstly, the authors have not clarified the type and site of rash or the duration of fever in the patient, which would be salient for association with both KD and MIS-A. Moreover, it would have been more precise to label KD as complete or incomplete in the presence or absence of diagnostic features. The patient appeared to have incomplete KD as per the clinical features described by the authors.

Secondly, eosinophilia in the patient is mostly associated with the acute stage of KD2 or is associated with adverse drug reactions, but it is noteworthy that in COVID-19, either normal peripheral eosinophil count or eosinopenia have been reported.3 The interval between severe SARS-CoV2 infection and development of MIS-A is unclear, and therefore early detection of either incomplete or complete KD-like cutaneous features in the absence of substantial support from laboratory investigations may be helpful in the early diagnosis and treatment of MIS.

Information on MIS in either adults or children with overlapping features like KD or SARS-CoV-2 triggering KD is not complete. Cheung et al.4 described patterns of cytokines such as increased production of interleukin-6 and interleukin-10 in patients with MIS (children) and suggested that MIS is similar to KD. The presence of COVID-19 IgM antibodies in the patient suggests that the patient must have had SARS-CoV-2 infection in the previous 2–3 weeks. KD-like desquamation of the skin of the palms and soles and strawberry tongue may be seen in the convalescent stage of severe diseases or drug reaction, but an acute rise of inflammatory markers and multi-organ involvement may differentiate these from MIS. Therefore, it is pertinent to monitor any rash developing even after the crucial 14 days of COVID-19 to curtail the morbidity or even mortality due to MIS.

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Response to ‘COVID-19-associated multisystem inflammatory syndrome in adults with Kawasaki disease-like cutaneous manifestations’: reply from the authors

DOI: 10.1111/bjd.20638

Dear Editor, We appreciate the interest shown by Pathania1 regarding our manuscript,2 and enjoyed reading his additional comments on multisystem inflammatory syndrome in adults (MIS-A) and children (MIS-C) and Kawasaki disease (KD).

Our patient had a 3-day history of fever, and the rash appeared within a day of the fever. The fever and rash subsided promptly with intravenous steroids (hydrocortisone 100 mg every 8 h), which was given as emergency treatment due to the suspicion of drug rash (azithromycin and mefenamic acid taken for the fever). By the time we examined the patient, the rash had faded and was hence not documented.

However, for the benefit of our readers, we would like to append the clinical image of rash in another case of MIS-A with circulatory shock. The rash was morbilliform and involved the limbs and trunks, and was associated with limb-sparing conjunctivitis, lip crusting and palmpoplantar erythema (Figure 1). The rash faded immediately with the
administration of systemic steroids. The rash did not leave any postinflammatory sequelae.

We would like to clarify regarding the author’s argument of labelling features in MIS-A as complete or incomplete KD. We agree that an abnormal immune response like T helper-17-mediated cytokine storm is implicated in the causation of KD as well as MIS, and some initial reports of MIS-A resorted to mentioning the symptom complex as complete or incomplete KD. However, these are distinct clinical entities. While the classic definition of KD relied entirely on mucocutaneous manifestations, the World Health Organization definition of MIS-C relied more on systemic signs, and laboratory markers with mucocutaneous manifestations altogether were taken as a single nonmandatory criterion. The Centers for Disease Control and Prevention definition of MIS-A does not include cutaneous features at all. Jiang et al. have tabulated the differences between the classic definitions of KD and MIS-C. In summary, while KD may lead to some systemic complications, especially cardiovascular phenomena, MIS presents with systemic features. Hence, some authors consider MIS as a constellation of KD and toxic shock syndrome.

As the author highlighted, MIS-A should be considered a differential diagnosis, and immunological markers for COVID-19 should be ordered when adult patients present with KD-like cutaneous manifestations. However, there is no particular relevance to the complete or incomplete presentation of KD in MIS-A.

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Funding sources: none.
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