

Black Toes in an Infant: Consider Kawasaki-Like Syndrome

Ghita Sqalli Houssini^{1,*}, Zakia Douhi¹, Meryem Soughi¹, Sara Elloudi¹, Hanane Baybay¹, Ilham Tadmouri², Widad Kozman², Mustapha Hida² and Fatima Zahara Mernissi¹

¹Department of Dermatology, University Hospital Hassan II, Morocco

²Pediatric Emergency Department, University Hospital Hassan II, Morocco

*Corresponding author: Dr. Sqalli Houssini Ghita, Department of Dermatology, University Hospital Hassan II, Fez, Morocco

Received: November 03, 2023

Published: April 11, 2024

Abstract

The pediatric inflammatory multisystem syndrome associated with COVID described in a few case reports is an entity encompassing three phenotypes: high fever and inflammation, signs of Kawasaki disease, and signs of toxic shock. Cutaneous manifestations are nonspecific. The heterogeneity of this syndrome constitutes a diagnostic challenge, and the treatment remains unstandardized. We report the case of a young infant who was urgently admitted for management of high fever and bilateral toe necrosis associated with a rash. Biological explorations showed a positive COVID-19 PCR and inflammatory syndrome. Thoracic angioscanning and lower limb exploration confirmed parenchymal involvement and good opacification of the arteries of the lower limbs. The patient's condition improved under aspirin and enoxaparin.

Keywords: Necrosis; Toe; Infant; SARS-CoV, Syndrome, Kawasaki

Introduction

The coronavirus pandemic spared no age group, including the pediatric population. However, clinical and dermatological manifestations differ from those in adults. Lesions resembling pernio-like, erythema multiforme, urticaria, and the inflammatory multisystemic syndrome in children (Kawasaki-like syndrome) have been described. We report the case of a 6-month-old infant presenting with necrosis of the extremities and a positive SARS-CoV PCR.

Observation

A 6-month-old infant with no notable medical history, admitted to the emergency department for the management of a pruritic eczematous skin rash that has been evolving for one week. Upon examination, the infant was found to have a fever of 38.5°C and was in good general condition. Dermatologically, there was a maculopapular and vesicular rash on the cheeks, trunk, and thighs, accompanied by bilateral toes necrosis. Distal pulses were present and symmetric. Additionally, the mother reported a preceding cough and flu-like symptoms. Given this clinical presentation, a suspicion of meningococcal meningitis was raised, and an intramuscular injection of a third-generation cephalosporin was administered.

Further laboratory tests were requested, including a lumbar puncture and a blood count, both of which returned normal results. Platelet counts and coagulation profiles were within the normal range, with a D-dimer level of 2231 µg/L and a C-reactive protein (CRP) level of 30 mg/dl. A SARS-CoV PCR test

was performed for both the infant and the mother, and it came back positive. A thoracic and lower limb angioscan revealed a pulmonary parenchymal consolidation in the upper right lobe, suggestive of infection, estimated at 10%, with good opacification of the arteries in both lower limbs. The infant was placed on a regimen of enoxaparin at 1 mg/kg/day and aspirin at 5 mg/kg/day. The patient showed improvement with the resolution of the skin rash and fever, and there was no extension of distal necrosis.

Discussion

Several dermatological manifestations of COVID-19 have been described in children, including pediatric multisystem inflammatory syndrome temporally associated with COVID-19, also known as Kawasaki-like syndrome [1]. This syndrome differs from classic vasculitis in certain aspects: it typically occurs between the ages of 6 and 10 years, has a higher incidence of gastrointestinal symptoms, and involves cardiac involvement. On a biological level, it is characterized by leukopenia, thrombocytopenia, and elevated ferritin levels. However, both syndromes share common features, such as a fever lasting more than 5 days and a polymorphic rash [2].

What makes our patient unique is not only their age, as they are a 6-month-old infant, but also the presence of distal necrosis, which has not been previously described at this age. Additionally, the absence of skin desquamation, conjunctival involvement, and normal arteriography in this case make it an incomplete and atypical.



Figure 1: Maculopapular eczematous rash diffusely associated with distal toe necrosis.

Conclusion

Kawasaki-like syndrome is one of the severe manifestations of SARS-CoV described in children. The presence of extremity necrosis in a young COVID-positive infant should prompt consideration of this syndrome.

Author Contributions: All the authors contributed to the completion of this work concerning its correction and revision

Conflicts of interest: The authors do not declare any conflict of interest

Grant information: The authors received no specific funding for this work.

Consent: The examination of this patient was conducted according to the Declaration of Helsinki principles



Figure 2: Distal toe necrosis associated with plantar purpura.

References

1. Society, Canadian Paediatric. Paediatric Inflammatory Multisystem Syndrome Temporally Associated with COVID-19, 2021.
2. Andina D, Belloni-Fortina A, Bodemer C, Bonifazi E, Chiriac A, Colmenero I, et al. Skin Manifestations of COVID-19 in Children: Part 2 . Clinical and Experimental Dermatology, 2021; 46(3): 451-461.