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RESEARCH ARTICLE

ACUTE URTICARIA IN A CHILD WITH COVID-19: A CASE REPORT

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Abstract

In individuals with the new coronavirus SARS-CoV-2, dermatologic indications are common and are sometimes the only signs of illness. Few incidences of urticaria eruption in children have been recorded. In this report, we describe a case of acute urticaria in a 1-year-old child that occurred after the onset of any other COVID-19 symptoms. In this case, the rapid testing and identification of SARS-CoV-2 infection was driven by the suspicion of a probable COVID-19-associated symptom.

Introduction:-

Several different types of rashes caused by COVID-19 infection have been described during the SARS-CoV-2 epidemic. Maculopapular exanthema, urticarial lesions, and vesicular eruptions are the most frequent skin symptoms [1].

Urticaria is a localized and often harmless disorder brought on by the activation of mast cells and basophils and the release of histamine by immunoglobulin E or non-immunoglobulin E driven mechanisms. Wheals of pruritus and/or swelling are seen [2]. Lesions from COVID-19 often manifest on the face and upper body after the onset of the flu-like symptoms (fever, cough, and exhaustion) [1].

We discuss a case of a child patient who did not recently start any new medications, but yet showed up at the emergency room with high fever and after admission exhibited severe prodromal urticaria after the classic COVID-19 symptoms began to appear.

Case Presentation

Our case report is 1-year-old boy. He was presented with 2 days history of cough, rhinorrhea, and fever. The fever was high-grade reaching 40°C and occurring frequently each 3-4 hours, for which he was given antipyretic without improvement. Therefore, according to Saudi Arabia Ministry of Health COVID-19 management protocol, a nasopharyngeal swab was taken and it revealed a positive result. His systemic examination prior to hospital admission was unremarkable apart from congested nasopharynx and high-grade fever.

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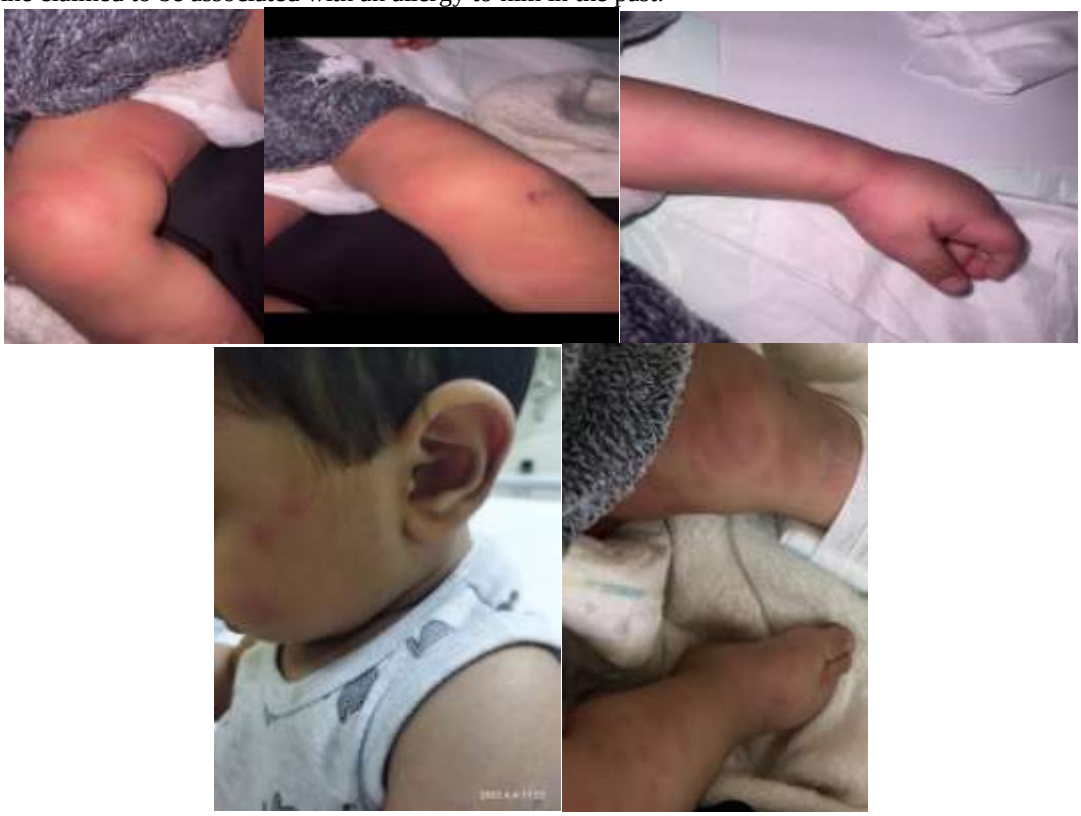
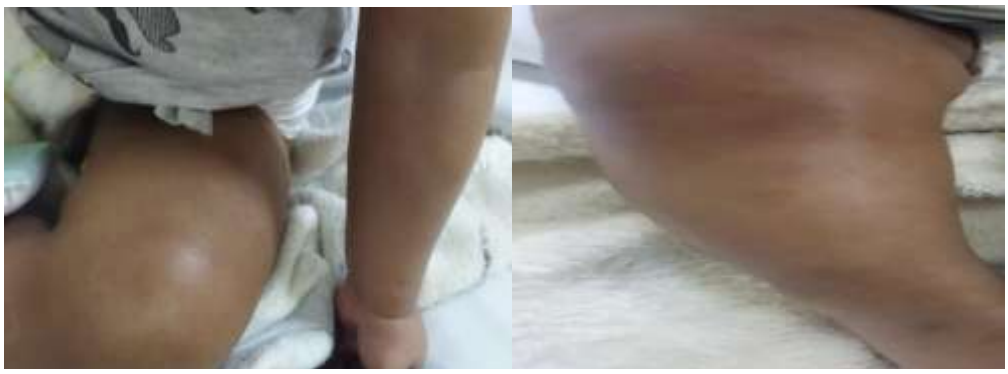
Few hours after the admission to control his high temperature, he showed frequent spiking of the fever, and developed generalized, intense itchy and erythematous urticarial wheals (hives) (Figure 1 & 2) which were evanescent and completely disappeared in hours after he had received antihistamine, steroid ointment and calamine lotion.

The child has no past medical history of food or drugs allergy. Furthermore, during the admission, he did not receive a medicine claimed to be associated with an allergy to him in the past.



Pictures 1:- Generalized wheals over different parts of the body.



Pictures 2:- Disappearance of the wheals few hours later.

Discussion:-

Different dermatological symptoms have been documented in the recent literature and they have all been linked to COVID-19. Chilblain-like lesions, variations in viral exanthem (e.g., morbilliform, varicella-like), and mucocutaneous involvement in Kawasaki-like illness and multisystem inflammatory syndrome in children (MIS-C) are all examples of cutaneous symptoms observed in children [1]. An infant with COVID-19-related symptoms, including acute urticaria, is described here.

Upper respiratory infections are a frequent precipitating factor in acute urticaria, which is defined by wheals and/or angioedema present for less than six weeks [2]. A PubMed search using the keywords ("COVID-19" OR "SARS-CoV-2") AND ("urticaria" OR "urticarial" OR "wheals" OR "hives") AND ("pediatric" OR "children" OR "paediatric") up to December 2020 reveals a dearth of reports of children experiencing urticarial eruptions as a result of COVID-19 infection. To far, only two instances of acute urticaria in children whose testing was positive for COVID-19 have been reported. A 2-month-old Spanish child was diagnosed with a widespread urticarial rash that responded well to symptomatic therapy and cleared up in five days [3]. In a similar case, a 6-year-old Italian girl also presented with urticarial lesions, fever, and desquamation of her distal extremities, all of which cleared up after four days on oral antihistamines [4].

Our patient's urticaria cleared up within hours after beginning therapy, while the effects of oral prednisolone and antihistamine on estimating the eruption's natural course cannot be ruled out. Notably, the urticarial rash appeared first, followed by the patient's other systemic signs. Timelines found in adult urticaria cases match those of children with SARS-CoV-2 infections [5], lending credence to the hypothesis that the processes driving urticaria development are similar in children and adults. Also, this case emphasizes the importance of cutaneous signs in the early diagnosis of SARS-CoV-2. Children with otherwise asymptomatic or moderate presentations should have their skin checked for any signs of infection since there have been reports of COVID-19 illness presenting with nonspecific fever or rash [3, 6-7]. Delays in testing and identification of SARS-CoV-2 infection may occur if the skin abnormalities are misdiagnosed or misclassified [8-9].

Conclusion:-

Our patient's case cannot prove a causal link between COVID-19 and her acute urticaria, but we argue that the virus should still be considered in the differential diagnosis of childhood urticaria because of the high likelihood of an association between the two in the absence of other possible eliciting factors. Since most children with COVID-19 will show no or mild symptoms, the risk of the virus spreading unchecked is high, especially as some social isolation measures, like the closure of schools, are being lifted. Urticaria, especially if it appears before other symptoms (if any), can be a useful eruption for raising suspicion and leading to a prompt diagnosis of COVID-19 in children.

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