

# SKIN LESIONS IN DERMATOLOGIC OUTPATIENT CHILDREN WITH CORONAVIRUS DISEASE 2019

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## INTRODUCTION

The coronavirus disease 2019 (COVID-19) is a multisystemic disease with varying degrees of severity caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Among the affected organs, the SARS-CoV-2 infection can present cutaneous manifestations with a significant number of reports in adults and hospitalized patients.[1] The cutaneous manifestations can occur before, simultaneously or after the systemic symptoms, therefore they can contribute to the diagnosis of the infection, especially in pre-symptomatic or oligosymptomatic patients.[2,3]

However, only a few cases of dermatological conditions related to SARS-CoV-2 were reported in children. This group has a higher frequency of mild symptoms than adults, [4] not requiring hospitalization in most cases. Therefore, dermatological lesions in outpatient children may be the only symptom of COVID-19. We report four cases of different cutaneous lesions compatible with a viral etiology in children without other symptoms, who had close contact with a sick adult and had been evaluated by dermatologists.

## CASE REPORTS

**Case one:** Girl, eight-years-old. Father, mother, and grandmother diagnosed with COVID-19. The grandmother was hospitalized for pneumonia associated with COVID-19. One week after the grandmother got sick, the child had a light exanthematous rash on face, behind the ears, on the upper dorsal region, and the sternal region. It was resolved in five days without treatment. She had all vaccinations up to date including rubella. The Serology for SARS-CoV-2 performed one month after the lesions were negative. (Fig. 1 - A).

**Case two:** Five-years-old boy presented sparse small plaques with an oval shape and little desquamation on the trunk without pruritus, compatible with Pityriasis rosea. The housekeeper had an abortion fifteen days before, having been diagnosed with COVID-19 during this hospitalization. Her husband is a hospital worker and was diagnosed with coronavirus either. The lesions resolved in fifteen days without treatment and the serology for SARS-CoV-2 performed at this time had negative results. (Fig. 1 - B).

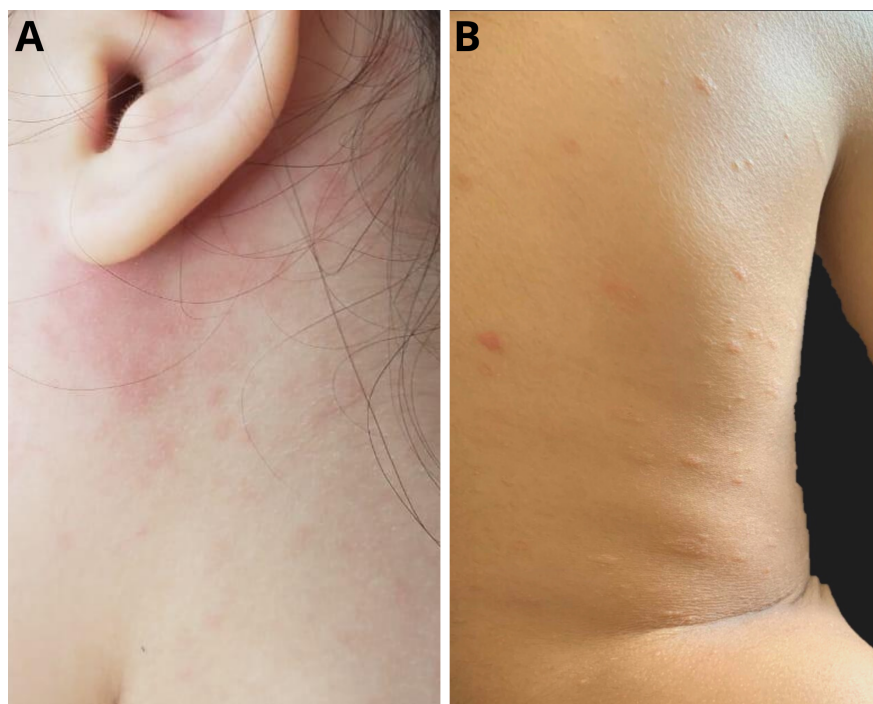


Figure 1: A - Case 1: Exanthema clearly visible behind the ear. B - Case 2: Erythematous oval plaques with light desquamation on the trunk.

**Case three and four:** Twin male brothers, 1-year-old. The father had a fever, malaise, myalgia and rhinopharyngitis with anosmia. The RT-PCR was positive for SARS-CoV-2. The children were at home for three months and there were no mosquitoes or animals in the place. After three days, the twins presented descending erythematous edematous plaques on the lower limbs, (Figure 2 - A) and one of them had a light facial rash. Two days later, the second twin presented a hypersensitivity reaction on the scrotum, with small papules following the midline and umbilicated vesicles (Figure 2 - B). The lesions regressed in three days after the use of hydrocortisone cream 1% twice a day and did not return after 3 months of follow-up. Children did not show respiratory symptoms and parents refused to perform RT-PCR. The serology tests were not performed due to cost-benefit, since results are usually negative, and the parents did not want to subject the children unnecessarily to the exam.

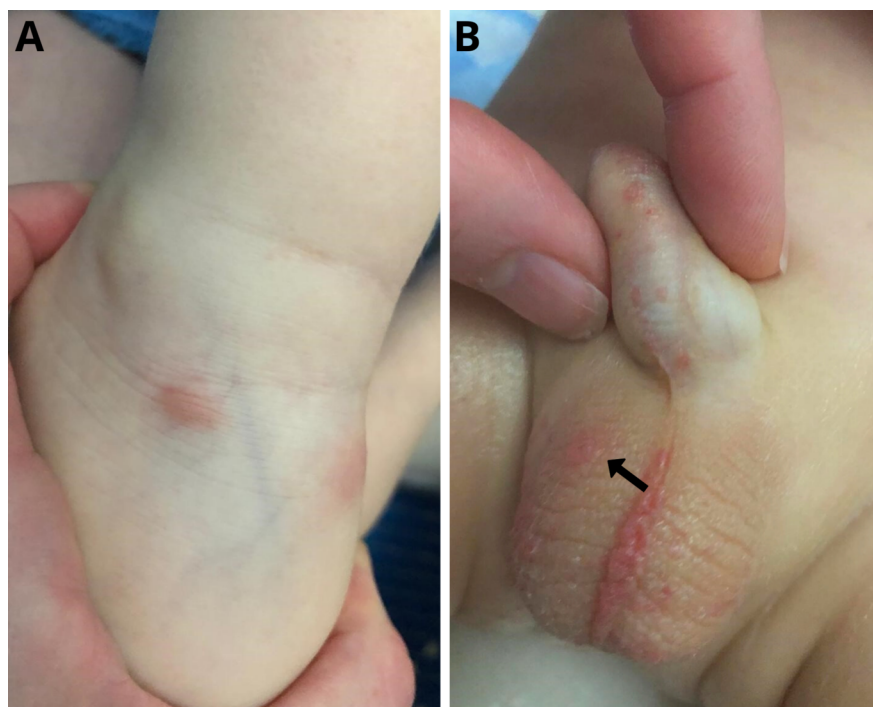


Figure 2: A - Case 3: Erythematous edematous plaques on lower limbs of one of the twin brothers. B - Case 4: Erythematous papules and vesicles in the scrotum (arrow).

## DISCUSSION

The dermatological lesions related to Sars-CoV-2 infection most reported are maculopapular lesions, urticarial lesions, erythema multiforme-like lesions, chilblain-like lesions, and varicella-like lesions associated or not with pruritus and pain.[2,5] They are similar to adults lesions and correspond to moderate to severe skin symptoms.[1,2] However, the lesions presented by outpatients are not always exactly as previously reported. Mild cutaneous lesions as light exanthematous rash, localized rashes, isolated erythematous-edematous plaques, mild Pityriasis rosea, and petechiae in localized areas were seen in this situation. These lesions may not be diagnosed as COVID -19.

Non-diagnosis can occur due to lack of suspicion,[2] need for a broad viral panel to rule out other hypotheses,[3] refusal of the family to submit children to tests,[5] and a high frequency of false-negative tests when cutaneous lesions appear without significant respiratory symptoms especially due to its quick improvement.[1,3] The key to diagnosis is the close contact with a symptomatic adult and this information should be exhaustively sought. Despite the high frequency of negative results, whenever possible, laboratory tests should be performed, including serology for other viruses such as parvovirus, cytomegalovirus, rubella, and herpes virus.

The mild skin lesions do not require treatment in most cases. When treatment is necessary, short courses of topical corticosteroids associated with antihistamines in case of itching are enough. These cases corroborate the idea that children have a good prognosis and reinforce that the number of cases of COVID-19 is greater than the official statistics, especially in the pediatric population.

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