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**COVID-19 AND ERYTHEMA MULTIFORME: CLINICAL CONTEXT**

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**კოვიდ-19 და მრავალფორმიანი ერითემა: კლინიკური კონტექსტი**  
 კანვენი - კანისა და ვენსნეულებათა ს/კ ეროვნული ცენტრი

### რეზიუმე

კოვიდ-19-ის კანის მანიფესტაციები მნიშვნელოვან როლს თამაშობს დაავადების დიაგნოსტიკასა და მიმდინარეობის შეფასებაში. ჩატარებული კვლევები გვანვდის მნიშვნელოვან ინფორმაციას კორონავირუსით დაავადებული სხვადასხვა ასაკის პაციენტებში კანზე გამონაყარის შესახებ. არსებობს კვლევებიც, რომლებიც აღწერს მრავალფორმიანი ერითემის გამონაყარის გაჩენას კოვიდ-19-ის მქონე პაციენტებში. ჩვენ განვიხილავთ კავშირს კოვიდ-19 და მრავალფორმიან ერითემას შორის კლინიკურ კონტექსტში.

წარმოგიდგინოთ ორ საინტერესო შემთხვევა. პირველი შემთხვევა ეხება 19 წლის ქალს, ანამნეზში იდიოპათიური მორეციდივე მრავალფორმიანი ერითემით. ჩვენთვის საინტერესო მეორე პაციენტი იყო 22 წლის 14 კვირის ორსული ქალი. პაციენტს ჰქონდა ატოპური დერმატიტის ისტორია. პირველ შემთხვევაში, კოვიდ-19 ინფექცია არ აღმოჩნდა მრავალფორმიანი ერითემის გამწვავების მაპროვოცირებელი ფაქტორი. დაინთიცირების შემდეგ პაციენტს კანზე გამოუვლინდა ამ ინფექციასთან ასოცირებული აკრალური პურპურული გამონაყარი. მეორე შემთხვევაში კოვიდ-19 აღმოჩნდა მრავალფორმიანი ერითემის ეტიოლოგიური მიზეზი და პაციენტს განუვითარდა გამონაყარი. კოვიდ-19 ინფექციისა და მრავალფორმიანი ერითემის კლინიკურ კონტექსტში განხილვა მნიშვნელოვანია და საჭიროებს შემდგომ დეტალურ შესწავლას.

**Introduction:** Cutaneous manifestations of COVID-19 play an important role in the diagnosis and assessment of the course of the disease. Data on skin pathologies developed during coronavirus are constantly updated. The urgency of the problem is determined by the variety of skin rashes developed during the infection. Different types of rashes often remind us of other skin pathologies, so they can cause a diagnostic error.

The conducted studies provide important information about skin rashes in patients of different ages suffering from coronavirus. Commonly identified skin pathologies included: chilblain-like acral lesions, erythematous maculopapular rashes, urticarial rashes, and vascular (petechiae, purpura) patterns; Studies have also revealed cases of vesicular rash, acro-ischemia and livedoid rash. Some studies describe the appearance of an erythema multiforme-like rash in patients with COVID-19 [1-6]. We consider the link between COVID-19 and erythema multiforme in a clinical context.

**Case presentation:** We present two interesting cases related to COVID-19 and erythema multiforme. Patients were consulted at the National Center of Dermatology and Venereology for rashes.

**Case 1:** The first case refers to a 19-year-old woman with a history of idiopathic recurrent multiform erythema, with periodic exacerbations. During the previous three days, the patient had a subfebrile temperature. Then she noticed a rash on the upper and lower limbs, in the areas of the fingers and toes, for which reason she turned to our clinic for consultation. On external examination, the patient had several painful dark red purpuric lesions of different sizes, with a cyanotic tint, in the areas of the toes and fingers. It was a suggestion to make a test for COVID-19. The PSR test was positive and the patient was confirmed to have a COVID-19 infection. The patient was treated according to the recommendations of the family doctor regarding the clinical symptoms. No specific treatment was performed on the skin. The rash cleared up within 7 days of confirmation of infection. In the period of COVID-19 infection, a rash of multiform erythema was not detected.



**Case 2:** The second patient was a 22-year-old 14-week pregnant woman. The patient had a history of atopic dermatitis. On the third day after the diagnosis of COVID-19 infection, a small red papular rash started on the body and limbs. On the tenth day of infection, a multiform erythema-like rash was revealed on the upper limbs. The rash was presented in a typical form characteristic of erythema multiforme: symmetrically, with target lesions of different sizes on the upper extremities. The rash lasted for a month. The patient was treated according to the recommendations of the family doctor regarding the clinical symptoms. No specific treatment was performed on the skin.



**Discussion:** In general, erythema multiforme is considered as an immune-mediated disorder, which is characterized by a specific rash on the skin and mucous membranes. This disease is often associated with various infections. Herpes simplex virus is the most common cause. Sometimes it may be related to other viruses: mycoplasma pneumoniae, hepatitis C virus, Coxsackievirus, and Epstein Barr virus. There are also idiopathic forms and drug-induced erythema multiforme [7-10].

Interesting data were revealed by studies that determined the characteristics of erythema multiforme in COVID-19 patients. The age turned out to be different. Some studies have shown it to be more common in children, by other research erythema multiforme was detected in patients younger than 30 years or older than 55 years [1,6].

In both cases presented by us, the patient was a young woman. We discuss COVID-19 and erythema multiforme in a clinical context. In the cases reviewed by us, the relationship between multiform erythema and COVID-19 infection was revealed differently. In the first case, although the patient had a history of idiopathic recurrent multiform erythema, the COVID-19 infection was not found to be a provoking factor for the exacerbation. The patient's skin showed a common pathology associated with this infection, acral purpuric lesions. The second case was also interesting. A patient with a history of chronic atopic dermatitis developed an erythema multiforme-like rash after being infected with a COVID-19 infection. In this case, it turned out to be the reason.

**Conclusion:** COVID-19 infection should be considered as a conditional etiological factor of erythema multiforme. It may cause a rash of erythema multiforme; However, it is also noteworthy that even chronic idiopathic form of the disease may not cause exacerbation of erythema multiforme. Consideration in a clinical context of COVID-19 infection and erythema multiforme is important and requires further detailed study.

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**SUMMARY**

Cutaneous manifestations of COVID-19 play an essential role in the diagnosis and assessment of the course of the disease. The conducted studies provide important information about skin rashes in patients of different ages suffering from coronavirus. Some studies describe the appearance of an erythema multiforme-like rash in patients with COVID-19. We consider the link between COVID-19 and erythema multiforme in a clinical context.

We present two interesting cases. The first case refers to a 19-year-old woman with a history of idiopathic recurrent multiform erythema, with periodic exacerbations. The second patient of interest to us was a 22-year-old 14-week pregnant woman. The patient had a history of atopic dermatitis. In the first case, the Covid-19 infection was not found to be a provoking factor for the exacerbation of erythema multiforme. The patient's skin showed a common pathology associated with this infection, acral purpuric lesions. In the second case, COVID-19 was the reason for infection and development of an erythema multiforme-like rash. Consideration in a clinical context of Covid-19 infection and erythema multiforme is important and requires further detailed study.

**Keywords:** COVID-19; Erythema multiforme.

