Received: 27 April 2023 / Accepted: 10 August 2023 / Published online: 31 August 2023

DOI 10.34689/SH.2023.25.4.034 UDC 618.2-06:616.9:616.24-0708

A CASE OF DÜHRING'S DERMATITIS HERPETIFORMIS ASSOCIATED WITH SARS - COV - 2

Nurgul K. Sultanova¹⁻², Nurlan K. Shaimardanov¹,

¹ NJSC "Semey Medical University", Semey c., Republic of Kazakhstan;

² City multidisciplinary hospital №1 of Semey city, Semey c., Republic of Kazakhstan.

Summary

Clinical studies during the epidemic of a new coronavirus infection caused by SARS - CoV -2 confirm not only dermatropic skin lesions, but also complex immune-mediated skin complications of COVID -19, one of which is Dühring's herpetiform dermatitis.

To present a clinical case of Dühring's dermatitis herpetiformis, which developed against the background of a coronavirus infection, probably caused by the SARS - CoV - 2 virus.

Retrospective analysis of the medical history, interpretation of clinical and laboratory data in an 81-year-old patient with developed Duhring's dermatitis herpetiformis. Characteristic changes in the skin pathological process in a patient with Dühring's dermatitis herpetiformis made it possible to assume a tendency to a protracted severe course as a result of a coronavirus infection, leading to a protracted immunodeficiency state. The presented case will be of interest to therapists, infectious disease specialists, doctors of other specialties, as well as residents and students of medical universities.

Key words: Dühring's dermatitis herpetiformis, coronavirus infection.

Резюме

СЛУЧАЙ ГЕРПЕТИФОРМНОГО ДЕРМАТИТА ДЮРИНГА, ACCOLUMPOBAHHOГO C SARS-COV-2

Нургуль К. Султанова¹⁻², Нурлан К. Шаймарданов¹

¹ НАО «Медицинский университет Семей», г. Семей, Республика Казахстан;

Клинические исследования в период эпидемии новой коронавирусной инфекции, вызванной SARS-CoV-2 подтверждают не только дермотропное поражение кожи, но и сложные иммуноопосредованные кожные осложнения COVID-19, одним из которых является герпетиформный дерматит Дюринга.

Представлен клинический случай герпетиформного дерматита Дюринга, у пациентки 81 года, развившегося на фоне коронавирусной инфекции, вероятно обусловленный вирусом SARS-CoV-2. Характерные изменения кожнопатологического процесса дали возможность предположить склонность к затяжному тяжелому течению, как следствие перенесенной коронавирусной инфекции, ведущей к затяжному иммунодефицитному состоянию. Представленный случай будет интересен для терапевтов, инфекционистов, врачей других специальностей, а также резидентов, студентов медицинских ВУЗов.

Ключевые слова: герпетиформный дерматит Дюринга, коронавирусная инфекция.

Түйіндеме

SARS-COV-2-МЕН БАЙЛАНЫСТЫ ДЮРИНГ ҰШЫҚТӘРІЗДІ ДЕРМАТИТІ ЖАҒДАЙДЫҢ СИПАТТАМАСЫ

Нургул К. Султанова¹-², Нурлан Қ. Шаймарданов¹

- ¹ «Семей медициналық университеті» КеАҚ, Семей қ., Қазақстан Республикасы;
- ² Семей қаласының №1 қалалық көпсалалы ауруханасы, Семей қ., Қазақстан Республикасы.

SARS-CoV-2 тудырған жаңа коронавирустық инфекцияның эпидемиясы кезіндегі клиникалық зерттеулер терінің дермотропты зақымдануын ғана емес, сонымен қатар COVID-19күрделі иммундық тері асқынуларын растайды, олардың бірі Дюринг ұшықтәрәзді дерматиті.

SARS-CoV-2 вирусынан туындаған коронавирустық инфекцияның үстінен дамыған ұшықтәрізді Дюринг дерматитінің клиникалық жағдайының 81 жастағы науқаста презентациясы.

Дюринг ұшықтәрізді дерматиті науқаста терінің патологиялық тән өзгерістері ұзаққа созылған ауыр ағымға бейімділік иммун тапшылығы жағдайына әкелетін коронавирустық инфекцияға байланысты деп болжауға мүмкіндік берді. Осы оқиға терапевт,инфекционист, басқа мамаң дәрігерлеріне және медициналық ЖОО студенттеріне, резиденттеріне қызығушылық көрсетеді.

Түйін сөздер: Дюрингтің ұшықтәрізді дерматиті, коронавирусты инфекция.

² Городская многопрофильная больница №1 города Семей, г. Семей, Республики Казахстан.

Bibliographic citation:

Sultanova N.K., Shaimardanov N.K. A case of Dühring's dermatitis herpetiformis associated with SARS - CoV -2 // Nauka i Zdravookhranenie [Science & Healthcare]. 2023, (Vol.25) 4, pp. 278-281. doi 10.34689/SH.2023.25.4.034

Султанова Н.К., Шаймарданов Н.К. Случай герпетиформного дерматита Дюринга, ассоциированного с SARS-CoV-2 // Наука и Здравоохранение. 2023. 4 (T.24). С. 278-281. *doi 10.34689/SH.2023.25.4.034*

Сұлтанова Н.К., Шаймарданов Н.Қ. SARS-CoV-2-мен байланысты Дюринг ұшықтәрізді дерматиті жағдайдың сипаттамасы // Ғылым және Денсаулық сақтау. 2023. 4 (Т.25). Б. 278-281. doi 10.34689/SH.2023.25.4.034

Introduction

Studies around the world have identified a number of potential dermatological manifestations of COVID -19 [1-8]. Reports on the prevalence of skin manifestations in patients with COVID -19 range from less than 1% to more than 20% of patients [9-17]. Data from two large population-based studies suggest an incidence of skin manifestations in the range of 10% to 13% [13-14].

The study assessed rash, rash stinging, rash erythematopapular, rash urticaria, and unusual hair loss [15].

One of the most serious skin complications is Duhring's dermatitis herpetiformis.

Aim. Presentation of a clinical case of Dühring's dermatitis herpetiformis resulting from a respiratory infection likely due to a virus SARS - CoV -2.

Research methods. Retrospective analysis of the medical history. Clinical interpretation of complaints, anamnesis of the disease, objective somatic status data, dynamic assessment of blood parameters.

Description of the clinical case.

Patient R., 81 years old, was in the hospital from 07.03.2023 to 17.03.2023. Diagnosed with Dühring's dermatitis herpetiformis. Complaints at admission to the presence of profuse rash and skin lesions on the legs and arms, intense and persistent skin itching during the day and night, burning and tingling, tightening and soreness of the skin in the lesions, sleep disturbance, weight loss (4 kg per month).

Medical history: has been ill for 2 years after suffering a coronavirus infection (2020), when rashes first appeared on the skin of the trunk, upper and lower extremities. accompanied by severe itching. The disease has nothing to do with it. The rash spread, the itching intensified. Since that time, she has been repeatedly treated on an outpatient and inpatient basis with a temporary improvement with a diagnosis of Dermatitis of unknown etiology. Last hospitalization in February 2023. Discharged with temporary improvement. Exacerbation does not connect with anything, possibly with an error in nutrition. Independently uses sinaflan ointment in combination with baby cream, suprastin tablets. There is no effect from the treatment. She turned to the polyclinic of the KVD on 07/03/2023. She was referred for inpatient treatment in a round-the-clock hospital.

Anamnesis of life: Grew and developed according to age. Of the past diseases, the patient notes colds, appendectomy (1981), hepatitis C (2016), coronavirus infection (2020). There were no injuries. There were no blood transfusions in the next six months. Concomitant pathology: ischemic heart disease. Angina pectoris. Arterial hypertension. Tricuspid valve insufficiency, atrophic gastritis.

Tuberculosis, sexually transmitted diseases denies. Hereditary history is not burdened. Allergy to sweets. Material and living conditions are satisfactory. Pensioner.

General status: General condition is satisfactory. The position is active. Consciousness is clear. Body temperature - 36.4 C, height - 157 cm, weight - 51.5 kg. Satisfactory nutrition. The musculoskeletal system is developed correctly. Dermographism red. Peripheral lymph nodes are not enlarged. The borders of the heart are expanded, the heart sounds are muffled. Pulse rhythmic 76 beats per minute. HELL 110/70 mm Hg. Nasal breathing, exhalation, inhalation is not difficult. Vesicular breathing in the lungs, no wheezing. The pharynx is calm, the tongue is moist, lined with a thick white coating at the root. The abdomen is soft and painless. The liver is not palpable, the spleen is not palpable. Diuresis is painless, free. The chair is issued, not daily, in 4-6 days.

Local status: At admission, the skin pathological process was acutely inflammatory, widespread, symmetrical with localization on the skin in the area of the shoulder blades, shoulders, lower back, buttocks, extensor surfaces of the upper and lower extremities. Against the background of erythematous spots of rounded shape with a clear contour of various sizes of copper-red color, in some places urticaria-like formations, pink- cyanotic foci, covered with serous-hemorrhagic crusts, grouped vesicles and blisters of different diameters. From 0.2 to 2 cm, tense with a dense cover, with serous contents, multiple rounded erosions, serous-hemorrhagic crusts. foci of secondary hyperpigmentation. Nikolsky's symptom is negative.

Yadasson's test with 5% iodine solution is positive.

On the basis of complaints, anamnesis of the disease, anamnesis of life, general status, local status, a positive Yadasson test, the diagnosis was made: Duhring's dermatitis herpetiformis.

Laboratory data

From 03.03.23.Complete blood count: HGB (hemoglobin) -121, 3.90, color index - 0.9, WBC (leukocytes) - 11.74 * 10 / I, PLT (platelets) - 195 * 10 / I, stab 1%, segmented -60%, eosinophils -1, lymphocytes -36, monocytes - 2.0, ESR -5 mm/h.

General analysis of urine from 03.03. 23 years old -color - light yellow, specific gravity - 1010, no protein, squamous epithelium 0-0 in the field of view, leukocytes 1-1 in the field of view.

From 03.03.23 biochemical blood test: total protein - 67.4 g / I glucose - 4.40, ALT - 9.2, AST-12.2, total bilirubin - 4.69, cholesterol - 5.75.

From 03.07.23 smear-imprint on acantholytic cells and eosinophils - acantholytic cells were not found, eosinophils - 42%;

Fluorography from 10.02.23. without pathology, vaccinated.

ELISA dated March 9, 2023. Ig detected A - antibodies to tissue transglutaminase.

Treatment: mode 2; table number 15 (general). Glutenfree diet: exclusion of products from wheat, rye, oats, barley, millet and other cereals, seafood rich in iodine, as well as limiting the use of table salt; refusal to take iodinecontaining (halogen-containing) drugs.

Treatment: Loratal 10 mg 1 tablet 1 time per day, per os. (antihistamine)

Allergopress 20 mg - 1.0 IM once a day (antihistamine) Sodium chloride solution - 0.9% -200 ml + prednisolone 120.0 mg IV drip once a day (desensitizing)

Sodium thiosulfate solution 30% 5.0 ml IV 1 time per day.

Ascorbic acid solution 5% 2.0 ml IM once a day (antioxidant).

Omegast 20 mg once a day, in the morning per os. (proton pump inhibitor).

Ursocid 250 mg 1 capsule 1 time per day, per os. (hepatoprotector).

Lactulose 30 ml once a day, per os. (laxative).

Outwardly: Treatment with a solution of potassium permanganate 1%, methylene blue 1%, nobetasone ointment 0.1%, zinc paste - externally 2 times a day.

During the course of the treatment, we came to the following conclusions :

- 1. Dermatitis herpetiformis (HD) is a rare dermatosis that is more common in northern Europeans. It usually occurs between the ages of 25 and 55. Women get sick less often than men. In our clinical case, Dühring's dermatitis herpetiformis currently has a tendency to "growing up" of the disease. It is now common in women.
- 2. The pathological process after a coronavirus infection is prone to a protracted severe course, as a result of a coronavirus infection, leading to a protracted immunodeficiency state.
- 4. As a result of an immunodeficiency state, the skin pathological process is difficult to respond to traditional therapy. Erosions are poorly epithelialized



1 photo. On the lateral surface of the abdomen on dry infiltrated skin, there are blisters measuring 0.5-1.5 cm in diameter; erosions, hemorrhagic crusts, papules ranging in size from 0.5 to 2.0 cm in diameter.



2 photo. The pathological process spreads to the skin of the chest, abdomen, upper and lower extremities. Papular rash from 0.5 to 1.5 cm in diameter, vesicles, blisters, erosions, hemorrhagic crusts, excoriations.



3 photo. On the skin of the right breast there are fresh blisters, erosions, serous crusts, and a papular rash.

The presented case will be of interest to therapists, infectious disease specialists, doctors of other specialties, as well as residents and students of medical universities.

Authors' contributions:

All authors made equal contributions to the writing of this article.

Funding: No third party funding was provided.

Conflict of interest: The authors declare no conflict of interest.

Publication information: This material has not been published in other publications and is not under consideration in other publications.

Literature:

1. Calvan Casas C., Catala A., Carretero Hernandez G. et al. Classification of the cutaneous manifestations of COVID-19: a rapid prospective nationwide consensus study in Spain with 375 cases // Br. J. Dermatol. 2020. 183:71.

- 2. Daneshgaran G., Dubin D.P., Gould D.J. Cutaneous Manifestations of COVID-19: An Evidence-Based Reviev // Am J Clin Dermatol. 2020. 21:627.
- 3. de Masson A., Bouaziz J.D., Sulimovic L. et al. Chilblains is a common cutaneous finding during the COVID-19 pandemic; A retrospective nationwide study from France // J. Am. Acad. Dermatol. 2020. 83:667.
- 4. Freeman E.E., McMahon D.E., Lipoff J.B. et al. Pernio-like skin lesions associated with COVID-19: A case series of 318 patients from 8 countries // J Am Acad Dermatol. 2020. 83:486.
- 5. Freeman E.E., McMahon D.E., Fitzgerald M.E. et al. The American Academy of Dermatology COVID-19 registry: Crowdsoursing dermatology COVID-19 // J Am Acad Dermatol. 2020. 83:509.
- 6. Guan W.J., Ni Z.Y., Hu Y. et al. Clinical Characteristics of Cutaneous Disease 2019 in China // N Engl J Med. 2020. 382:1708.
- 7. Madigan L.M., Micheletti R.G., Shinkai K. How Dermatologists Can learn and Contribute at the Leading Edge of the COVID-19 Global Pandemic // JAMA Dermato.I 2020. 156:733.
- 8. Marzano A.V., Genovese G., Moltrasio C. et al. The clinical spectrum of COVID-19 associated cutaneous manifestations: An Italian multicenter study of 200 adult patients // JAM Acad Dermatol. 2021. 84:1356.
- 9. Mascitti H., Jourdain P., Bleibtreu A. et al. Prognosis of rash and chilblain-like lesions among

- outpatientswith COVID -19: a large cohort study // Eur J Clin Microbiol Infect Dis. 2021. 40:2243.
- 10. Rajan M.B., Kumar M.P., Bhardwaj A. The trend of cutaneous lesions during COVID-19 pandemic: lessons from a meta-analysis and systematic review // Int J Dermatol. 2020. 59:1358.
- 11. Recalcati S., Gianotti R., Fantini F. COVID-19: The experience from Itali // Clin Dermatol. 2021. 39:12.
- 12. Recalcati S. Cutaneous manifestations in COVID-19: a first perspective // J Eur Acad Dermatol Venerol. 2020, 34:e 212.
- 13. Sameni F., Hajikhani B., Yaslianifard S. et al. COVID-19 and Skin Manifestations: An Overview of case Reports / Case Series and Meta-Analysis of Prevalence Studies // Front Med (Lausanne). 2020. 7:573188.
- 14. Sugai T., Fujita Y., Inamura E. et al. Prevalence and patterns of cutaneous manifestations in 1245 COVID-19 patients in Japan a single- ctntre study // J EUR Acad Dermatol Venerol. 2022. 36:e522.
- 15. *Tan* S.W., *Tam* Y.C., *Oh* C.C. Skin manifestationsof COVID-19: A worldwide review // JAAD Int 2021. 2:119.
- 16. Visconti A., Bataille V., Rossi N. et al. Diagnostic value of cutaneous manifestation of SARS-CoV-2 infection // Br J Dermatol. 2021. 184:880.
- 17. Visconti A., Murray B., Rossi N. et al. Cutaneous manifestations of SARS-CoV-2 infection during the Delta and Omicron waves in348 691 UK users of the UK ZOE COVID Study app // Br J Dermatol. 2022. 187:900.

Sultanova Nurgul Karibaevna - Associate Professor of the Department of Infectious Diseases, Dermatovenereology and Immunology of Semey Medical University NCJSC, the Ministry of Health of the Republic of Kazakhstan.

Postal address: Republic of Kazakhstan Semey, Abay street 103.

E-mail: nksultanova@mail.ru **Contact phone**: +7 705 520 54 26