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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии
საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

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GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

WEBSITE

www.geomednews.com

К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman (Кириллица)**, для текста на грузинском языке следует использовать **AcadNusx**. Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - <http://www.spinesurgery.ru/files/publish.pdf> и http://www.nlm.nih.gov/bsd/uniform_requirements.html В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректур авторам не высылаются, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or computer-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface - **Times New Roman (Cyrillic)**, print size - 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform_requirements.html
http://www.icmje.org/urm_full.pdf

In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

**Articles that Fail to Meet the Aforementioned
Requirements are not Assigned to be Reviewed.**

ავტორთა საქურაღებოლ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დაიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx**. შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შედეგის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფხიხლებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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COVID-19 ASSOCIATED REACTIVATION OF HERPES INFECTION WITH THE DEVELOPMENT OF ENCEPHALITIS: A CASE REPORT

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Abstract.

Background: The etiology of meningoencephalitis with COVID-19 is coronavirus and herpetic. Secondary herpes infection is associated with immunological dysregulation or with the use of tocilizumab. Differential diagnosis of the etiology of encephalitis is important, because acyclovir is effective for herpes infection.

Case Report: A 38-year-old man with right-sided lower lobe pneumonia COVID-19 was hospitalized in the infectious diseases department. On the 6th day of hospitalization, the patient developed respiratory failure and was transferred to the anesthesiology and intensive care unit. We started noninvasive lung ventilation, which was ineffective, and the patient was intubated and started on MVL. MRI data: encephalitis of the frontal, parietal and occipital lobes on the left. On the 14th day, we detected a herpetic rash on the legs and thighs in the projection of the sciatic nerve. We suspected the patient had a herpes infection and prescribed acyclovir 1000 mg intravenously 3 times a day. On the 32nd day, a blood test by IFA revealed class G antibodies to the Viral Capsid Antigen (VCA) of the Epstein-Barr virus. On the 58th day, he was discharged home in a satisfactory condition.

Conclusions: Given the extraordinary strain on healthcare systems amid the pandemic, there are challenges in diagnosing herpes infection in patients with COVID-19. The alertness of doctors about the development of herpes infection and its clinical signs is important. This will allow for early antiherpetic treatment.

Key words. COVID-19, Herpes simplex virus, Epstein-Barr virus, encephalitis, cytomegalovirus, respiratory distress syndrome.

Abbreviations. RDS: Respiratory Distress Syndrome; HSV: Herpes Simplex Virus; EBV: Epstein-Barr Virus; NIV: Noninvasive Lung Ventilation; aPTT: activated Partial Thromboplastin Time; IFA: Immunofluorescence Assay; MRI: Magnetic Resonance Imaging; VCA: Viral Capsid Antigen; CMV: Cytomegalovirus; CSF: Cerebrospinal Fluid.

Introduction.

In addition to the usual symptoms of COVID-19 (cough, fever, fatigue), as well as manifestations such as pneumonia, damage to the central nervous system (meningitis, encephalitis, acute cerebrovascular accident, transverse myelitis, direct effects on peripheral nerves) may develop [1,2]. There are data and assumptions that the impact of COVID-19 infection on immunological dysregulation, psychological stress can cause the addition of a secondary infection to attach [3].

Some data suggests that COVID-19 infection may contribute to the activation of herpes infection in patients [4]. A. Meyer et al. showed that Herpes simplex virus - 1 (HSV) reactivation is associated with increased mortality in critically ill COVID-19 patients [5]. Probably, a violation of the immune response in COVID-19 can lead to reactivation of HSV infection with the development of encephalitis [6], as well as reactivation of the Epstein-Barr virus (EBV) [7].

In this article, we present a discussion of a clinical case of COVID-19. The initial manifestation was respiratory distress syndrome (RDS), later encephalitis with right-sided hemiparesis was diagnosed, with Epstein-Barr virus reactivation.

Written informed consent was obtained from the patient for the publication of this clinical case. The permission of Ethics Committee (Protocol №5 07/09/2022) has been obtained for the publication of this clinical case.

Case Description.

On November 17, 2020, a 38-year-old man with no known comorbidities was admitted to the hospital. Complaints at admission: fever up to 39°C for 6 days, headache in the forehead, cough with sputum, sweating and pain in the joints. During a medical examination, the score on the Glasgow coma scale is 15 points, body temperature is 38.6°C, blood pressure is 140/80 mm Hg, heart rate is 105 beats per minute, (SpO₂) 96%. According to X-ray examination of the chest: right-sided lower lobe pneumonia. Venous blood gas composition (FiO₂ - 21%): pH - 7.395, pCO₂ - 33.5 mmHg, pO₂ - 82.4 mmHg, cLac - 1.6 mmol/l. Diagnosis: Out-of-hospital right-sided lower lobe pneumonia of moderate severity. COVID-19. PCR-test for COVID-19 (18/11/2020) is positive. The patient was hospitalized in the infectious diseases department. Treatment: ambroxol, paracetamol, azithromycin, omeprazole, dexamethasone, heparin.

On the 6th day of hospitalization, the patient developed respiratory failure: shortness of breath up to 27 per minute, heart rate - 126 beats/min, SpO₂ - 79% against the background of insufflation with humidified O₂ flow of 15 l/min in the prone-position. The patient was transferred to the Department of Anesthesiology and Intensive Care (DAIC).

The gas composition of venous blood (immediately after transport to DAIC): FiO₂ - 21%, pH - 7.363, pCO₂ - 49.5 mmHg, pO₂ - 17.4 mmHg, cLac - 2.6 mmol/l. We set up high-flow O₂ therapy with a flow of 30 L/min, which was ineffective for 6 hours. We started non-invasive lung ventilation (NIV) in CPAP/PSV mode, FiO₂ - 90%, PEEP - 6 mbar, Ppeak - 17 mbar, Vt - 520 ml, MV - 8.9 l/min in prone-position. The gas composition of arterial blood against the background of NIV: pH - 7.453,

pCO₂ - 35.3 mmHg, pO₂ - 68.6 mmHg, Lac - 1.2 mmol/l. We catheterized the right internal jugular vein.

Therapy: dexamethasone, omeprazole, acetylsalicylic acid. We titrated intravenous heparin 1000 U/h under the control of activated partial thromboplastin time (aPTT) (target Ratio 1.5 - 2) and control of antithrombin-III. Infusion therapy with crystalloids in the volume of the daily requirement. Hydroxychloroquine 200 mg orally. Given the increase in respiratory failure, the level of interleukin-6 is 86.61 pg/ml, we prescribed tocilizumab at a dose of 400 mg intravenously. We assumed the rapid addition of bacterial and fungal infection against the background of the introduction of tocilizumab. Therefore, we immediately prescribed imipenem-cilastatin, variconazole.

On the 10th day, the patient is clinically improved. We have established high-flow O₂ therapy (flow 30 l/min.).

On the 11th day, respiratory failure increased. The patient was intubated and put on mechanical ventilation in PSIMV mode: FiO₂ - 100%, PEEP - 10 mbar, Pins - 25 mbar, Ppeak - 30 mbar, I:E=1:1.3, Vt - 510-570 ml, MV - 10.0 l / min, SpO₂ - 89-90% in the prone position. Sedation and synchronization with a ventilator with propofol and intravenous morphine. Relaxation - atracurium intravenously. Antibacterial therapy: imipenem-cilastatin (procalcitonin level 3.35 ng/ml). The patient developed diarrhea, which we regarded as antibiotic-associated diarrhea. For this reason, we prescribed vancomycin orally. Antiviral therapy: remdesivir. Probe nutrition assimilates in full. Blood gas composition after the start of mechanical ventilation: pH - 7.173, pCO₂ - 59.2 mmHg, pO₂ - 109 mmHg, Lac - 3.2 mmol/L, Base - -6.3 mmol/L.

On the 12th day, the patient developed an attack of tonic-clonic convulsions - it was stopped by intravenous administration of thiopental, then sedation with intravenous diazepam. Continued mechanical ventilation, sedation, tube feeding.

On the 14th day, we revealed a herpetic rash on the shins and thighs in the projection of the sciatic nerve.

On the 18th day, we performed magnetic resonance imaging (MRI) of the brain. Conclusion: MRI data for encephalitis of the frontal, parietal and occipital lobes on the left. The study of cerebrospinal fluid in table 1. Performed tracheostomy. Examination by a neurologist: encephalitis of unspecified etiology (Covid-associated, herpetic?) with right-sided hemiparesis. We suspected that the patient had a herpes infection and prescribed acyclovir 1000 mg intravenously 3 times a day. For immunoreplacement therapy, human immunoglobulin was administered intravenously.

Table 1. Analysis of cerebrospinal fluid.

Indicators/Results per day	18day	22day
Color	Colorless	Colorless
Quantity	2 ml	1 ml
Transparency	Transparent	Transparent
total protein	0.12 g/l	0.03 g/l
Glucose	4.0	
chlorides	115	
cytosis	1.0x10 ⁶ /L	1.0x10 ⁶ /L

On the 29th day, a blood test by Immunofluorescence assay (IFA) revealed Ig G to the cytomegalovirus (CMV), HSV 1 and 2 from 12/15/2020.

On the 30th day, the patient was weaned off the ventilator.

On the 32nd day, a blood test by IFA revealed class G antibodies to the Viral Capsid Antigen (VCA) of the Epstein-Barr virus dated 12/18/2020.

On the 42nd day of MRI - MRI data for encephalitis of the frontal, parietal and occipital lobes on the left.

On the 58th day he was discharged from the hospital in a satisfactory condition.

After 1 year and 8 months, we contacted the patient. The patient told us that he did not have a neurological deficit, he fully recovered and returned to his previous work, he did not have any restrictions in daily life. The convulsions didn't recur.

Discussion.

The most common manifestation of COVID-19 is respiratory symptoms. However, cases have been described where respiratory symptoms were mild and the most significant symptoms were neurological [7]. Our patient had severe respiratory failure requiring invasive mechanical ventilation and meningoencephalitis with severe neurological symptoms.

PCR-test of the CSF allows a reliable diagnosis of COVID-19 encephalitis [8]. PCR-test of CSF would allow us to differentiate the etiology of encephalitis (COVID-19 VS HSV), but at that time we did not have the technical capability to conduct this analysis.

Based on various publications, as well as on the results of IFA, in our case, a combination of these two types of viral infection cannot be ruled out. A variant of the joint etiology of encephalitis is possible [4,5]. Given the publications on HSV reactivation in patients with COVID-19 (PCR detection of HSV in blood samples and endotracheal aspirates [5]), we suspected a possible generalized herpes infection in our patient. They performed a blood test by IFA and found class G antibodies to HSV and CMV. Later, we identified class G antibodies to the Epstein-Barr virus VCA capsid antigen by IFA.

According to De Paschale M et al. isolated VCA IgG can be detected in acute EBV infection with delayed or early disappearance of VCA IgM. This situation can be detected in about 7% of cases and in 8% of all patients with one marker of EBV infection [9]. Thus, in our patient, acute EBV infection or EBV reactivation due to severe COVID-19 infection with encephalitis cannot be excluded.

The data obtained could also indicate a pre-existing infection.

Unfortunately, we were not technically able to perform a PCR study of the patient's CSF to detect SarsCov2, HSV, CMV, or EBV. This would simplify the differential diagnosis of the etiology of encephalitis. Also, at that time, it was inappropriate to perform a VCA IgG avidity test for differential diagnosis of acute and past infections [9]; this would lead to a loss of time for the appointment of acyclovir. And according to the literature, in a laboratory situation like ours (with the need for a VCA IgG avidity test to confirm the diagnosis), it is necessary to have clinical information about the manifestations of the infection [9,10]. In our case, both clinically and according to the MRI study, encephalitis was confirmed.

Reactivation of Varizella Zoster virus cannot be ruled out, but it was not possible to make a diagnosis in that situation. But the patient received acyclovir, which covers the spectrum of Varizella Zoster virus.

As shown by previous publications, the treatment of EVB is successfully carried out with acyclovir [11]. This was also demonstrated in our case.

The use of steroids and tocilizumab could cause a decrease in immune activity, which led to the generalization of herpes infection [12,13].

Conclusion.

The clinical case we have described once again confirms the possibility of combining COVID-19 with the generalization of a herpes infection. Generalization of a herpes infection may be triggered by a coronavirus infection or immunodeficiency as a result of the use of tocilizumab (and possibly a combination of these two factors). The alertness of doctors regarding the possible generalization of a herpes infection, as well as early diagnosis, will allow prescribing antiherpetic treatment at an earlier date.

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Conflicts of interest.

None.

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