Western European Journal of Medicine and Medical Science
Volume 2, Issue 5, May, 2024
https://westerneuropeanstudies.com/index.php/3
ISSN (E): 2942-1918 Open Access| Peer Reviewed

ASSESSMENT OF DYNAMICS OF HEMOSTASIS SYSTEM INDICATORS AND INFLAMMATION MARKERS IN PATIENTS WITH CORONAVIRUS INFECTION

Nabiyeva Farangiz Sadriddinovna
Senior lecturer at the Department of Clinical and Laboratory Diagnostics
Musayeva Firuza Ravshanovna
Clinical Resident of the Department of Clinical and Laboratory Diagnostics
Samarkand State Medical University
Uzbekistan, Samarkand

Abstract. The coronavirus infection (COVID-19) is an infectious disease that spreads rapidly all over the world and is accompanied by severe complications. Severe coagulopathy, arterial and venous thrombosis were the main causes of death in COVID-19. In addition, it was noted that the indicators of acute phase proteins in patients increased several times over the standard indicators. Inflammatory reaction, which is evident in response to coronavirus infection, can damage the blood vessel wall and lead to the activation of the hemostasis system [1,3,7,10,14].
Key words: coronavirus, COVID-19, hemostasis, D-dimer, C-reactive protein, ferritin.

Purpose of the research: The purpose of the research is to evaluate the dynamics of hemostasis system and acute phase protein indicators in patients with coronavirus infection.

Materials and research methods: The research was conducted at the Samarkand Regional Clinical Hospital of Infectious Diseases. 51 patients diagnosed with coronavirus infection participated in the research. At discharge from the hospital and after 4 months, prothrombin time, activated partial thromboplastin time (APTT), fibrinogen, D-dimer, ferritin and C-reactive protein were determined in all patients.

Research results. After treatment in the hospital, the following values of blood coagulation system indicators were observed in patients. Quick prothrombin time 84-91% (88%), APTT 29-32.7 s (31.2 s), fibrinogen 3.0-3.9 g/l (3.5 g/l), D-dimer 503-2183 ngFEU/ ml (951 ngFEU/ ml). It was found that the level of D-dimer in the blood of the patients was 1.6 times higher than the normal values, while other values corresponded to the normal values. When patients were re-analyzed after 4 months, the prothrombin time according to Quick increased by 1.25 times - 109% (101-123), APTT decreased by 1.2 times - 25.9 s (24.4-27.3), it was also found that the level of D-dimer decreased by 2.5 times - 340 ngFEU/ml (220-520) [8,9]. These changes showed the normalization of the activity of the external and internal coagulation pathways due to the cancellation of anticoagulant drugs prescribed for the prevention of thrombus formation, the marker of thrombus formation was an increase in the level of D-dimer in the hospital stage. After 4 months, the decrease of D-dimer concentration

Western European Journal of Medicine and Medical Science
Volume 2, Issue 5, May, 2024
https://westerneuropeanstudies.com/index.php/3
ISSN (E): 2942-1918 Open Access| Peer Reviewed

to normal values reflects the restoration of anticoagulant and fibrinolytic blood systems [2,4,5,11].

Acute phase proteins ferritin and C-reactive protein were also analyzed in dynamics. At the time of discharge from the hospital, ferritin level in patients was 2.9 times higher than the upper limit of reference indicators - 440 ng/ml (286-607), C-reactive protein was at the upper limit of reference indicators - 5 mg/l (2- 14.5). After 4 months, a decrease in acute phase proteins was observed: ferritin 3.2 times to 139 ng/ml (86-237), C-reactive protein to 1 mg/l (0-5). This dynamic indicates that the symptoms of the inflammatory response caused by the coronavirus infection have disappeared [6,12,13].

Conclusion: The four-month recovery period after coronavirus infection is accompanied by the normalization of the activity of the blood fibrinolytic system and the level of inflammatory markers.

REFERENCES:

1. Авдонина А.С., Марданлы С.Г. Лабораторные исследования в диагностике COVID-19 //Известия ГГТУ. Медицина, фармация. – 2020. – №. 4. – С. 32-38.
2. Бердиярова Ш.Ш. и др. ЛАБОРАТОРНАЯ ДИАГНОСТИКА КОРОНАВИРУСНОЙ ИНФЕКЦИИ //TADQIQOTLAR. – 2024. – Т. 31. – №. 1. – С. 33-38.
3. Кожокина О.М., Созина Д.А. ЗНАЧЕНИЕ ЛАБОРАТОРНЫХ ИССЛЕДОВАНИЙ В ДИАГНОСТИКЕ COVID-19 //Научные открытия 2023: сборник материалов XL-ой международной очно-заочной научно-практической конференции, в 3 т., том 1, 17 ноября, 2023–Москва: Издательство НИЦ «Империя», 2023. –182с. – 2023. – С. 139.
4. Курбонова З.Ч. Патология системы гемостаза у больных коронавирусной инфекцией, клинико-лабораторная диагностика и совершенствование путей коррекции. – 2023.
5. Набиева Ф.С., Душанова Г.А., Бобокулов О.О. Значение иммуноферментного анализа в диагностике инфекционных заболеваний //Вестник науки и образования. – 2021. – №. 4-1 (107). – С. 54-56.
6. Ibragimova N. S., Keldiyorova S. H. K. GSh Nazarova The value of folic acid, homocysteine and endothelin-1 in the development of polycystic ovary syndrome in women of reproductive age //Central Asian Research Journal for Interdisciplinary Studies (CARJIS). – 2022. – Т. 2. – №. 10.
7. Kudratova Z. E.Isomadinova L. K.Sirojeddinova S. F. Tursunova M. E.Current modern etiology of anemia. novateur publications international journal of innovations in engineering research and technology. № 10. 2023, P. 1-4.
8. Бердиярова Ш.Ш., Юсупова Н.А. Особенности иммунометаболических нарушений иммунологической реактивности при гематогенных остеомиелитах, Вестник науки и образования, 29-32

Western European Journal of Medicine and Medical Science
Volume 2, Issue 5, May, 2024
https://westerneuropeanstudies.com/index.php/3
ISSN (E): 2942-1918 Open Access| Peer Reviewed

9. Ибрагимова Н. С., Юсупова Н. А., Мамадиёрова М. А. К. Клиническая картина гипоксически-ишемической энцефалопатии у новорождённых с разным сроком гестации //European science. – 2021. – №. 2 (58). – С. 14-16.
10. Isomadinova L.K. Qudratova Z.E. Shamsiddinova D.K. Samarqand viloyatida urotiliaz kasalligi klinik-kechishining o'ziga xos xususiyatlari. Central asian journal of education and innovation №10. 2023, P. 51-53
11. Бердиярова Ш.Ш., Юсупова Н.А., Ширинов Х.И. Клинико-лабораторная диагностика внебольничных пневмоний у детей, Вестник науки и образования, 80-83
12. Mamatova M.N., Kadirov J.F. Biological Features of the Rabies Virus. TELEMATIQUE Volume 22 Issue 1, 2023
13. RAYIMOVA F. et al. The role of VDR and TNF gene polymorphism in cytokine regulation in type I diabetes mellitus of the Uzbek population, Samarkand, Uzbekistan //Biodiversitas Journal of Biological Diversity. – 2024. – Т. 25. – №. 3.
14. Nabiyeva F. S., Umirkulova S. I. MODERN DIAGNOSTIC CAPABILITIES VITAMIN B12 DEFICIENCY //TADQIQOTLAR. – 2024. – Т. 31. – №. 2. – С. 82-89.

Western European Journal of Medicine and Medical Science
Volume 2, Issue 5, May, 2024
https://westerneuropeanstudies.com/index.php/3
ISSN (E): 2942-1918 Open Access| Peer Reviewed

REFERENCES:

1. Кулаков Ю. К. и др. Метод ПЦР в лабораторной диагностике бруцеллеза //Эпидемиология и вакцинопрофилактика. – 2010. – №. 2. – С. 29-33.

2. Ермолаева И. А. ЛАБОРАТОРНАЯ ДИАГНОСТИКА БРУЦЕЛЛЕЗА //Редакционная коллегия. – 2022. – С. 54.

3. Фазылов В. Х. и др. Диагностика и лечение хронического бруцеллеза в реальной практике //Практическая медицина. – 2014. – №. 7 (83). – С. 75-79.

4. ШШ Бердиярова, НА Юсупова. Особенности иммунометаболических нарушений иммунологической реактивности при гематогенных остеомиелитах. Вестник науки и образования, 29-32.

5. Клинико-лабораторная диагностика внебольничных пневмоний у детей ШШ Бердиярова, НА Юсупова, ХИ Ширинов Вестник науки и образования, 80-83.

6. Ибрагимов Б.Ф., Ибрагимова Н.С. Роль гомоцистеина в патогенезе синдрома поликистозных яичников у женщин International scientific review, Boston, USA. January 22-23, 2020.
7. Душанова Г.А., Набиева Ф.С., Садинова М.Ж., Нурматова Д.М. Анализ взаимосвязей параметров иммунного гомеостаза с состоянием системы ПОЛ-АОС // Вестник науки и образования, 2021. № 2 (105). Часть 2.
8. BS Shukurullayevna, IL Kamolidinovna, KZ Nabijonovna. Differential diagnosis of alcoholic and viral hepatitis. World Bulletin of Public Health 21, 8-11.
9. Ибрагимова Н.С., Набиева Ф.С., Умарова С.С. Оценка значимости клинико-лабораторных и инструментальных методов исследования при диагностике эхинококкоза // International scientific review, Boston, USA. December 22-23, 2019.
10. Umarova S.S., Nabiyeva F.S., Ibragimova N.S. Early diagnostics of echinococcosis in children // European research: innovation in science, education and technology. London, United Kingdom. January 9-10. C. 88-90, 2020.
11. Isomadinova L. K., Kudratova Z. E. Clinical and laboratory characteristics of vomiting in pregnant women in early pregnancy //Doctor's herald journal. – 2023. – Т. 2. - С. 52-56.
12. Kudratova Z. E., & Shamsiddinova M. Sh. (2023). LABORATORY METHODS FOR DIAGNOSING UROGENITAL CHLAMYDIA. Open Access Repository, 10 (10), 5–7.

Western European Journal of Medicine and Medical Science
Volume 2, Issue 5, May, 2024
https://westerneuropeanstudies.com/index.php/3
ISSN (E): 2942-1918 Open Access| Peer Reviewed

13. Kudratova Z. E. et al. CURRENT MODERN ETIOLOGY OF ANEMIA //Open Access Repository. – 2023. – Т. 10. – №. 10. – С. 1-4.
14. Clinical and laboratory characteristics of chronic osteomyelitis in children BS Sh, AY Sh, NA Yusupova, NK Murtazaeva

15. Sabirovna I. N., Shekhrozovna B. F. DIAGNOSTIC CRITERIA AND TREATMENT OF TYPE 2 DIABETES MELLITUS //Galaxy International Interdisciplinary Research Journal. – 2023. – Т. 11. – №. 10. – С. 237-240.
16. Sabirovna I. N. et al. Dysfunctions of the Immune System and Their Role in the Development of Diseases //The Peerian Journal. – 2023. – Т. 23. – С. 49-52.
17. Yusupova N., Firdavs O. Energy drinks. The composition of energy drinks and the effect on the body of their individual components //Thematics Journal of Microbiology. – 2022. – Т. 6. – №. 1.

18.Tursunov Feruz O'Ktam O'G'Li, Raximova Gulchiroy Olim Qizi, Isroilova Umidaxon, Turayeva Shaxnoza ASSESSMENT OF CARBOHYDRATE METABOLISM IN PATIENTS WITH DIABETES AND COVID-19 // ReFocus. 2022. №4.

19. Burkhanova D. S., Tursunov F. O., Musayeva F. THYMOMEGALY AND THE STATE OF HEALTH OF CHILDREN IN THE FIRST YEAR OF LIFE //Galaxy International Interdisciplinary Research Journal. – 2023. – Т. 11. – №. 10. – С. 62-64.

20. Feruz O'ktam o'gli T., Mengdobilovich M. N. ANALYSIS OF GLYCEMIA AND GLUCOSURIA IN PATIENTS WITH DIABETES AND COVID-19 //Open Access Repository. – 2023. – Т. 4. – №. 2. – С. 177-181.