

SCI-CONF.COM.UA

SCIENCE AND SOCIETY: MODERN TRENDS IN A CHANGING WORLD



**PROCEEDINGS OF VI INTERNATIONAL
SCIENTIFIC AND PRACTICAL CONFERENCE
MAY 13-15, 2024**

**VIENNA
2024**

SCIENCE AND SOCIETY: MODERN TRENDS IN A CHANGING WORLD

Proceedings of VI International Scientific and Practical Conference

Vienna, Austria

13-15 May 2024

Vienna, Austria

2024

UDC 001.1

The 6th International scientific and practical conference “Science and society: modern trends in a changing world” (May 13-15, 2024) MDPC Publishing, Vienna, Austria. 2024. 517 p.

ISBN 978-3-954754-01-4

The recommended citation for this publication is:

Ivanov I. Analysis of the phaunistic composition of Ukraine // Science and society: modern trends in a changing world. Proceedings of the 6th International scientific and practical conference. MDPC Publishing, Vienna, Austria. 2024. Pp. 21-27. URL: <https://sci-conf.com.ua/vi-mizhnarodna-naukovo-praktichna-konferentsiya-science-and-society-modern-trends-in-a-changing-world-13-15-05-2024-viden-avstriya-arhiv/>.

Editor

Komarytskyy M.L.

Ph.D. in Economics, Associate Professor

Collection of scientific articles published is the scientific and practical publication, which contains scientific articles of students, graduate students, Candidates and Doctors of Sciences, research workers and practitioners from Europe, Ukraine and from neighbouring countries and beyond. The articles contain the study, reflecting the processes and changes in the structure of modern science. The collection of scientific articles is for students, postgraduate students, doctoral candidates, teachers, researchers, practitioners and people interested in the trends of modern science development.

e-mail: vienna@sci-conf.com.ua

homepage: <https://sci-conf.com.ua>

©2024 Scientific Publishing Center “Sci-conf.com.ua” ®

©2024 MDPC Publishing ®

©2024 Authors of the articles

TABLE OF CONTENTS

AGRICULTURAL SCIENCES

1. *Nikolayev K. D.* 13
ROLE OF THE GERMAN UPRIGHT IN THE ECOLOGICAL WORLD
2. *Антал Т. В., Демченко Н. О.* 17
СТРУКТУРНІ ПОКАЗНИКИ ТА УРОЖАЙНІСТЬ РІПАКУ
ОЗИМОГО ЗАЛЕЖНО ВІД ТЕХНОЛОГІЇ ВИРОЩУВАННЯ

VETERINARY SCIENCES

3. *Горюк Ю. В., Лазоренко А. В., Косташ А. О.* 21
ІМУНОЛОГІЧНІ АСПЕКТИ РОЗВИТКУ ДЕМОДЕКОЗУ СОБАК
4. *Малюк М. О., Коваленко Д. О.* 24
ГІСТОЛОГІЧНЕ ДОСЛІДЖЕННЯ ПРОЦЕСУ ЗАГОЄННЯ СТІНКИ
ШЛУНКУ КРОЛЯ ПІСЛЯ ПРОВЕДЕННЯ ГАСТРОТОМІЇ

BIOLOGICAL SCIENCES

5. *Севастьянова І. Ю., Максименко Ю. В.* 28
ОСОБЛИВОСТІ ВИКОРИСТАННЯ КОНЮШИНИ ЛУЧНОЇ

MEDICAL SCIENCES

6. *Andrusovych I. V.* 31
DETERMINATION OF THE DEGREE OF INFLAMMATORY
RESPONSE IN PATIENTS WITH COVID-19 INFECTION BY
INTERLEUKIN-6 LEVELS
7. *Idiev Z. Z., Abdukayumov A. A.* 34
FUNCTIONAL ENDOSCOPIC SINUS SURGERY IN CHILDREN
WITH CHRONIC SINUSITIS
8. *Yakobchuk A., Khrapach V.* 36
RELEVANCE AND CURRENT STATE OF STUDY PROBLEMS OF
ASYMMETRY OF THE MAMMARY GLANDS
9. *Аскарьянц В. П., Фатхуллаева Назокат Ильхомжон кизи,
Рустамова Мехрибону Фахриддин кизи, Абдумаликова А. А.* 44
СТРУКТУРА ТРОМБОЦИТОВ В АСПЕКТЕ ФІЗИОЛОГІЇ
10. *Дзевульська І. В., Ніязметов Т. С., Семеник В. М.* 50
ОЦІНКА КІЛЬКОСТІ СПЕРМАТОГОНІЙ У ЗВІВИСТИХ
КАНАЛЬЦЯХ СІМ'ЯНИКІВ ЩУРІВ ЗА УМОВИ ВПЛИВУ
ОТРУТИ ГАДЮК VIPERA BERUS BERUS ТА VIPERA BERUS
NIKOLSKII
11. *Єгоров А. А., Тихоновський О. В., Курляк Х. В., Скрипник Л. В.* 54
МОЖЛИВОСТІ ТА ПЕРСПЕКТИВИ ФІТОТЕРАПІЇ РІЗНИХ
ФОРМ МАСТОПАТІЇ

MEDICAL SCIENCES

DETERMINATION OF THE DEGREE OF INFLAMMATORY RESPONSE IN PATIENTS WITH COVID-19 INFECTION BY INTERLEUKIN-6 LEVELS

Andrusovych Inna Volodymyrivna,
graduate student of the Department of
Infectious Diseases and
children's infectious diseases,
parasitology, Phthisiology and pulmonology
Kharkiv National Medical University,
Kharkiv, Ukraine

Introduction. An inflammatory reaction and subsequent severe organ damage play an undeniable role in the pathogenesis of disorders in patients with COVID-19 infection. Clinically, this is manifested by severe acute respiratory syndrome, which is characterized by diffuse damage to the alveoli at the level of hyaline membranes. The immune response in this case can manifest itself in the form of a cytokine storm: in the vast majority of patients, there is a significant increase in the levels of interleukin (IL)-6, IL-17A and tumor necrosis factor- α .

Stimulation of thrombosis is significantly enhanced in the presence of inflammation induced by endothelial dysfunction. In response to virus infection, the endothelium produces IL-6, which enhances its own immune response, including a state of hyperstimulation - a cytokine storm.

In addition to these cytokines, increased levels of IL-1 β , interferon- γ , and macrophage inflammatory protein are detected. At the same time, a significant impact is determined on the hemostasis link by dysregulation of endothelial integrity and function and further intensification of von Willebrand factor and adhesion molecules, in particular E-selectin, integrins and intercellular adhesion molecule type 1. Proinflammatory cytokines are an integral part of the chain of excessive thrombus formation and platelet hyperactivation.

As a result of the described process, the endothelium begins to exert proinflammatory and procoagulant effects, which are realized in the increased involvement of platelets and leukocytes in the process.

The aim of the study was to determine the risks of cytokine storm development in patients with COVID-19 infection by IL-6 levels.

Materials and methods: The study was conducted at the Department of Infectious and Children's Infectious Diseases, Parasitology, Phthisiology and Pulmonology of the Kharkiv National Medical University and on the basis of the communal non-commercial enterprise (KNE) "Kharkiv Regional Infectious Hospital" of the Kharkiv City Council (KhCC) in the period 2020–2024.

The necessary list of laboratory and instrumental methods was carried out on the basis of the KNE "Kharkiv Regional Infectious Disease Hospital" and on the basis of the laboratory complex of the Kharkiv Regional Blood Service Center and the "Analytika" medical laboratory.

The research was conducted in accordance with existing international and domestic bioethical norms and rules.

Were examined 179 patients with coronavirus infection COVID-19 (according to ICD XI revision - code RA01.0 "COVID-19 identified") 20-88 years old, who were treated on the basis of KNE "Kharkiv Regional Infectious Disease Hospital" of KhCC in the period 2020-2021 (main group). Were examined and 42 people of the control group (practically healthy people who are blood donors), randomized by age and sex.

Results and discussion. IL-6 values in patients with COVID-19 were expected to be significantly (almost four times) higher than the reference values and at the time of admission to the clinic were recorded at 24.56 ± 22.9 pg/ml.

These values are typical for patients infected with COVID-19, as IL-6 is a marker of the cytokine response and at the same time a marker of sepsis and an indicator of the threat of a cytokine storm, which often develops in severe forms of

infection, which is clinically marked by a significant increase in the concentration of IL-6 in the blood plasma of patients with COVID-19.

In the case of a cytokine storm effect, IL-6 affects the blood clotting process, causing DIC and cardiomyopathy and significant respiratory failure.

Conclusions. Thus, significant risks of developing severe acute respiratory syndrome characterized by a cytokine storm response in patients with COVID-19 infection have been identified.