

CRR
JOURNAL
OF CARDIORESPIRATORY RESEARCH

ISSN 2181-0974
DOI 10.26739/2181-0974

Journal of

**CARDIORESPIRATORY
RESEARCH**



Volume 3, Issue 1

2022

МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ
РЕСПУБЛИКИ УЗБЕКИСТАН

Журнал кардиореспираторных исследований

JOURNAL OF CARDIORESPIRATORY RESEARCH

Главный редактор: Э.Н.ТАШКЕНБАЕВА

Учредитель:

Самаркандский государственный
медицинский институт

Tadqiqot.uz

Ежеквартальный
научно-практический
журнал

ISSN: 2181-0974
DOI: 10.26739/2181-0974



N^o 1
2022

Главный редактор:

Ташкенбаева Элеонора Негматовна

доктор медицинских наук, заведующая кафедрой внутренних болезней №2 Самаркандского Государственного Медицинского института, председатель Ассоциации терапевтов Самаркандской области. <https://orcid.org/0000-0001-5705-4972>

Заместитель главного редактора:

Хайбулина Зарина Руслановна

доктор медицинских наук, руководитель отдела биохимии с группой микробиологии ГУ «РСНПМЦХ им. акад. В. Вахидова» <https://orcid.org/0000-0002-9942-2910>

ЧЛЕНЫ РЕДАКЦИОННОЙ КОЛЛЕГИИ:

Аляви Анис Лютфуллаевич

академик АН РУз, доктор медицинских наук, профессор, Председатель Ассоциации Терапевтов Узбекистана, Советник директора Республиканского специализированного научно-практического центра терапии и медицинской реабилитации (Ташкент) <https://orcid.org/0000-0002-0933-4993>

Бокерия Лео Антонович

академик РАН, доктор медицинских наук, профессор, Президент научного центра сердечно-сосудистой хирургии им. А.Н. Бакулева (Москва), <https://orcid.org/0000-0002-6180-2619>

Курбанов Равшанбек Давлетович

академик АН РУз, доктор медицинских наук, профессор, Советник директора Республиканского специализированного научно-практического медицинского центра кардиологии (Ташкент) <https://orcid.org/0000-0001-7309-2071>

Michal Tendera

профессор кафедры кардиологии Верхнесилезского кардиологического центра, Силезский медицинский университет в Катовице, Польша (Польша) <https://orcid.org/0000-0002-0812-6113>

Покушалов Евгений Анатольевич

доктор медицинских наук, профессор, заместитель генерального директора по науке и развитию сети клиник «Центр новых медицинских технологий» (ЦНМТ), (Новосибирск), <https://orcid.org/0000-0002-2560-5167>

Акилов Хабибулла Атауллаевич

доктор медицинских наук, профессор, Директор Центра развития профессиональной квалификации медицинских работников (Ташкент)

Ризаев Жасур Алимджанович

доктор медицинских наук, профессор, Ректор Самаркандского государственного медицинского института <https://orcid.org/0000-0001-5468-9403>

Абдиева Гулнора Алиевна

ассистент кафедры внутренних болезней №2 Самаркандского Медицинского Института <https://orcid.org/0000-0002-6980-6278>

Зиядуллаев Шухрат Худойбердиевич

доктор медицинских наук, доцент, проректор по научной работе и инновациям Самаркандского Государственного медицинского института <https://orcid.org/0000-0002-9309-3933>

Зуфаров Миржамол Мирумарович

доктор медицинских наук, профессор, руководитель отдела ГУ «РСНПМЦХ им. акад. В. Вахидова» <https://orcid.org/0000-0003-4822-3193>

Ливерко Ирина Владимировна

доктор медицинских наук, профессор, заместитель директора по науке Республиканского специализированного научно-практического медицинского центра фтизиатрии и пульмонологии Республики Узбекистан (Ташкент) <https://orcid.org/0000-0003-0059-9183>

Цурко Владимир Викторович

доктор медицинских наук, профессор Первого Московского государственного медицинского университета им. И.М. Сеченова (Москва) <https://orcid.org/0000-0001-8040-3704>

Камилова Умида Кабировна

д.м.н., профессор, заместитель директора по научной работе Республиканского специализированного научно-практического медицинского центра терапии и медицинской реабилитации (Ташкент) <https://orcid.org/0000-0002-1190-7391>

Тураев Феруз Фатхуллаевич

доктор медицинских наук, Директор Республиканского специализированного научно-практического медицинского центра эндокринологии имени академика Ю.Г. Туракулова

Саидов Максуд Арифович

к.м.н., директор Самаркандского областного отделения Республиканского специализированного научно-практического медицинского центра кардиологии (г. Самарканд)

Насирова Зарина Акбаровна

PhD, ассистент кафедры внутренних болезней №2 Самаркандского Государственного Медицинского Института (ответственный секретарь)

Bosh muharrir:

Tashkenbayeva Eleonora Negmatovna

tibbiyot fanlari doktori, Samarqand davlat tibbiyot instituti 2-sonli ichki kasalliklar kafedrasini mudiri, Samarqand viloyati vrachlar uyushmasi raisi.
<https://orsid.org/0000-0001-5705-4972>

Bosh muharrir o'rinbosari:

Xaibulina Zarina Ruslanovna

tibbiyot fanlari doktori, "akad V. Vohidov nomidagi RIJM davlat institutining mikrobiologiya guruhi bilan biokimyo kafedrasini mudiri" <https://orcid.org/0000-0002-9942-2910>

TAHRIRIYAT A'ZOLARI:

Alyavi Anis Lyutfullayevich

O'zbekiston Respublikasi Fanlar akademiyasining akademigi, tibbiyot fanlari doktori, professor, O'zbekiston Terapevtlar uyushmasi raisi, Respublika ixtisoslashtirilgan ilmiy va amaliy tibbiy terapiya markazi va tibbiy reabilitatsiya direktori maslahatchisi (Toshkent), <https://orcid.org/0000-0002-0933-4993>

Bockeria Leo Antonovich

Rossiya fanlar akademiyasining akademigi, tibbiyot fanlari doktori, professor, A.N. Bakuleva nomidagi yurak-qon tomir jarrohligi ilmiy markazi prezidenti (Moskva)
<https://orcid.org/0000-0002-6180-2619>

Kurbanov Ravshanbek Davlatovich

O'zbekiston Respublikasi Fanlar akademiyasining akademigi, tibbiyot fanlari doktori, professor, Respublika ixtisoslashtirilgan kardiologiya ilmiy-amaliy tibbiyot markazining direktor maslahatchisi (Toshkent)
<https://orcid.org/0000-0001-7309-2071>

Mixal Tendera

Katovitsadagi Sileziya Tibbiyot Universiteti, Yuqori Sileziya Kardiologiya Markazi kardiologiya kafedrasini professori (Polsha)
<https://orcid.org/0000-0002-0812-6113>

Pokushalov Evgeniy Anatolevich

tibbiyot fanlari doktori, professor, "Yangi tibbiy texnologiyalar markazi" (YTTM) klinik tarmog'ining ilmiy ishlar va rivojlanish bo'yicha bosh direktorining o'rinbosari (Novosibirsk)
<https://orcid.org/0000-0002-2560-5167>

Akilov Xabibulla Ataulayevich

tibbiyot fanlari doktori, professor, Tibbiyot xodimlarining kasbiy malakasini oshirish markazi direktori (Toshkent)

Rizayev Jasur Alimjanovich

tibbiyot fanlari doktori, professor, Samarqand davlat tibbiyot instituti rektori
<https://orcid.org/0000-0001-5468-9403>

Abdiyeva Gulnora Aliyevna

Samarqand davlat tibbiyot instituti 2-sonli ichki kasalliklar kafedrasini assistenti (mas'ul kotib)

Ziyadullayev Shuxrat Xudoyberdiyevich

tibbiyot fanlari doktori, dotsent, Samarqand davlat tibbiyot institutining fan va innovatsiyalar bo'yicha prorektori (Samarqand)
<https://orcid.org/0000-0002-9309-3933>

Zufarov Mirjamol Mirumarovich

tibbiyot fanlari doktori, professor, "akad V. Vohidov nomidagi RIJM davlat muassasasi" bo'limi boshlig'i "
<https://orcid.org/0000-0003-4822-3193>

Liverko Irina Vladimirovna

tibbiyot fanlari doktori, professor, Respublika ixtisoslashtirilgan fiziologiya va pulmonologiya ilmiy-amaliy tibbiyot markazining ilmiy ishlar bo'yicha direktor o'rinbosari (Toshkent)
<https://orcid.org/0000-0003-0059-9183>

Surko Vladimir Viktorovich

tibbiyot fanlar doktori, professori I.M. Sechenov nomidagi Birinchi Moskva Davlat tibbiyot universiteti (Moskva)
<https://orcid.org/0000-0001-8040-3704>

Kamilova Umida Kabirovna

tibbiyot fanlari doktori, professor, Respublika ixtisoslashtirilgan terapiya va tibbiy reabilitatsiya ilmiy-amaliy tibbiyot markazi ilmiy ishlari bo'yicha direktor o'rinbosari (Toshkent)
<https://orcid.org/0000-0002-1190-7391>

Turayev Feruz Fatxullayevich

tibbiyot fanlari doktori, akademik Y.X.To'raqulov nomidagi Respublika ixtisoslashtirilgan endokrinologiya ilmiy amaliy tibbiyot markazi direktori
<https://orcid.org/0000-0002-1321-4732>

Saidov Maqsud Arifovich

tibbiyot fanlari nomzodi, Respublika ixtisoslashtirilgan kardiologiya ilmiy amaliy tibbiyot markazi Samarqand viloyat mintaqaviy filiali direktori (Samarqand)

Nasirova Zarina Akbarovna

Samarqand davlat tibbiyot instituti 2-sonli ichki kasalliklar kafedrasini assistenti, PhD (mas'ul kotib)

Chief Editor:

Tashkenbaeva Eleonora Negmatovna

Doctor of Medical Sciences, Head of the Department of Internal Diseases No. 2 of the Samarkand State Medical Institute, Chairman of the Association of Physicians of the Samarkand Region. <https://orsid.org/0000-0001-5705-4972>

Deputy Chief Editor:

Xaibulina Zarina Ruslanovna

Doctor of Medical Sciences, Head of the Department of Biochemistry with the Microbiology Group of the State Institution "RSSC named after acad. V. Vakhidov", <https://orcid.org/0000-0002-9942-2910>

MEMBERS OF THE EDITORIAL BOARD:

Alyavi Anis Lutfullaevich

Academician of the Academy of Sciences of the Republic of Uzbekistan, Doctor of Medical Sciences, Professor, Chairman of the Association of Physicians of Uzbekistan, Advisor to the Director of the Republican Specialized Scientific - Practical Center of Therapy and Medical Rehabilitation (Tashkent) <https://orcid.org/0000-0002-0933-4993>

Bockeria Leo Antonovich

Academician of the Russian Academy of Sciences, Doctor of Medical Sciences, Professor, President of the Scientific Center for Cardiovascular Surgery named after A.N. Bakuleva (Moscow) <https://orcid.org/0000-0002-6180-2619>

Kurbanov Ravshanbek Davletovich

Academician of the Academy of Sciences of the Republic of Uzbekistan, Doctor of Medical Sciences, Professor, Advisor to the Director Republican Specialized Scientific and Practical Medical Center of Cardiology, (Tashkent) <https://orcid.org/0000-0001-7309-2071>

Michal Tendera

Professor of the Department of Cardiology, Upper Silesian Cardiology Center, Silesian Medical University in Katowice, Poland (Poland) <https://orcid.org/0000-0002-0812-6113>

Pokushalov Evgeny Anatolyevich

Doctor of Medical Sciences, Professor, Deputy Director General for Science and Development of the Clinic Network "Center for New Medical Technologies" (CNMT), (Novosibirsk) <https://orcid.org/0000-0002-2560-5167>

Akilov Xabibulla Ataulloevich

Doctor of Medical Sciences, Professor, Center for the development of professional qualifications of medical workers (Tashkent)

Rizaev Jasur Alimjanovich

Doctor of Medical Sciences, Professor, Rector of the Samarkand State Medical Institute <https://orcid.org/0000-0001-5468-9403>

Abdieva Gulnora Alievna

Assistant of the Department of Internal Diseases No. 2 of the Samarkand State Medical Institute <https://orcid.org/0000-0002-6980-6278> (Executive Secretary)

Ziyadullaev Shuhrat Khudoyberdievich

Doctor of Medical Sciences, Associate Professor, Vice-Rector for Science and Innovation of the Samarkand State Medical Institute (Samarkand) <https://orcid.org/0000-0002-9309-3933>

Zufarov Mirjamol Mirumarovich

Doctor of Medical Sciences, Professor, Head of the Department of the State Institution "RSNPMTSH named after acad. V. Vakhidov" <https://orcid.org/0000-0003-4822-3193>

Liverko Irina Vladimirovna

Doctor of Medical Sciences, Professor, Deputy Director for Science of the Republican Specialized Scientific and Practical Medical Center for Phthysiology and Pulmonology of the Republic of Uzbekistan (Tashkent) <https://orcid.org/0000-0003-0059-9183>

Tsurko Vladimir Viktorovich

Doctor of Medical Sciences, professor Of Moscow State Medical University by name I.M. Sechenov (Moscow) <https://orcid.org/0000-0001-8040-3704>

Kamilova Umida Kabirovna

Doctor of Medicine, professor, deputy director of Scientific unit of the Republican specialized scientific and practical medical center for therapy and medical rehabilitation (Tashkent) <https://orcid.org/0000-0002-1190-7391>

Turaev Feruz Fatxullaevich

Doctor of Medical Sciences, Director of the Republican Specialized Scientific and Practical Medical Center of Endocrinology named after Academician Yu.G. Turakulova

Saidov Maksud Arifovich

Candidate of Medical Sciences, Director of the Samarkand Regional Department of the Republican Specialized Scientific and Practical Medical Center of Cardiology (Samarkand)

Nasyrova Zarina Akbarovna

PhD, Assistant of the Department of Internal Diseases No. 2 of the Samarkand State Medical Institute (Executive Secretary)

Алимов Дониёр Анварович
доктор медицинских наук, директор
Республиканского научного центра
экстренной медицинской помощи

Янгиев Бахтиёр Ахмедович
кандидат медицинских наук,
директор Самаркандского филиала
Республиканского научного центра
экстренной медицинской помощи

Абдуллаев Акбар Хатамович
доктор медицинских наук, главный
научный сотрудник Республиканского
специализированного научно-практического
центра медицинской терапии и
реабилитации
<https://orcid.org/0000-0002-1766-4458>

Агабабян Ирина Рубеновна
кандидат медицинских наук, доцент,
заведующая кафедрой терапии ФПДО,
Самаркандского Государственного
медицинского института

Алиева Нигора Рустамовна
доктор медицинских наук, заведующая
кафедрой Госпитальной педиатрии №1 с
основами нетрадиционной медицины
ТашПМИ

Исмаилова Адолат Абдурахимовна
доктор медицинских наук, профессор,
заведующая лабораторией
фундаментальной иммунологии Института
иммунологии геномики человека АН РУз

Камалов Зайнитдин Сайфутдинович
доктор медицинских наук, профессор,
заведующий лабораторией иммунорегуляции
Института иммунологии и геномики
человека АН РУз

Каюмов Улугбек Каримович
доктор медицинских наук, профессор,
заведующий кафедрой внутренних болезней
и телемедицины Центра развития
профессиональной квалификации
медицинских работников

Хусинова Шоира Акбаровна
кандидат философских наук, доцент,
заведующая кафедрой общей практики,
семейной медицины ФПДО Самаркандского
Государственного медицинского института

Шодиколова Гуландом Зикрияевна
д.м.н., профессор, заведующая кафедрой
внутренних болезней № 3 Самаркандского
Государственного Медицинского
Института (Самарканд)
<https://orcid.org/0000-0003-2679-1296>

Alimov Doniyor Anvarovich
tibbiyot fanlari doktori, Respublika
shoshilinch tibbiy yordam ilmiy markazi
direktori (Toshkent)

Yangiyev Baxtiyor Axmedovich
tibbiyot fanlari nomzodi,
Respublika shoshilinch tibbiy
yordam ilmiy markazining
Samarqand filiali direktori

Abdullaev Akbar Xatamovich
tibbiyot fanlari doktori, O'zbekiston
Respublikasi Sog'liqni saqlash vazirligining
"Respublika ixtisoslashtirilgan terapiya va
tibbiy rehabilitatsiya ilmiy-amaliy
tibbiyot markazi" davlat
muassasi bosh ilmiy xodimi
<https://orcid.org/0000-0002-1766-4458>

Agababyan Irina Rubenovna
tibbiyot fanlari nomzodi, dotsent, DKTF,
terapiya kafedrasini mudiri, Samarqand
davlat tibbiyot instituti

Alieva Nigora Rustamovna
tibbiyot fanlari doktori, 1-sonli gospital
pediatriya kafedrasini mudiri, ToshPTI

Ismoilova Adolat Abduraximovna
tibbiyot fanlari doktori, professor,
O'zbekiston Respublikasi Fanlar
akademiyasining Odam genomikasi
immunologiyasi institutining fundamental
immunologiya laboratoriyasining mudiri

Kamalov Zaynitdin Sayfutdinovich
tibbiyot fanlari doktori, professor,
O'zbekiston Respublikasi Fanlar
akademiyasining Immunologiya va inson
genomikasi institutining Immunogenetika
laboratoriyasi mudiri

Qayumov Ulug'bek Karimovich
tibbiyot fanlari doktori, professor, Tibbiyot
xodimlarining kasbiy malakasini oshirish
markazi, ichki kasalliklar va teletibbiyot
kafedrasini mudiri (Toshkent)

Xusinova Shoira Akbarovna
tibbiyot fanlari nomzodi, dotsent,
Samarqand davlat tibbiyot instituti DKTF
Umumiy amaliyot va oilaviy tibbiyot
kafedrasini mudiri (Samarqand)

Shodiqulova Gulandom Zikriyevna
tibbiyot fanlari doktori, professor,
Samarqand davlat tibbiyot instituti 3- ichki
kasalliklar kafedrasini mudiri (Samarqand)
<https://orcid.org/0000-0003-2679-1296>

Alimov Doniyor Anvarovich
Doctor of Medical Sciences, Director of the
Republican Scientific Center of Emergency
Medical Care

Yangiev Bakhtiyor Axmedovich
PhD, Director of Samarkand branch of
the Republican Scientific Center of
Emergency Medical Care

Abdullaev Akbar Xatamovich
Doctor of Medical Sciences,
Chief Researcher of the State Institution
"Republican Specialized Scientific and
Practical Medical Center for Therapy and
Medical Rehabilitation" of the Ministry of
Health of the Republic of Uzbekistan,
<https://orcid.org/0000-0002-1766-4458>

Agababyan Irina Rubenovna
PhD, Associate Professor, Head of the
Department of Therapy, FAGE, Samarkand
State Medical Institute

Alieva Nigora Rustamovna
Doctor of Medical Sciences, Head of the
Department of Hospital Pediatrics No. 1 with
the basics of alternative medicine, TashPMI

Ismoilova Adolat Abduraximovna
doctor of Medical Sciences, Professor, Head of
the Laboratory of Fundamental Immunology of
the Institute of Immunology of Human
Genomics of the Academy of Sciences
of the Republic of Uzbekistan

Kamalov Zaynitdin Sayfutdinovich
doctor of Medical Sciences, Professor, Head of
the Laboratory of Immunogenetics of the
Institute of Immunology and Human Genomics
of the Academy of Sciences of the
Republic of Uzbekistan

Kayumov Ulugbek Karimovich
Doctor of Medical Sciences, Professor,
Head of the Department of Internal Diseases
and Telemedicine of the Center for the
development of professional qualifications
of medical workers

Khusinova Shoira Akbarovna
PhD, Associate Professor, Head of the
Department of General Practice,
Family Medicine FAGE of the
Samarkand State Medical Institute

Shodiqulova Gulandom Zikriyevna
Doctor of Medical Sciences, professor, head of
the Department of Internal Diseases N 3 of
Samarkand state medical institute (Samarkand)
<https://orcid.org/0000-0003-2679-1296>

MUNDARIJA | СОДЕРЖАНИЕ | CONTENT

ОБЗОРНЫЕ СТАТЬИ/ABYOTLAR SHARHI/ REVIEW ARTICLES

- 1. Агабабян И.Р., Журакулов Ф.Н., Исмоилова Ю.А.**
Место фенофибрат в лечении больных коронавирусом SARS
Agababyan I.R., Juraqulov F.N., Ismoilova Y.A.
The role of fenofibrate in the treatment of patients with SARS-COV-2 coronavirus
Agababyan I.R., Juraqulov F.N., Ismoilova Y.A.
SARS-COV-2 koronavirus bo'lgan bemorlarni davolashda fenofibratning o'rni..... 9
- 2. Акрамова Х.А., Ахмедова Д.И., Хайбуллина З.Р.**
Аутоантитела, профили иммунореактивности и их связь с заболеваниями
Akramova Kh.A., Akhmedova D.I., Khaybullina Z.R. Autoantibodies, immunoreactivity profiles and their connection with diseases
Akramova X.A., Axmedova D.I., Xaybullina Z.R.
Autoantitanalar, immunoreaktivlik profillari va ularning kasalliklar bilan aloqasi..... 13

ОРИГИНАЛЬНЫЕ СТАТЬИ/ORIGINAL MAQOLALAR/ ORIGINAL ARTICLES

- 3. Абдуллаева М.Н., Файзуллаева Х.Б., Икрамова З.Х.**
Метаболические сдвиги как индикатор постгипоксических осложнений у новорождённых
Abdullayeva M.N., Fayzullayeva X.B., Ikramova Z.X.
Metabolic shifts as an indicator of post-hypoxic complications in newborns
Abdullayeva M.N., Fayzullayeva X.B., Ikramova Z.X.
Chaqaloqlarda metabolik siljishlar postgipoksik asoratlarning indikatorini sifatida..... 19
- 4. Аблакулова М.Х., Хусинова Ш.А., Юлдашова Н.Э.**
Распространенность ишемической болезни сердца в городской неорганизованной популяции города Самарканда
Ablakulova M.Kh., Khusinova Sh.A., Yuldoshova N.E.
The prevalence of coronary heart disease in the urban unorganized population of the city of Samarkand
Ablakulova M.H., Xusinova Sh.A., Yo'ldoshova N.E.
Samarqand shahrining uyushmagan aholisida yurak ishemik kasalligining tarqalishi..... 23
- 5. Бекмурадова М.С., Хайдаров С.Н.**
Связь между повышенным пульсовым давлением и натрийуретическим пептидом
Bekmuradova M.S., Khaidarov S.N.
The relationship between elevated pulse pressure and natriuretic peptide
Bekmuradova M.S., Xaydarov S.N.
Puls bosimining oshishi va natriyuretik peptid o'rtasidagi bog'liqlik..... 26
- 6. Бобоева Н.Т.**
Маркеры воспаления и тяжесть заболевания у новорожденных с пролонгированной гипербилирубинемией
Boboeva N.T.
Inflammatory markers and disease severity in newborns with prolonged hyperbilirubinemia
Boboeva N.T.
Chaqaloqlar cho'zilgan sariqliklarida yallig'lanish markerlari va kasallik og'irlik darajasi..... 30
- 7. Гайбуллаев Ж.Ш., Хусайнова Ш.К.**
Факторы риска и частота формирования миокардита у детей после перенесенной острой бронхиальной обструкции
Gaybullaev J.Sh., Khusainova Sh.K.
Risk factors and frequency of myocarditis in children after acute bronchial obstruction
G'aybullaev J.Sh., Xusainova Sh.K.
O'tkir bronxial obstruktsiyadan so'ng bolalarda miokarditni keltirib chiqaruvchi xavf omillari..... 33
- 8. Исмаилов С.И., Юлдашев О.С., Тажибоева Д.М., Султанов Ш.Б.**
Инсулинорезистентность у больных мастопатиями и ее влияние на клиническое течение мастопатии
Ismailov S.I., Yuldashev O.S., Tojiboeva D.M., Sultanov Sh.B.
Insulinoreistance in patients with mastopathy and its effect on the clinical course of mastopathy
Ismailov S.I., Yuldashev O.S., Tojiboeva D.M., Sultanov Sh.B.
Mastopatiya bilan kasallarda insulinorezistentlik va uning mastopatiya klinik kechishiga ta'siri..... 36
- 9. Камолова Д.Ж.**
Структурно-геометрические изменения в миокарде и особенности диастолической дисфункции левого желудочка у беременных с артериальной гипертензией
Kamolova D.J.
Structural - geometrical changes of the myocardium and the particularities of the left ventricle of the heart in a pregnant woman with a different types of arterial hypertension
Kamolova D.J.
Turli xil arterial gipertansiya bilan homilador ayollarda miokarddagi struktur-geometrik o'zgarishlar va yurak diastolik disfunksiyasining xususiyatlari..... 40

10. **Каримова М.М, Содиков У.Т, Юсупова М.М., Мухаммадсодиқов М.М.**
Анализ состояния щитовидной железы у пациентов, перенесших COVID-19
Karimova M.M., Sodiqov U.T., Yusupova M.M., Muhammadsodiqov M.M.
Analysis of the state of the thyroid gland in patients who have undergone COVID-19
Karimova M.M, Sodiqov U.T, Yusupova M.M, Muhammadsodiqov M.M.
COVID-19 o'tkazgan bemorlarda qalqonsimon bez holatini tahlil qilish..... 44
11. **Лицкевич Л.В.**
Коморбидные нарушения сердечно-сосудистой системы и качество жизни пациентов с хронической обструктивной болезнью легких в республике Беларусь
Litskevich L.V.
Comorbid disorders of the cardiovascular system and quality of life of patients with chronic obstructive pulmonary disease in the republic of Belarus
Litskevich L.V.
Belarus respublikasida yurak-qon tomir tizimining komorbid kasalliklari va surunkali obstruktiv o'pka kasalligi bilan og'rigan bemorlarning hayot sifati..... 47
12. **Машарипова Ш.С.**
Морфологическое строение легочных артерий под влиянием сахарного диабета
Masharipova Sh.S.
Morphological structure of the pulmonary arteries under the influence of diabetes mellitus
Masharipova Sh.S.
O'pka arteriyalarining qandli diabet ta'sirida morfologik tuzilishi..... 52
13. **Норматов М.Б.**
Эффективность амлодипина при артериальной гипертензии в сочетании с сахарным диабетом 2 типа
Normatov M.B.
Efficacy of amlodipine in arterial hypertension combined with type 2 diabetes mellitus
Normatov M.B.
2-tip qandli diabet bilan birgalikda arterial gipertenziyada amlodipinning samaradorligi..... 55
14. **Саидова М.М.**
Оценка параметров толщины интима-медиа сонных артерий как раннего предиктора развития атеросклероза у больных ревматоидным артритом
Saidova M.M.
Evaluation of carotid intima-media thickness as an early predictor of atherosclerosis in rheumatoid arthritis patients
Saidova M.M.
Revmatoid artrit bo'lgan bemorlarda aterosklerozning rivojlanishining dastlabki belgilari sifatida uyqu arteriyalarning intima-media qalinligi parametrini baholash..... 58
15. **Сирождидинова Х.Н., Усманова М.Ф.**
Материнский анамнез как фактор формирования группы часто болеющих детей
Sirojiddinova Kh.N., Usmanova M.F.
maternal anamnesis as a factor of formation groups of frequently ill children
Sirojiddinova X.N., Usmanova M.F.
Onalar anamnezi tez-tez kasallanuvchi bolalar guruhi shakllanishidagi ahamiyati..... 61
16. **Сирождидинова Х.Н., Ортикбоева Н.Т.**
Клиническая характеристика респираторной патологии часто болеющих и эпизодически болеющих детей
Sirojiddinova Kh.N., Ortikboyeva N.T.
Clinical characteristics of respiratory pathology of frequently ill and episodically ill children
Sirojiddinova X.N., Ortiqboyeva N.T.
Tez-tez kasal va kam kasal bo'luvchi bolalar nafas olish patologiyasining klinik xususiyatlari..... 65
17. **Элламонов С.Н., Насырова З.А.**
Клинические и инструментальные особенности течения ишемической болезни сердца у больных с коморбидными состояниями
Ellamonov S.N., Nasyrova Z.A.
Clinical and instrumental features of coronary heart disease in patients with comorbid conditions
Ellamonov S.N., Nasirova Z.A.
Komorbid holatlari bo'lgan bemorlarda yurak koronar kasalliklarning klinik va instrumental xususiyatlari..... 69



ОБЗОРНЫЕ СТАТЬИ/АБИЙОТЛАР ШАРHI/ REVIEW ARTICLES

Агабабян Ирина Рубеновна

к.м.н., доцент, заведующая кафедрой внутренних ФПДО Самаркандского государственного медицинского института Самарканд, Узбекистан

Журакулов Фазлидин Норманович

ассистент кафедры внутренних болезней Термезского филиала ТМА Термиз, Узбекистан

Исмоилова Юлдуз Абдувохидовна

ассистент кафедры внутренних болезней ФПДО СамГосМИ Самарканд, Узбекистан

МЕСТО ФЕНОФИБРАТА В ЛЕЧЕНИИ БОЛЬНЫХ КОРОНАВИРУСОМ SARS-COV-2**For citation:** I.R. Agababayan, Y.A. F.N.Juraqulov, Ismoilova Y.A. «THE ROLE OF FENOFIBRATE IN THE TREATMENT OF PATIENTS WITH SARS-COV-2 CORONAVIRUS» Journal of cardiorespiratory research. 2022, vol. 3, issue 1, pp.9-12<http://dx.doi.org/10.5281/zenodo.6401008>**АННОТАЦИЯ**

Настоящая пандемия и тяжелый острый респираторный синдром (SARS-CoV-2) привели к значительному числу летальных исходов во всем мире. На сегодняшний день число смертельных случаев превышает 4.55.миллиона человек. Чтобы определить препараты для дополнительного эффективного лечения инфекции SARS-CoV-2, был создан экран для измерения димеризации ангиотензин превращающего фермента 2 (ACE2), основного рецептора входа вируса в клетку. Этот экран идентифицировал фенофибриновую кислоту, активный метаболит фенофибрата. Фенофибриновая кислота также дестабилизировала рецептор-связывающий домен (RBD) спайкового белка вируса и ингибировала связывание RBD с ACE2 в иммуноферментном анализе (ИФА). Фенофибрат и фенофибриновая кислота были протестированы двумя независимыми лабораториями в Великобритании. В обоих случаях при концентрациях препарата в клинических дозах фенофибрат и фенофибриновая кислота снижали вирусную инфекцию до 70% [15, 23]. Вместе с обширной историей клинического применения и относительно хорошим профилем безопасности это исследование определяет фенофибрат как потенциальное терапевтическое средство, требующее клинической оценки для лечения инфекции SARS-CoV-2 у коморбидных больных с артериальной гипертензией и высоким индексом массы тела, а также сахарным диабетом и ишемической болезнью сердца.

Ключевые слова: фенофибрат, SARS-CoV-2, ACE2, рецептор-связывающий домен (RBD), ИФА.**Agababayan Irina Rubenovna**

Ph.D., Associate Professor, Head of the Department of Internal Medicine, Faculty of Postgraduate Education, Samarkand State Medical Institute Samarkand, Uzbekistan

Jurakulov Fazliddin Normanovich

Department of Internal Medicine, Termez branch of the Tashkent Medical Academy

Ismoilova Yulduz Abduvohidovna

department assistant internal diseases FPGE SSMI Samarkand, Uzbekistan

THE ROLE OF FENOFIBRATE IN THE TREATMENT OF PATIENTS WITH SARS-COV-2 CORONAVIRUS**ANNOTATION**

The present pandemic and severe acute respiratory syndrome (SARS-CoV-2) have resulted in a significant number of deaths worldwide. Today the number of deaths exceeds 4.55 million people. To identify drugs for additional effective treatment of SARS-CoV-2 infection, a screen was created to measure the dimerization of angiotensin converting enzyme 2 (ACE2), the main virus entry receptor into the cell. This screen identified

fenofibric acid, the active metabolite of fenofibrate. Fenofibric acid also destabilized the receptor-binding domain (RBD) of the viral spike protein and inhibited the binding of RBD to ACE2 in an enzyme-linked immunosorbent assay (ELISA). Fenofibrate and fenofibric acid have been tested by two independent laboratories. In both cases, at concentrations of the drug in clinical doses, fenofibrate and fenofibric acid reduced viral infection by up to 70%. Together with an extensive history of clinical use and a relatively good safety profile, this study identifies fenofibrate as a potential therapeutic agent requiring clinical evaluation for the treatment of SARS-CoV-2 infection in comorbid patients with hypertension and high body mass index.

Key words: fenofibrate, SARS-CoV-2, ACE2, receptor-binding domain (RBD), IFA.

Agababyan Irina Rubenovna

t.f.n., dotsent, Samarqand davlat tibbiyot instituti
DKTF Ichki kasalliklar kafedra mudiri
Samarkand, O'zbekistan

Juraqulov Fazliddin Normanovich

Toshkent tibbiyot akademiyasi
Termiz filiali ichki kasalliklar kafedrasida assistenti
Termiz, O'zbekistan

Ismoilova Yulduz Abduvohidovna

Samarqand davlat tibbiyot instituti
DKTF Ichki kasalliklar kafedrasida assistenti
Samarkand, O'zbekistan

SARS-COV-2 KORONAVIRUS BO'LGAN BEMORLARNI DAVOLASHDA FENOFIBRATNING O'RNI

ANNOTATSIYA

Hozirgi pandemiya va o'tkir nafas olish sindromi (SARS-CoV-2) butun dunyo bo'ylab o'limga olib keldi. Bugungi kunda vafot etganlar soni 4,55 milliondan oshdi. SARS-CoV-2 infeksiyasini qo'shimcha samarali davolash uchun dori-darmonlarni aniqlash uchun hujayra asosiy virus kirish retseptorlari bo'lgan angiotenzin aylantiruvchi ferment 2 (ACE2) dimerizatsiyasini o'lchash uchun ekran yaratildi. Bu ekran fenofibratning faol metaboliti bo'lgan fenofibrik kislota aniqladi. Fenofibrin kislota, shuningdek, virusli oqsilning retseptorlari bilan bog'lanish sohasini (RBD) beqarorlashtirdi va ferment bilan bog'liq immunoferment taxlidagi RBD ning ACE2 ga bog'lanishi aniqlandi. Fenofibrat va fenofibrin kislota ikkita mustaqil laboratoriya tomonidan sinovdan o'tkazilgan. Ikkala holatda ham, preparatning klinik dozalarida konsentratsiyasida fenofibrat va fenofibrin kislota virusli infeksiyani 70% gacha kamaytirdi. Keng klinik anamnez va nisbatan yaxshi xavsizlik profiliga ega keng bo'lgan holda, ushbu tadqiqot fenofibratni gipertenziya va tana massasi indeksi yuqori bo'lgan bemorlarda SARS-CoV-2 infeksiyasini davolash uchun klinik baholashni talab qiladigan potensial terapevtik vosita sifatida aniqlaydi.

Kalit so'zlar: fenofibrat, SARS-CoV-2, ACE2, retseptorlarni bog'lovchi domen (RBD), IFA.

Og'ir o'tkir respirator sindromli koronavirus (SARS-CoV-2) hozirgacha dunyo bo'ylab 4,55 milliondan ortiq odamning hayotiga zomin bo'lgan pandemiyaning sababidir. Yuqish tezligi yuqori bo'lgan viruslarning yangi variantlari paydo bo'lishi tufayli butun dunyoda infeksiya va o'lim ko'rsatkichlarining tez o'sishi kuzatilmoqda. Bir nechta vaksinalar tezlashtirilgan tasdiqdan o'tdi va butun dunyo bo'ylab joriy qilinmoqda [16, 20]. Klinik ma'lumotlar juda istiqbolli bo'lsa-da, vaksinalar barcha bemorlar populyatsiyasi uchun tavsiya etilmaydi yoki mos kelmaydi, masalan, giperimmun kasalliklari bo'lgan bolalar, immunosuppressantlarni qo'llaydiganlar va Alpha-B kabi virusli variantlarning global tarqalishiga ega bo'lganlar shuningdek 1.1.7, Beta-B. 1.351, Gamma-P. 1 va Delta-B. 1.617.2, hozirgi vaksinalar yangi shtammlar uchun yetarlicha himoyani ta'minlay oladimi yoki yo'qmi hozircha noma'lum [23, 25]. Bir qator mamlakatlarda emlash dasturlari tez sur'atlar bilan o'sib borayotgan bo'lsa-da, emlash bilan qamrab olish stavkalari farq qiladi va o'rta daromad darajasi past bo'lgan ko'pgina mamlakatlarda aholining muhim qismi 2022 yilgacha emlanishi mumkin emas. Bundan tashqari, emlash infeksiya tezligini va kasallikning og'irligini kamaytirishi ko'rsatilgan bo'lsa-da, javobning kuchi va davomiyligi hali aniq emas. Alomatlar paydo bo'lgan va/yoki kasalxonaga yotqizishni talab qiladigan COVID-19 bilan kasallangan bemorlarni davolash uchun terapiya hali ham zarur. Virus inson hujayralariga angiotensin-konvertatsiya qiluvchi ferment 2 (ACE2) bilan bog'langan virusli oqsilning retseptorlari bilan bog'lanish sohasi (RBD) orqali kiradi [1, 24]. Boshqa virusli retseptorlari aniqlangan bo'lsa-da [18, 26]. Virusning ACE2 bilan bog'lanishini bloklaydigan dorilar virusning so'rilishini sezilarli darajada kamaytirishi mumkin, shu bilan faol infeksiyasi bo'lgan bemorlarda simptomlarni kamaytiradi/yumshatadi yoki virusni yuqtirmagan odamlarga yuqishini kamaytiradi [6, 13]. SARS-CoV-2 epidemiyasining tez sur'atlar bilan kuchayishi an'anaviy kanallar orqali yangi dori vositalarini ishlab chiqish uchun oz vaqt qoldiradi, ammo dori vositalarini qayta ishlatish tezlashtirilgan alternativani taklif qiladi. Qayta ishlatiladigan dorilar darhol klinik foydalanish uchun mavjud va ularning farmakokinetik va xavsizlik profilari odatda yaxshi hujjatlashtirilgan. Bu allaqachon

isbotlangan, chunki deksametazon SARS-CoV-2 bilan kasallangan bemorlarning o'limini kamaytiradi va remdesivir bemorlarning infeksiyadan tiklanish vaqtini qisqartiradi [2,17]. Bunday hollarda, garchi dori vositalari qayta ishlab chiqilgan bo'lsa-da, ulardan foydalanish hali ham dori ta'sirining asosiy mexanizmiga bog'liq. Qaysi dorilar yangi ta'sir mexanizmiga ega bo'lishi va SARS-CoV-2 bilan bog'lanishi va ACE2 vositachiligida hujayralarga kirishiga xalaqit berishi aniq emas. Shu maqsadda yaqinda RBD virusli adezyon oqsilining ACE2 ga ulanishini o'lchash uchun tahlil ishlab chiqildi [12, 21]. Strukturaviy tadqiqotlar shuni ko'rsatdiki, ACE2 dimerdir va har bir ACE2 dimeri bilan o'zaro ta'sir qiluvchi bir nechta boshqali RBD bo'lishi mumkin [22]. Molekulyar dinamikani modellashtirish ACE2-da sezilarli moslashuvchanlikni ko'rsatdi va bu bir nechta ACE2 dimerlarining har bir boshqaga bog'lanishiga imkon berishi mumkin [8, 11]. Agar shunday bo'lsa, ACE2 dimerizatsiyasi har bir komissural umurtqa pog'onasi bilan bir nechta aloqalarni keltirib chiqaradi, bu esa bog'lanish faolligini oshiradi [1, 10].

Tajribalar shuni ko'rsatdiki, fenofibrik kislota, og'iz orqali qabul qilinadigan lipidlarni pasaytiradigan dori fenofibratning faol metaboliti, ACE2 dimerizatsiyasini qo'zg'atadi va RBD boshqalarini ACE2 bilan bog'lanishini inhibe qilish orqali RBD boshqalarini beqarorlashtiradi. Muhimi, kutilganidek, RBD-ACE2 o'zaro ta'sirida fenofibrat tomonidan qo'zg'atilgan o'zgarishlar jonli SARS-CoV-2 yordamida hujayra madaniyati modellarida infeksiyaning sezilarli darajada past darajasi (<60%) va virus tarqalishi bilan bog'liq edi. Ushbu ma'lumotlar, boshqa guruhlarning nashr etilmagan ma'lumotlari va fenofibrat haqidagi hozirgi klinik bilimlar bilan birgalikda uni SARS-CoV-2 infeksiyalarini davolash uchun kuchli nomzod qiladi [27].

Fenofibrat - bu COVID-19 bilan kasallangan bemorlarda randomizatsiyalangan maxsus sinovda (RMS) tekshirilayotgan yagona fibrat. Kardiyovaskulyar kasalliklar bo'yicha RMS ma'lumotlariga asoslanib, muhim yon ta'sirlarni kuzatish kerak. Miyopatiya statinlarni qo'llashning eng keng tarqalgan yon ta'siri bo'lib, boshqa statin preparatlariga o'tish orqali boshqariladi. Mushaklarning og'ir asoratlari

(masalan, rabdomiyoliz) juda kam uchraydi. Jigar fermenti darajasining oshishi boshqa potentsial, ammo kam uchraydigan yon ta'sirdir. Fibratlar, shuningdek, miyopatiya va gepatotsitlarning shikastlanishi xavfini oshirishi mumkin. Dori vositalarining o'zaro ta'siri ushbu ortib borayotgan xavfda muhim rol o'ynaydi va hozirgi COVID-19 RMSlarida ko'rib chiqilmoqda [3, 11]. Shuni ta'kidlash kerakki, ommaviy qon aylanishini tadqiq qilishda nojo'ya ta'sirlar bir necha oydan yillargacha davolanish natijasida paydo bo'ladi, hozirgi COVID-19 tadqiqotlari esa odatda ancha qisqaroq davolanishga ega.

In vitro tadqiqotlar shuni ko'rsatadiki, tolali kislotada hosilasi bo'lgan fenofibrat SARS-CoV-2 spike oqsilining retseptorlari bilan bog'lanish sohasini beqarorlashtiradi va retseptorlarni bog'laydigan domenning ACE2 bilan bog'lanishini inhibe qiladi. Bu virusli infeksiyani 70% gacha kamaytirishi mumkin. COVID-19 kasallik holati pnevmoniyadan tizimli ko'p a'zoli kasallikka o'tib, tizimli yallig'lanish va tromboz asosiy xususiyat sifatida namoyon bo'ldi. Ushbu sharh o'tkir COVID-19 ni davolashda lipid modulyatsiya qiluvchi agentlarning rolini baholovchi 34 ta RMS, post-COVID sindromi bo'lgan bemorlarda 2 RMS va COVID-19 infeksiyasining oldini olish bo'yicha 4 RMS aniqladi. Ushbu sinovlar natijalari COVID-19 bilan kurashish uchun vositalar arsenalini kengaytirishi mumkin. COVID-19 bilan og'rigan bemorlarda antikoagulyantlarning dozasi oshirish bo'yicha yaqinda o'tkazilgan RMSlarning neytral natijalari og'ir COVID-19da noto'g'ri immunitet reaksiyasining ahamiyatini ko'rsatishi mumkin. Aynan shu kontekstda pleiotropik lipid modulyatsiya qiluvchi vositalar mumkin bo'lgan terapevtik salohiyatga ega. Ushbu vositalarning o'rtacha immunomodulyatsion ta'siri boshqa yallig'lanishga qarshi vositalar bilan tez-tez uchraydigan haddan tashqari immunosuppressiya va superinfeksiyani kamaytiradi. Immunitetni modulyatsiya qiluvchi terapiyalar orasida faqat steroidlar COVID-19 bilan kasallangan bemorlarda barqaror samaradorlikni ko'rsatdi. Ivermektin va gidroksiklorokin bilan neytral natijalar, kolxitsin va tosilizumab bilan aralash natijalar bizga biologik aniqlik mazmunli davolanishga olib kelmasligini eslatadi. Shu sababli, lipid modulyatsiyasi bo'yicha hozirgi RMSlar alohida qiziqish uyg'otadi. CVD xavfini kamaytirishda kam qo'llanilishiga qaramay, fibratlar sulfatid darajasini oshirish va ACE2 retseptorlari bilan bog'lanish sohasini inhibe qilish orqali virusning kirib borishini va SARS-CoV-2 infeksiyasini kamaytirishi mumkin. Davomiy etayotgan fibrat tadqiqotlarining kuchli tomonlari so'nggi nuqtani tanlashni o'z ichiga oladi: o'lim, O'RDS(O'tkir respirator distress sindrom) bilan bog'liq natijalar, yallig'lanish belgilari va invaziv mexanik yordam asosiy natijadir. Fenofibratni buyurishda odatda dorilarning o'zaro ta'siri hisobga olinadi. COVID-19 tizimli yallig'lanish, endotelial faollashuv va ko'p a'zolarining namoyon bo'lishi bilan bog'liq. Lipid modulyatsiya qiluvchi vositalar COVID-19 bilan kasallangan bemorlarni davolashda foydali bo'lishi mumkin. Ular lipid tolalarini buzish orqali virusning kirib borishini inhibe qilishi yoki yallig'lanish reaksiyasini va endotelial faollashuvni kamaytirishi mumkin. Bundan tashqari, pastroq yuqori zichlikdagi lipoprotein (ZPL) xolesterin va yuqori triglitseridli displidemiya COVID-19 bilan og'rigan bemorlarda yomonroq natijalarni ko'rsatadi. Tizimli qidiruv natijasida lipid modulyatsiya qiluvchi vositalar bilan 40 ta RMS aniqlandi, shu jumladan statinlarning 17 ta tadqiqoti, omega-3 yog 'kislotalarining 14 tasi, fibratlar bo'yicha 3 ta RMS, niatsinning 5 ta RMS va COVID-ning davolash yoki oldini olish uchun dalcetrapibning 1 ta RMS. 19.

Birmingem universiteti va Buyuk Britaniyaning Keele universiteti boshchiligidagi tadqiqot guruhi litsenziyalangan og'iz orqali qabul qilinadigan fenofibrat preparati va uning faol shakli fenofibrik kislotaga

in vitro sharoitida inson hujayralarida SARS-CoV-2 infeksiyasini sezilarli darajada kamaytirishi mumkinligini aniqladi [14, 25]. Turli mamlakatlarda tasdiqlangan fenofibrat qondagi xolesterin va yog'li maddalarning ko'tarilishi kabi kasalliklarni davolash uchun ishlatiladi [7].

Birmingem universiteti fenofibratning standart klinik dozasi bilan xavfsiz va erishish mumkin bo'lgan konsentratsiyalarda Covid-19 infeksiyasini 70% gacha kamaytirishini ta'kidladi [4,9]. In vitro tadqiqotlar shuni ko'rsatadiki, tolali kislotada fenofibrat SARS-CoV-2 spike oqsilining retseptorlari bilan bog'lanish sohasini beqarorlashtiradi va retseptorlarni bog'laydigan domenning ACE2 bilan bog'lanishini inhibe qiladi, bu esa virusli infeksiyani kamaytiradi [19, 28].

Shuningdek, COVID-19da lipid modulyatsiya qiluvchi vositalarning virusga qarshi, immunomodulyator va antitrombotik mexanizmlari va ularning yuzaga kelishi mumkin bo'lgan nojo'ya ta'sirlari aniqlangan. Alveolar ichida SARS-CoV-2 ning pnevmositlarga dastlabki ulanishi tug'ma immun hujayralari (shu jumladan makrofaglar va T hujayralari) infiltratsiyasiga va keyinchalik sitokinlarning chiqarilishiga olib keladi. Statinlar va fibratlar yallig'lanish reaksiyasining zo'ravonligini kamaytiradigan immunomodulyatsion xususiyatlarni namoyon qilishi mumkin. SARS-CoV-2 ACE2 ifodasini bostirishi va uning ko'plab to'qimalarda himoya reaksiyalarini kamaytirishi mumkin. Ammo statinlar va fibratlar ACE2 ni faollashtirish va endotelial azot oksidi sintetaza faolligini oshirish orqali alveolyar epiteliya hujayralarining yaxlitligini saqlab turishi mumkin. Statinlar, shuningdek, transformatsiya qiluvchi o'sish omili beta-retseptor III ni faollashtirish orqali kollagen cho'kmasi va o'pka fibrozini kamaytirishi mumkin [1, 29].

Virusli oqshil RBDni beqarorlash va RBDning ACE2 ga ulanishini blok qilish orqali fibratlar virusning kirib kelishini oldini oladi. Statinlar, shuningdek, xolesterin sintezi yo'lini va membrana lipid raflarini buzish orqali virusning kirib borishini inhibe qilishi mumkin [5, 14]. Shuningdek, statinlarning gepatit C virusi kabi o'ralgan viruslarga virusga qarshi to'g'ridan-to'g'ri antiviral ta'siri, virus konvertini oqshil va yo'q qilish orqali ba'zi dalillar mavjud. Ular, shuningdek, replikasiya yo'lidagi oqsillarga aralashish orqali virus replikasiyasini bostirishi mumkin. Bundan tashqari, statinlar reaktiv kislorod turlarini blokirovka qilish orqali immunomodulyator ta'sirga ega bo'lishi mumkin. Tomir ichida lipid modulyatsiya qiluvchi vositalar immunitet reaksiyasini modulyatsiya qilishi va sitokin bo'ronini bostirishi mumkin. Statinlar va fibratlar antitrombositar faolligiga ega bo'lishi mumkinligi haqida ba'zi dalillar ham mavjud. Bundan tashqari, statinlar to'qima faktorini, qon Villebrand omilini, V, XIII omillarni va plazminogen faollashtiruvchi inhibitorini inhibe qilish orqali qo'shimcha antitrombotik xususiyatlarga ega bo'lishi mumkin. Bundan tashqari, TG va LDL xolesterinning yuqori darajalari yomonroq natijalar bilan bog'liq; Ammo triglitseridlar yoki past zichlikdagi lipoprotein xolesterin darajasini pasaytirish COVID-19 da terapevtik aralashuv sifatida ishlatilishi mumkinmi yoki yo'qmi, hali ham noma'lum.

Xulosalar. Lipid-modulyatsiya qiluvchi vositalar yallig'lanishga qarshi, virusga qarshi va pleiotropik ta'sirlar orqali COVID-19 bilan bog'liq ko'p a'zolarining shikastlanishini yumshata oladi. Hozirgi yaxshi o'tkazilgan va etarli darajada o'tkazilgan RMS natijalari bizga COVID-19 ning turli bosqichlarini oldini olish yoki davolashda staitnes, fenofibrik kislotaga kabi lipid modulyatsiya qiluvchi vositalarning mumkin bo'lgan samaradorligini baholashga imkon beradi va keyingi tadqiqotlar uchun yangi ufqlarni ochishi mumkin. klinik amaliyot. Bu, ayniqsa, arterial gipertenziya, metabolik sindrom, COVID-19 fonida 2-toifa qandli diabet bilan kasallangan bemorlar uchun to'g'ri keladi.

References / Список литературы / Iqtiboslar

1. Agababyan I.R., Soleyeva S.Sh. Mesto statinov v kompleksnom lechenii SARS-CoV-2. Voprosi nauki i obrazovaniya №14 (139) 2021. s.70-80.
2. Karpov Yu.A. Effektivnost i bezopasnost terapii statinami// Atmosfera. Novosti kardiologii, 2019. № 1. S. 3-12.
3. Krugliy L.B., Karpov Yu.A. Uluchsheniye prognoza bolnix s serdechno-sosudistoy patologiyey na fone povishennogo urovnya S-reaktivnogo belka: novie dannie ob effektax atorvastatina i rozuvastatina. // Atmosfera. Novosti kardiologii, 2016. № 2. 33-40.
4. Mareyev V.Yu., Orlova Ya.A., Pavlikova Ye.P., Matskeplishvili S.T., Krasnova T.N., Malaxov P.S., Samoxodskaya L.M., Mershina Ye.A., Sinitin V.Ye., Mareyev Yu.V., Kalinkin A.L., Begrambekova Yu.L., Kamalov A.A. Puls-terapiya steroidnimi gormonami bolnix s Koronavirusnoy pnevmoniyey (COVID-19), sistemnim vospaleniyem i riskom venoznix trombozov i tromboembolii (issledovaniye

- PUTNIK). *Kardiologiya*. 2020;60(6). DOI: 10.18087/cardio.2020.6.n1226. r.15-29. Anderson EJ, Roupael NG, Widge AT, et al. Safety and immunogenicity of SARS-CoV-2 mRNA-1273 vaccine in older adults. *N Engl J Med* 2020; 383:2427-2438.
5. Arutiunov G.P., Tarlovskaya E.I., Koziolova N.A., Boldina M.V., Batiushin M.M., Ametov A.S. et al. The agreed experts' position of the Eurasian Association of Therapists on tactics of management of patients with comorbid pathology infected with SARS-CoV-2. *Therapeutic Archive*. 2020; 92(9). DOI: 10.26442/00403660.2020.09.000703.
 6. Cao Y, Wei J, Zou L, Jiang T, Wang G, Chen L et al. Ruxolitinib in treatment of severe coronavirus disease 2019 (COVID-19): A multicenter, single-blind, randomized controlled trial. *Journal of Allergy and Clinical Immunology*. 2020;S0091674920307387. [Epub ahead of print]. DOI: 10.1016/j.jaci.2020.05.019
 7. Cao Y, Wei J, Zou L, Jiang T, Wang G, Chen L et al. Ruxolitinib in treatment of severe coronavirus disease 2019 (COVID-19): A multicenter, single-blind, randomized controlled trial. *Journal of Allergy and Clinical Immunology*. 2020;S0091674920307387. [Epub ahead of print]. DOI: 10.1016/j.jaci.2020.05.019.
 8. Clore J, Thurby-Hay L. Glucocorticoid-Induced Hyperglycemia. *Endocrine Practice*. 2009;15(5):469–74. DOI: 10.4158/EP08331.RAR8. Shono A, Mori S, Nakamura K, Yatomi A, Takada H, Tanaka H et al. Glucocorticoid-sensitive Paroxysmal Atrial Fibrillation, Sick Sinus Syndrome, and Mitral Regurgitation in a Patient with Malignant Rheumatoid Vasculitis. *Internal Medicine (Tokyo, Japan)*. 2019; 58(21):3093–8. DOI: 10.2169/internalmedicine.3090-19.
 9. Darmon P, Dadoun F, Boullu-Ciocca S, Grino M, Alessi M-C, Dutour A. Insulin resistance induced by hydrocortisone is increased in patients with abdominal obesity. *American Journal of Physiology-Endocrinology and Metabolism*. 2006;291(5):E995–1002. DOI: 10.1152/ajpendo.00654.2005.
 10. European Society of Cardiology. ESC Guidance for the Diagnosis and Management of CV Disease during the COVID-19 Pandemic. Last updated on April 2020. Available at: <https://www.escardio.org/Education/COVID-19-and-Cardiology/ESC-COVID-19-Guidance>.
 11. Folegatti PM, Ewer KJ, Aley PK, et al. Safety and immunogenicity of the ChAdOx1 nCoV-19 vaccine against SARS-CoV-2: a preliminary report of a phase 1/2, single-blind, randomised controlled trial. *Lancet* 2020;396:467-478.
 12. Gorabi AM, Kiaie N, Hajghasemi S, Banach M, Penson PE, Jamialahmadi T et al. Statin-Induced Nitric Oxide Signaling: Mechanisms and Therapeutic Implications. *Journal of Clinical Medicine*. 2019; 8(12):2051. DOI: 10.3390/jcm8122051.
 13. Irina Rubenovna Agababyan, Sitora Shahobovna Soleeva, Muyassar Gafurjanovna Mukhamedova, Jamol Uzokov. Condition of coronary arteries and change of lipid profile in coronary heart disease. *Journal of critical reviews* 2020 August .p.4719-4723.
 14. Lindsey R. Baden, M.D., Hana M. El Sahly, M.D., Brandon Essink, M.D., Karen Kotloff, M.D., Sharon Frey, M.D., Rick Novak, M.D., David Diemert, M.D., Stephen A. Spector, M.D., Nadine Roupael, M.D., C. Buddy Creech, M.D., John McGettigan, M.D., Shishir Khetan, M.D., et al. Efficacy and Safety of the mRNA-1273 SARS-CoV-2 Vaccine. for the COVE Study Group February 4, 2021. *N Engl J Med* 2021; 384:403-416. DOI: 10.1056/NEJMoa2035389.
 15. Ludovico Cantuti-Castelvetri, Ravi Ojha , Liliana d. Pedro, Minou Djannatian, Jonas Franz , Suvi Kuivanen, Franziska Van der Meer, Katri Kalliotugberk Kaya , Mikael Simons. Neuropilin-1 facilitates SARS-CoV-2 cell entry and infectivity. *SCIENCE* 13 Nov 2020 • Vol 370, Issue 6518 • pp. 856-860 • DOI: 10.1126/science.abd2985.
 16. Madjid M, Safavi-Naeini P, Solomon SD, Vardeny O. Potential Effects of Coronaviruses on the Cardiovascular System: A Review. *JAMA Cardiology*. 2020; DOI: 10.1001/jamacardio.2020.1286.
 17. Markus Hoffmann, Hannah Kleine Weber, Simon Schroeder, Nadine Kruger, Tanja Herrler, Sandra Erichsen, Tobias S. Schiergens, Georg Herrler, Nai-Huei Wu, Andreas Nitsche, Marcel A. Müller, Christian Drosten, Stefan Pöhlmann, SARS-CoV-2 Cell Entry Depends on ACE2 and TMPRSS2 and Is Blocked by a Clinically Proven Protease Inhibitor. *Cell Press*. Volume 181, Issue 2, 16 April 2020, Pages 271-280. e8.
 18. Mehta P, McAuley DF, Brown M, Sanchez E, Tattersall RS, Manson JJ. COVID-19: consider cytokine storm syndromes and immunosuppression. *The Lancet*. 2020;395(10229):1033–4. DOI: 10.1016/S0140-6736(20)30628-0.
 19. Merryn Voysey DPhil, Sue Ann Costa Clemens PhD, Shabir A Madhi PhD, Lily Y Weckx PhD, Pedro M Folegatti MD, Parvinder K Aley PhD, Brian Angus MD, Vicky L Baillie PhD, Shaun L Barnabas PhD, Qasim E Bhorat MSc, Sagida Bibi PhD, Carmen Briner MBBCh, Paola Cicconi PhD, Andrea M Collins PhD, Rachel Colin-Jones MSc, Clare L Cutland PhD, Thomas C Darton DPhil, Keertan Dhedra FRCPCH, Peter Zuidewind. Safety and efficacy of the ChAdOx1 nCoV-19 vaccine (AZD1222) against SARS-CoV-2: an interim analysis of four randomised controlled trials in Brazil, South Africa, and the UK. *Volume 397, Issue 10269, 9–15 January 2021, Pages 99-111*.
 20. Ministry of Health of Russian Federation. Temporary methodical recommendations. Prevention, diagnosis and treatment of new coronavirus infection (COVID-2019). Version 7 (03.06.2020). Moscow. Available at: https://static0.rosminzdrav.ru/system/attachments/attaches/000/050/584/original/03062020_%D0%9CR_COVID-19_v7.pdf. 2020.
 21. Renhong Yan, Yuanyuan Zhang, Yanning Li, Lu Xia, Yingying Guo, Qiang Zhou Structural basis for the recognition of SARS-CoV-2 by full-length human ACE2. *2020 Mar 27; 367(6485):1444-1448*. doi: 10.1126/science.abb2762. Epub 2020 Mar 4.
 22. S A Meo, I A Bukhari, J Akram, A S Meo, D C Klonoff. COVID-19 vaccines: comparison of biological, pharmacological characteristics and adverse effects of Pfizer/BioNTech and Moderna Vaccines. *European review for medical and pharmacological sciences* 2021 Feb; 25(3):1663-1669. doi: 10.26355/eurev_202102_24877.
 23. Schett G, Sticherling M, Neurath MF. COVID-19: risk for cytokine targeting in chronic inflammatory diseases? *Nature Reviews Immunology*. 2020;20(5):271–2. DOI: 10.1038/s41577-020-0312-7.
 24. Shlyakho E.V., Konradi A.O., Arutyunov G.P., Arutyunov A.G., Bautin A.E., Boytsov S.A. et al. Guidelines for the diagnosis and treatment of circulatory diseases in the context of the COVID-19 pandemic. *Russian Journal of Cardiology*. 2020; 25(3):129–48. DOI: 10.15829/1560-4071-2020-3-3801.
 25. Soleeva S.Sh., Djabbarova N.M. Yarasheva Z.X. «Clinical and functional condition of patients with stable angina pectoris on the background of long-term use of Atorvastatin» International scientific review of the problems and prospects of modern science and education, Boston. USA. December 25-26, 2019. P.113-115.
 26. Soleeva S.Sh., Djabbarova N.M., Muradov Sh.B. The state of diastolic dysfunction of the left ventricle in patients with myocardial infarction. *Journal of cardiorespiratory research* 2020 vol.3, issue 1, pp.78-81. DOI <http://dx.doi.org/10.26739/2181-0974-2020-3-16>.
 27. Sun X, Wang T, Cai D, Hu Z, Chen J, Liao H et al. Cytokine storm intervention in the early stages of COVID-19 pneumonia. *Cytokine & Growth Factor Reviews*. 2020;53:38–42. DOI: 10.1016/j.cytogfr.2020.04.0022. World Health Organization. Clinical management of COVID-19. WHO Reference Number: WHO/2019-nCoV/clinical/2020.5. 2020. [Internet] 2020. Available at: <https://www.who.int/publications-detail-redirect/clinical-management-of-covid-19>.
 28. Tang N, Li D, Wang X, Sun Z. Abnormal coagulation parameters are associated with poor prognosis in patients with novel coronavirus pneumonia. *Journal of Thrombosis and Haemostasis*. 2020;18(4):844–7. DOI: 10.1111/jth.14768.

ЖУРНАЛ КАРДИОРЕСПИРАТОРНЫХ ИССЛЕДОВАНИЙ
ТОМ 3, НОМЕР 1

JOURNAL OF CARDIORESPIRATORY RESEARCH
VOLUME 3, ISSUE 1

Контакт редакций журналов. www.tadqiqot.uz

ООО Tadqiqot город Ташкент,
улица Амира Темура пр.1, дом-2.

Web: <http://www.tadqiqot.uz/>; Email: info@tadqiqot.uz

Тел: (+998-94) 404-0000

Editorial staff of the journals of www.tadqiqot.uz

Tadqiqot LLC the city of Tashkent,
Amir Temur Street pr.1, House 2.

Web: <http://www.tadqiqot.uz/>; Email: info@tadqiqot.uz

Phone: (+998-94) 404-0000