

GEPATITLAR FONIDA KORONAVIRUS INFEKSIYASINING KECHISHI

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Annotatsiya. Jigar hayotiy muhim organdir. Jigar inson organizmida ko‘plab funksiyalarni bajaradi, immunitet tizimi reaksiyalarida ishtirok etadi, infeksiyalarga umumiy qarshilik darajasini belgilaydi va viruslar va bakteriyalarga qarshi antitanalar ishlab chiqarish uchun javobgardir. Jigar kasalliklari dunyoda eng ko‘p tarqalgan kasalliklardan biri hisoblanadi, ayniqsa COVID-19 pandemiyasi sharoitida. Jahon sog‘liqni saqlash tashkiloti 2020 yil 11 fevralda yangi koronavirus infeksiyasining rasmiy nomi COVID-19 deb e‘lon qildi.

Kalit so‘zlar: COVID-19, surunkali gepatit, koronavirus, klinik kechish.

Аннотация. Печень является жизненно важным органом. Печень в организме человека выполняет множество функций. Участвует в реакциях иммунной системы. Кроме того определяет общий уровень сопротивляемости инфекциям и отвечает за производство антител для борьбы с вирусами и бактериями. Заболевания печени являются самыми распространенными в мире. Особенно в условиях пандемии COVID-19. Всемирная организация здравоохранения 11 февраля 2020 г.

Ключевые слова: COVID, хронический гепатит, коронавирусы, клиническое течение.

Annotation. The liver is a vital organ. The liver has many functions in the human body. Participates in the reactions of the immune system. In addition, it determines the overall level of resistance to infections and is responsible for the production of antibodies to fight viruses and bacteria. Liver diseases are the most common in the world. Especially in the context of the COVID-19 pandemic. World Health Organization February 11, 2020.

Keywords: COVID-19, chronic hepatitis, coronavirus, clinical course, the liver infectious diseases.

Dolzarbliigi: 2019 yilning oxirida Xitoy Xalq Respublikasida noma‘lum pnevmoniya holatlarining paydo bo‘lishi haqidagi xabar barchaning e‘tiborini tortdi. Pnevmoniya SARS-CoV-2 yangi koronavirusi (o‘tkir respirator sindrom koronavirusi 2) tomonidan qo‘zg‘atilgan. Jahon sog‘liqni saqlash tashkiloti 2020 yil

11 fevralda SARS-CoV-2 infeksiyasiga COVID-19 ("CoronaVirus Disease 2019" - 2019 yilda yangi koronavirus tomonidan qo'zg'atilgan kasallik) rasmiy nomini berdi.

Pnevmoniya COVID-19ning asosiy klinik shakli hisoblanadi. Shunday bo'lsada, COVID-19 pandemiyasi tarqalishi va kasallanganlardagi klinik ma'lumotlarni tahlil qilish natijasida "atipik" pnevmoniya uchun xos bo'lmagan alomatlar aniqlana boshlandi. Nevrologik ko'rinishlar, teri o'zgarishlari, ko'z shikastlanishlari va boshqalar tasvirlangan. SARS-CoV-2ning o'pkadan tashqari mavjudligi xolangiotsitlarda ham aniqlangan. Jigar shikastlanishining ehtimoliy omillari orasida viruslar tomonidan keltirib chiqarilgan ta'sir, tizimli yallig'lanish ("tsitokin bo'roni"), gipoksiya, gipovolemiya, shok holatidagi gipotoniya, dori gepatotoksikligi va boshqalar ko'rib chiqiladi.

COVID-19 bilan kasallangan bemorlarning 14-53% da bioximiyaviy ko'rsatkichlarda o'zgarishlar qayd etilishi mumkin, bu odatda dori-darmon bilan davolashni talab qilmaydi. O'tkir hepatit juda kam hollarda rivojlanadi. Ammo, xavf ostida bo'lgan COVID-19 bilan kasallangan bemorlarga alohida e'tibor qaratish kerak - jigar transplantatsiyasini o'tkazganlar, immunosuppressantlarni qabul qilayotganlar, shuningdek, tsirroz dekompensatsiyasi, surunkali gepatotsellyulyar karsinoma fonida o'tkir jigar yetishmovchiligi, viruslarga qarshi terapiya o'tkazilayotgan holatlarda. Ilmiy ma'lumotlar, yangi texnologiyalar va yangilanib turadigan qo'llanmalar bilan doimiy almashinuv va ochiq kirish zarur.

Koronaviruslar tabiatda keng tarqalgan bo'lib, turli xil shamollash kasalliklarining sababchisidir (25% gacha). Ularning aksariyati sog'liqqa jiddiy zarar yetkazmaydigan virusli infeksiyani keltirib chiqaradi, ammo SARS-CoV (og'ir o'tkir respirator sindrom koronavirusi) va MERS-CoV (Yaqin Sharq respirator sindromi koronavirusi) kabi ba'zilar yuqori o'lim darajasi bilan og'ir respirator sindromning rivojlanishiga olib keladi [1, 2].

Tabiatda ko'rshapalaklarning ko'p turlari koronaviruslar uchun tabiiy egadir. Mutatsiya va adaptatsiya jarayonlari natijasida rivojlanib, ular vaqti-vaqti bilan inson populyatsiyalarida epidemiyalarni keltirib chiqaradi. Shunday qilib, 2019 yil dekabr oyi oxirida Xitoyda boshlangan noma'lum pnevmoniyaning tarqalishi jamoat sog'lig'i sohasida favqulodda vaziyatning rivojlanishiga sabab bo'ldi, keyinchalik SARS-CoV-2 yangi koronavirusi (og'ir o'tkir respirator sindrom koronavirusi 2) tomonidan qo'zg'atilgan pandemiyaga olib keldi [2, 3]. Jahon sog'liqni saqlash

tashkiloti (JSST) 2020 yil 11 fevralda SARS-CoV-2 infeksiyasiga COVID-19 ("CoronaVirus Disease 2019" - 2019 yilda yangi koronavirus tomonidan qo'zg'atilgan kasallik) rasmiy nomini berdi. Ushbu infeksiyadan o'lim darajasi 0,5-3% ni tashkil qiladi [4].

SARS-CoV-2 va COVID-19 patogenezining ehtimoliy mexanizmlari. Yangi koronavirus - bir zanjirli RNK saqllovchi virus bo'lib, Coronaviridae oilasi, Betacoronavirus turiga mansub. SARS-CoV-2 - bu zoonozli virus, bu filogenetik tahlildan kelib chiqadi, bu esa SARSga o'xshash ko'rshapalaklar koronavirusining BM48-31/BGR/2008 izolyati bilan eng yaqin aloqani ko'rsatdi (o'xshashlik - 96%). Ko'rinadiki, ko'rshapalaklar SARS-CoV-2 uchun rezervuar hisoblanadi, boshqa kichik sut emizuvchilar, xususan, pangolinlar esa oraliq egalar bo'lib, ehtimol "nolinchi bemorni" yuqtirgan [1]. Bundan tashqari, SARS-CoV-2ning filogenetik tahlilida SARS-CoV bilan 88% va MERS-CoV bilan 50% ga yaqin ketma-ketlik o'xshashligini ko'rsatuvchi ma'lumotlar olingan [1, 5].

Respirator sindromlar koronaviruslarining tuzilishi juda o'xshash. SARS-CoV-2ning tuzilmaviy oqsillari orasida S-oqsillari yoki "oqsil tikalari" (inglizcha Spike - tikan), membrana oqsili, E oqsili va nukleokapsid ajratiladi. S oqsili virusning hujayralarga birikishi, qo'shilishi va kirishida muhim rol o'ynaydi, bu esa uni antitanalar va vaksina ishlab chiqarish uchun ehtimoliy nishon sifatida ko'rib chiqishga imkon beradi. Yangi koronavirus infeksiyasining patogenezini yetarlicha o'rganilmagan [6, 7].

Virulentlikning asosiy omili bu SARS-CoV-2ning tashqi membranasida joylashgan S oqsilining retseptor bilan bog'lanish domeni (receptor-binding domain – RBD)ning angiotenzin-o'zgartiruvchi ferment 2 (angiotensin-converting enzyme 2 receptors – ACE2) retseptori bilan o'zaro ta'siri hisoblanadi, u odamning transmembranali serin proteazalari (TMPRSS2 – Transmembrane protease, serine 2) tomonidan faollashtiriladi [8]. ACE2 qon plazmasi komponentlaridan II tipdagi alveolotsitlar tomonidan ajratiladigan surfaktantda ifodalanadi. Surfaktant - bu alveolalar, alveolyar o'tish joylari va 1-3-darajali respirator bronxiolalarda havosuzlik fazalari chegarasida joylashgan va nafas olish paytida alveolalar devorlarining qulashiga (yopishishiga) to'sqinlik qiladigan yuzaki faol monomolekulyar plyonkadir.

ACE2ning ifodasi o'pkaning shikastlanishidan himoya qiladi, ammo u SARS-CoVning tikansimon oqsili bilan bog'lanishi natijasida kamayadi, bu esa infeksiya

xavfini oshiradi. Shu bilan birga, tajribada ACE2 ifodasining kuchayishi SARS-CoV bilan bog‘lanishning ko‘payish ehtimolini istisno qilmasligi ko‘rsatilgan. Bitta nishonga uchtagacha virus birikishi mumkin. ACE2 va TMPRSS2 Yevropa va Osiyo kelib chiqishiga ega bemorlar orasida bir tekis taqsimlanmagan, bu ham infeksiyaning intensivligiga ta‘sir qilishi mumkin. SARS-CoVning tuzilmaviy bo‘lmagan oqsillari eritrotsitdagi gemoglobin tuzilishini o‘zgartirishga qodir, bu esa kislorod tashilishini buzadi, temirning dissotsiatsiyasiga, porfirin hosil bo‘lishiga va ferritinning ko‘payishiga olib keladi, degan taxmin mavjud.

Bunday ta‘sir o‘pkadagi yallig‘lanish jarayonlarini kuchaytirishi, oksidativ stress, gipoksemiya, gipoksiya, o‘tkir respirator distress sindromi (O‘RDS) va ko‘p organli kislorod yetishmovchiligi alomatlarining rivojlanishiga olib kelishi mumkin [5]. Biroq, ushbu gipotezaning asosi eksperiment va klinik tadqiqotlar o‘tkazmasdan biotransformatsiya modelini yaratish edi. SARS-CoV-2 nafas yo‘llari shilliq qavatida, ichakda, ko‘z kon’yunktivasida, oshqozon osti va okoloushnye slyunnye bezlarida joylashgan qadahsimon hujayralarga tropdir.

Virusning faol replikatsiyasi qadahsimon hujayralarning (shilimshiq hosil bo‘lishi) himoya funksiyalarini sezilarli darajada kamaytiradi, bu ham virusning inson organizmiga kirishiga yordam beradi.

Koronavirusning tarqalishiga javoban giper-immun reaksiya rivojlanishi kuzatiladi - bu "tsitokin bo‘roni" deb ataladi, u bir vaqtning o‘zida qondagi T-limfotsitlarning miqdori kamayishi bilan birga yallig‘lanishga qarshi interleykinlarning (IL-1 β , IL-6, o‘sma nekrozi omili va boshqalar) va xemokinnlarning sezilarli (anomal) miqdori sintezi bilan tavsiflanadi [1]. Bundan tashqari, SARS-CoV-2 qon tomirlari endoteliysini yuqtirib, u yerda joylashgan ACE2 bilan o‘zaro ta‘sir qiladi va endotelial disfunktsiya, giperpronitsayemost, mikrosirkulyatsiyaning buzilishi, tomir trombofiliyasi va tromb hosil bo‘lishining rivojlanishiga olib keladi [1].

COVID-19ning progresslashishi gialin membranalar hosil bo‘lishi va o‘pka shishining rivojlanishi bilan kechadigan diffuz alveolyar shikastlanish bilan aniqlanadi. O‘pkaning autopsiyasidagi gistologik manzarasi alveolyar eksudatlar va interstitsial fibrozning tashkillanishi, gialin membranalar hosil bo‘lishi, interstitsial mononuklear yallig‘lanish infiltratlarining mavjudligi, ko‘plab fibrin mikrotromblari, sezilarli shish, II tipdagi alveolotsitlarning giperplaziyasi va o‘choqli deskvamatsiyasi, alveolyar eksudatda virusli kiritmalar bilan

makrofaglarining sezilarli miqdori bilan tavsiflanadi. Ko‘proq zararlangan sohalarda qon ketishi, nekroz va gemorragik infarkt kuzatiladi [2, 3].

COVID-19ning klinik manzarasi va tashxisi: insonning SARS-CoV-2 bilan yuqtirilishi inkubatsiya davrining oxirgi kunlarida va kasallik boshlanganidan keyingi birinchi uch kunda maksimal darajada sodir bo‘ladi. Aksariyat hollarda yuqtirish klinik jihatdan namoyon bo‘lgan kasallik holatlarida COVID-19 bilan kasallangan bemor bilan aloqa qilish natijasida yuzaga keladi (75-85% gacha - oila muhitidagi yuqtirilgan qarindoshlar bilan aloqa qilishda). Ta’kidlash joizki, virus ajralishi, odatda, yengil/o‘rtacha hollarda 12 kungacha va og‘ir hollarda 14 kundan ortiq davom etadi. Biroq, COVID-19 dan tuzalib ketgan bemorlarda yangi koronavirus RNKsi klinik alomatlar yo‘qolganidan keyin ham ijobiy bo‘lishi mumkin. COVID-19 bilan kasallangan odam atrofdagi 3-5 kishini, gripp bilan kasallangan odam esa atigi 1-2 kishini yuqtirishi mumkin [4-6].

Epidemiologik dalillar shuni ko‘rsatadiki, yurak-qon tomir kasalliklari, arterial gipertenziya, qandli diabet, xavfli o‘smalar bilan og‘rigan bemorlar SARS-CoV-2 ga ko‘proq sezgir.

Xulosa. COVID-19 bilan kasallanganlar soni 3,5 milliondan oshgan bo‘lib, 250 mingdan ortiq bemor vafot etgan. Hozirda samarali maxsus davolash usullari mavjud emas, lekin turli terapevtik strategiyalar bo‘yicha klinik tadqiqotlar davom etmoqda. SARS-CoV-2 ga antitana hosil qilgan shaxslarni uzoq muddat monitoring qilish zarur. Jigar kasalliklari bo‘lgan bemorlar og‘ir kechish xavfiga ega bo‘lgani sababli, ularni nazorat qilish muhim ahamiyat kasb etadi. Pandemiya qarshi kurashda ilmiy ma’lumotlarga ochiq kirish va xalqaro hamkorlik muhim rol o‘ynaydi.

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