

## HYPERTENSION HIGH BLOOD PRESSURE CLINIC

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**Annotation:** : Hypertension or high blood pressure is one of the most common diseases of the vascular system of the heart. this is a disease in which a stable increase in blood pressure is its main manifestation. Risk factors that increase the likelihood of its development have been identified by observing large groups of people. It is often referred to as a " silent killer " (silent killer) because in most cases it develops without any specific symptoms. If not controlled, it leads to serious complications such as heart attack, stroke, kidney failure. Blood pressure is caused by the movement of blood through the vessels. During the contraction of the heart, an increase in pressure (systolic indicator) occurs, and during the relaxation of the organ, a decrease in blood pressure (diastolic indicator) occurs. Hypertension is one of the most common diseases of the cardiovascular system. It can be an independent pathology or the result of diseases of the kidneys, adrenal glands and other organs. This article is about

**Keywords:** hypertension, thiazide diuretics, Sartans (angiotensin II receptor blocker), calcium antagonists, Beta-adrenoblocators, Alpha-adrenoreceptor blockers, AAF-inhibitors, intracranial pressure, kininase II, migraine, hypertensive retinopathy, Retina, glaucoma,

**Annotatsiya:** Gipertoniya yoki yuqori qon bosimi – yurak qon tomir tizimining eng ko'p uchraydigan kasalliklaridan biridir. bu qon bosimining barqaror o'sishi uning asosiy ko'rinishi bo'lgan kasallikdir. Uning rivojlanish ehtimolini oshiradigan xavf omillari odamlarning katta guruhlarini kuzatish orqali aniqlangan. U ko'pincha "jim o'ldiruvchi" (silent killer) deb ataladi, chunki ko'p hollarda hech qanday aniq alomatlarsiz rivojlanadi. Agar u nazorat qilinmasa, yurak xuruji, insult, buyrak yetishmovchiligi kabi jiddiy asoratlarga olib keladi. Qon bosimi qonning tomirlar orqali harakatlanishi natijasida yuzaga keladi. Yurakning qisqarishi paytida bosimning oshishi (sistolik ko'rsatkich) va organning bo'shashishi paytida qon bosimining pasayishi (diastolik ko'rsatkich) sodir bo'ladi. Gipertenziya yurak-qon tomir tizimining eng keng tarqalgan kasalliklaridan biridir. Bu mustaqil patologiya yoki buyraklar, buyrak usti bezlari va boshqa organlar kasalliklarining natijasi bo'lishi mumkin. Ushbu maqolada gipertoniyaning asosiy sabablari va ularni qanday tushunish haqida so'z yuritiladi.

**Kalit so'zlar:** Gipertoniya, **Tiazid diuretiklar, Sartanlar** (angiotenzin II retseptorlari blokatori), **Kalsiy antagonistlari, Beta-adrenoblokatorlar, Alfa-adrenoretseptor blokatorlari, AAF-ingibitorlari,** Intrakranial bosim, kininaza II, migren, Gipertenziv retinopatiya, Retina, glaukoma,

Систолическое давление — давление крови на стенку  
артерии в момент сокращения  
сердца



Диастолическое давление — давление крови на стенку  
артерии в момент  
расслабления сердца

**Relevance of the topic:** The World Health Organization (who) supports reducing hypertension as a health problem in countries. In 2021, who published a new guide to pharmacological treatment of hypertension in adults. The publication provides evidence-based recommendations for starting treatment for hypertension and recommended intervals for follow-up. The document also contains information about the target blood pressure that must be achieved to control and who can initiate treatment in the health system. Hypertension is a disease caused by impaired neuromuscular function of blood vessels. It occurs mainly in adults over the age of 40, but in recent years it has also been noted that it is often observed in young people. Both women and men suffer from hypertension the same way. If the disease is diagnosed in 20-30% of adults, then after the age of 65 this figure is 50-65% can reach. Increased blood pressure is one of the leading causes of death in patients with diseases of the cardiovascular system. According to many experts, hypertension often occurs as a result of circulatory disorders. Heart failure is also on the list of its causes. This disease can provoke the development of secondary diseases in patients, including stroke, heart attack.

**Mavzuning dolzarbligi:** Jahon sog'liqni saqlash tashkiloti (VOZ) mamlakatlarda gipertenziyani sog'liqni saqlash muammosi sifatida kamaytirishni qo'llab-quvvatlaydi. 2021 yilda JSST kattalardagi gipertenziyani farmakologik davolash bo'yicha yangi qo'llanmani e'lon qildi. Nashr gipertenziyani davolashni boshlash bo'yicha dalillarga asoslangan tavsiyalar va kuzatish uchun tavsiya etilgan intervallarni taqdim etadi. Hujjat, shuningdek, nazorat qilish uchun erishish kerak bo'lgan maqsadli qon bosimini va sog'liqni saqlash tizimida kim davolanishni boshlashi mumkinligi haqidagi ma'lumotlarni o'z ichiga oladi. Gipertoniya — qon tomirlarning nerv-funksional faoliyati buzilishi natijasida kelib chiqadigan kasallik. Asosan 40 yoshdan kattalarda uchraydi, lekin so'nggi

yillarda yoshlarda ham tez-tez kuzatilishi qayd qilinmoqda. Gipertoniya ayollar ham, erkaklar ham bir xil aziyat chekishadi. Kasallik kattalarning 20-30 foizida tashxislansa, 65 yoshdan keyin bu ko'rsatkich 50-65% ni tashkil etishi mumkin. Qon bosimi oshishi yurak-tomir tizimi kasalliklari bo'lgan bemorlar ichida yetakchi o'lim sabablaridan biri hisoblanadi. Ko'plab mutaxassislar fikricha, gipertoniya ko'pincha qon aylanishi buzilishlari natijasida sodir bo'ladi. Yurak yetishmovchiligi ham uning sababchilari ro'yxatiga kiradi. Mazkur kasallik bemorlarda ikkilamchi kasalliklar rivojlanishiga turtki bo'lishi mumkin, jumladan insult, yurak xurujiga.

**The main part of the article.** Spasm of blood vessels (compression) High blood pressure increases the pressure on the wall of the capillaries and arteries located in the brain. These vessels contract reflectively, causing migraines or severe pulsating headaches. B. Increased intracranial pressure leads to impaired fluid circulation (fluid flow) within the cranium when blood pressure is constantly high. This increases intracranial (internal cranial) pressure, causing pain especially in the area of the head's nape. C. Hypoxia of the brain Along with high blood pressure, the quality of cerebral circulation deteriorates. This leads to a state of oxygen deficiency (hypoxia), exacerbating the pain. 2. The causes of eye problems are hypertensive retinopathy. High pressure also affects small blood vessels located in the eye. This condition is called "hypertensive retinopathy". Blurred vision "flies" appear in front of the eyes darkening or narrowing of the range of vision medical mechanism: The capillaries that nourish the retina narrow when exposed to pressure. Prolonged pressure damages the capillary wall and creates bleeding (hemorrhoids) or swelling. Swelling of the optic nerve disables the optic nerve in the eye. Increased intraocular pressure the external arterial pressure increases the intraocular pressure (the risk of glaucoma). This puts pressure on the optic nerve and increases the risk of blindness. Clinical significance: headaches and eye problems in Hypertension patients can be a medical emergency. Prolonged hypertension leads to a constant deterioration in vision and a risk of stroke. Therefore, if such signs are detected, the patient is recommended for in-depth examinations such as funduscopy (eyeball vision), MRI, retinal tomography. Blood vessels occur in one of two ways. Ischemic stroke is when blood clotting narrows or completely blocks blood vessels in the brain. Blocking prevents a part of the brain from getting enough oxygen prevents him from getting and he dies. Hemorrhagic stroke is a rupture of a blood vessel in the brain. This condition deprives the brain area of oxygen and can also cause pressure in the skull that damages brain tissue.

**Asosiy Qisim.** Qon tomirlarining spazmi (qisilishi)

Yuqori qon bosimi miyada joylashgan kapillyarlar va arteriyalarning devoriga bosimni oshiradi. Bu tomirlar reflektor tarzda qisilib, migren yoki kuchli pulsatsiyalovchi bosh og'rig'iga sabab bo'ladi. B. Intrakranial bosimning oshishi Qon bosimi doimiy yuqori bo'lganda, bosh miya ichidagi suyuqlik aylanishi (likvor oqimi) buziladi. Bu esa intrakranial (ichki bosh miya) bosimni oshirib, ayniqsa boshning ensa sohasida og'riq beradi. C. Miyaning gipoksiya holati. Qon bosimining yuqoriligi bilan birga miya qon aylanishining sifati yomonlashadi. Bu esa kislorod tanqisligi (gipoksiya) holatini keltirib chiqarib, og'riqni kuchaytiradi. 2. Ko'zdagi muammolar sabablari Gipertenziv retinopatiya. Yuqori bosim ko'zda joylashgan mayda qon tomirlarga ham ta'sir qiladi. Bu holat "gipertenziv retinopatiya" deb ataladi. Ko'rishning xiralashishi "Chivincha"lar ko'z oldida paydo bo'lishi Qorong'ilashish yoki ko'rish doirasining torayishi tibbiy mexanizm: Retinani oziqlantiruvchi kapillyarlar bosim ta'sirida torayadi. Uzoq davom etgan bosim kapillyar devorini shikastlaydi va qon ketishi (gemoramiya) yoki shish hosil bo'ladi. Optik nervning shishishi ko'zdagi ko'rish asabini

ishdan chiqaradi. Ko'z ichidagi bosimning oshishi Yuqori arterial bosim ko'z ichki bosimini (glaukoma xavfini) oshiradi. Bu esa ko'rish asabiga bosim o'tkazadi va ko'rlik xavfini oshiradi. Kliniki ahamiyati: Gipertoniya bemorlarida bosh og'rig'i va ko'zdagi muammolar tibbiy favqulodda vaziyat bo'lishi mumkin. Uzoq davom etgan gipertoniya ko'rishning doimiy yomonlashuviga va insult xavfiga olib keladi. Shuning uchun, bunday belgilar aniqlansa, bemorga funduskopiya (ko'z tubini ko'rish), MRT, retina tomografiyasi kabi chuqur tekshiruvlar tavsiya qilinadi. Qon tomirlari ikki usuldan birida sodir bo'ladi. Ishemik insult - qon ivishining miyadagi qon tomirlarini toraytirishi yoki butunlay to'sib qo'yishi. Bloklanish miyaning bir qismiga etarli miqdorda kislorod olishiga to'sqinlik qiladi va u o'ladi. Gemorragik insult - bu miyadagi qon tomirining yorilishi. Bu holat miya hududini kisloroddan mahrum qiladi va bosh suyagida miya to'qimalariga zarar etkazadigan bosimni ham keltirib chiqarishi mumkin.

**Treatment.** In the treatment of disability, a qualified physician prescribes a course of therapy with medications that are selected individually for each patient. In most cases, the following agents or a combination thereof are prescribed:

- angiotensin converting enzyme (ACE) inhibitors, such as ramipril
- calcium channel blockers such as amlodipine
- thiazide diuretics such as bendroflumetazid
- alpha-blockers, such as doxazosin
- beta-blockers - such as atenolol

Thiazide diuretics ?? these drugs lower blood pressure by reducing the amount of fluid in the body; Sartans (angiotensin II receptor blockers) ?? have been used since the 1990s. It's one of the modern drugs, and it's the only one that keeps my blood pressure in check for 24 hours after a single dose. Calcium antagonists block the flow of calcium into the sarcoplasm of smooth muscle, thereby inhibiting vasospasm, resulting in a hypotensive effect. It is prescribed when cardiac anomalies, arrhythmias, stenocardiomy and cerebral atherosclerosis are observed; Beta-blockers have an indirect hypotensive effect by reducing the number of heartbeat contractions (by reducing the amount of blood pumped per minute). Alpha-adrenoreceptor blockers are very gentle dilators of blood vessels. The AAF-inhibitor ?? vasodilator blocks the angiotensin converting enzyme (kinase II), which transforms bradykinin and converts angiotensin I to angiotensin II. The latter is a potent vasoconstrictor, and its inhibition leads to vasodilation and a drop in blood pressure. In secondary hypertension, treating the underlying disease also eliminates the risk of hypertension. The main symptom of the disease is a steady rise in blood pressure, which means that patients should avoid any stress or emotional distress during treatment. Proper nutrition is critical to the successful treatment of hypertension

**Davolash.** Kasallikni davolashda malakali shifokor har bir bemor uchun individual ravishda tanlanadigan dorilar bilan terapiya kursini belgilaydi. Ko'p hollarda quyidagi vositalar yoki ularning kombinatsiyasi buyuriladi:

- angiotensinga aylantiruvchi ferment (ACE) **inhibitörleri** - ramipril kabi
- **kaltsiy kanal blokerlari**- amlodipin kabi
- tiazidli diuretiklar - bendroflumetazid kabi
- alfa-blokerlar - doksazosin kabi
- **beta-blokerlar** - atenolol kabi

**Tiazid diuretiklar** — bu dorilar organizmda suyuqlik darajasini kamaytirish natijada qon bosimi pasaytiradi;

**Sartanlar** (angiotenzin II retseptorlari blokatori) — 1990-yillardan buyon ishlatiladi. Zamonaviy dorilar qatoriga kiradi, bir martalik qabuldan keyin 24 soat davomida qon bosimini me'yorda ushlaydi;

**Kalsiy antagonistlari** — qon tomilar silliq mushaklarining sarkoplazmiga kaltsiy oqimini bloklab, vazospazmga to'sqinlik qiladi va buning natijasida gipotenziv ta'sirga erishiladi. Yurak anomaliyalari, aritmiyalar, stenokardiya va miya aterosklerozi kuzatilganda tayinlanadi;

**Beta-adrenoblokatorlar** — yurak qisqarishlari sonini kamayitish natijasida bilvosita gipotenziv ta'sir ko'rsatadi (bir daqiqada haydaladigan qon miqdorini kamaytirish oqibatida);

**Alfa-adrenoretseptor blokatorlari**— qon tomirlarni juda ehtiyotkorlik bilan kengaytiradi.

**AAF-ingibitorlari**— vazodilatatori bradikininni transformatsiyalovchi va angiotenzin I ni angiotenzin II ga aylantiruvchi angiotenzin aylantiruvchi fermentni (kininaza II) bloklaydi. So'nggisi kuchli vazokonstriktor sanalib, uni ingibitsiyalash vazodilatatsiya va arterial bosimning pasayishiga olib keladi.

Ikkilamchi gipertoniya asosiy kasallikni davolash qon bosimi oshishini ham bartaraf etadi. Davolash paytida bemorlarga har qanday stress yoki hissiy zo'riqishdan yiroq bo'lish bu qon bosimining barqaror o'sishi uning asosiy ko'rinishi bo'lgan kasallikdir.. bo'ladi. Gipertoniyani muvaffaqiyatli davolashda to'g'ri ovqatlanish muhim hisoblanadi.

**Discussion and Results:** Due to the many positive effects of modern medications, treatment of hypertension involves not only lowering blood pressure, but also protecting internal organs from the adverse effects of the processes that accompany high blood pressure. Persistently elevated blood pressure damages blood vessels throughout the body, including the brain, making them more prone to clogging and rupture. Blood vessels occur in one of two ways. An ischemic stroke is when blood clots narrow or completely block blood vessels in the brain. The blockage prevents a part of the brain from getting enough oxygen, and it dies. Hypertension is a serious condition that can increase the risk of heart, brain, kidney, and other diseases. It's the leading cause of premature death worldwide, with one in four men and one in five women -- more than a billion people -- suffering from it. To reduce these numbers, it is possible to prevent the disease through healthy eating, exercise, mental stability, and medical supervision. Everyone should have their blood pressure checked and their health monitored regularly. Because the early detection of hypertension is the prevention of serious complications.

**Muhokamalar va natijalar:** Zamonaviy dori-darmonlarning ko'p qirrali ijobiy ta'siri tufayli gipertenziyani davolash nafaqat qon bosimini pasaytirishni, balki ichki organlarni yuqori qon bosimi bilan birga keladigan jarayonlarning salbiy ta'siridan himoya qilishni ham o'z ichiga oladi. Doimiy ravishda ko'tarilgan qon bosimi butun tanadagi qon tomirlariga, shu jumladan miyaga zarar etkazadi va ularni tiqilib qolish va yorilishlarga ko'proq moyil qiladi. Qon tomirlari ikki usuldan birida sodir bo'ladi. Ishemik insult - qon ivishining miyadagi qon tomirlarini toraytirishi yoki butunlay to'sib qo'yishi. Bloklanish miyaning bir qismiga etarli miqdorda kislorod olishiga to'sqinlik qiladi va u o'ladi. Gipertenziya jiddiy kasallik bo'lib, yurak, miya, buyrak va boshqa kasalliklar xavfini oshirishi mumkin. Bu butun dunyo bo'ylab bevaqt o'limning asosiy sababi bo'lib, har 4 erkakdan 1 nafari va 5 ayoldan 1 nafari - milliarddan ortiq odamda bu kasallik mavjud. Bu sonlarni kamaytirish uchun

Sogʻlom ovqatlanish, harakat, ruhiy barqarorlik va tibbiy nazorat orqali ushbu kasallikning oldini olish mumkin. Har bir inson oʻz qon bosimini muntazam oʻlchab, sogʻligʻini nazorat qilib borishi zarur. Chunki gipertoniyani erta aniqlash – ogʻir asoratlarning oldini olishdir. aholi oʻrtasida sanitar oqartiruv ishlarini olib borilishi kerak.

**Concluding** The problem is that people start to think about preventing hypertension, mainly when it's already getting worse and the blood pressure is already elevated to this or that level. And it's not about prevention anymore; it's about treatment. Hypertension can have many causes, often related to lifestyle, but the main one is that the sympathetic nervous system affects a person very quickly. Alpha and beta blockers of the adrenoreceptors in the sympathetic nervous system act by constricting the blood vessel walls and increasing blood pressure. We use drugs that block the main adrenoreceptors in the sympathetic nervous system. It can be prevented by a healthy diet, exercise, mental stability, and medical supervision. Everyone should have their blood pressure checked and their health monitored regularly. Because detecting hypertension early is the best way to prevent serious complications

**Xulosa.** Muammo shundaki, odamlar gipertoniyaning oldini olish haqida o'ylashni boshlaydilar, asosan ular allaqachon yomonlashganda va qon bosimi allaqachon u yoki bu darajaga ko'tarilgan. Va bu endi profilaktika emas, balki davolash masalasidir. Gipertoniya koʻplab sabablarga ega boʻlib, koʻpincha turmush tarziga bogʻliq boʻlib asosiy qismini simpatik nerv sistemasini insonga juda tez tasir koʻrsatadi. Simpatik nerv sistemasidagi alfa va beta adrenoretseptorlar blokatorlari tasir etadi qon tomirlar devorini toraytirib qon bosimini oshiradi. Shuning uchun simpatik nerv sistemasining asosiy blokatorlari dori vositalaridan foydalanmiz. Sogʻlom ovqatlanish, harakat, ruhiy barqarorlik va tibbiy nazorat orqali ushbu kasallikning oldini olish mumkin. Har bir inson oʻz qon bosimini muntazam oʻlchab, sogʻligʻini nazorat qilib borishi zarur. Chunki gipertoniyani erta aniqlash – ogʻir asoratlarning oldini olishdir.

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