

# БИОМЕДИЦИНА ВА АМАЛИЁТ ЖУРНАЛИ

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### Шавази Наргиз Нуралиевна

DSc, доцент, заведующая кафедрой акушерства и гинекологии N 3 СамГМУ. <https://orcid.org/0000-0001-7859-9955>

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доктор медицинских наук, доцент кафедры Педиатрии, неонатологии и переподготовки детских болезней №2 Самаркандского государственного медицинского университета **ORCID ID:** 0000-0003-2442-1523

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доктор медицинских наук, профессор кафедры онкологии Самаркандского государственного медицинского университета **ORCID ID:** 0000-0001-5272-5503

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**БИОМЕДИЦИНА ВА АМАЛИЁТ ЖУРНАЛИ**  
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**MATLUBOV Mansur Muratovich**

DSc, professor

**MUMINOV Abduhalim Abduvakil**

PhD, Assistant

**KHUDOYBERDIEVA Gulrukh Sobirovna**

PhD, Assistant


**UMAROVA Bibikhonum Azimjon kizi**

resident of the Master's program

Samarkand State Medical university

**EFFECTIVENESS OF POSTOPERATIVE INTENSIVE THERAPY IN PREGNANT WOMEN WITH VARICOSE VEINS (LITERATURE REVIEW)**

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 <http://dx.doi.org/10.5281/zenodo.18519638>**ANNOTATION**

Chronic venous diseases of the lower extremities are widespread health issues affecting a significant portion of the population. Pregnancy is a major factor contributing to venous insufficiency in women due to the mechanical pressure exerted by the growing uterus and the hormonal changes induced by the placenta, which affect the vessel walls.

This article examines sources from different references on how to properly use phlebotonics in postoperative intensive care.

**Key words:** Varicose veins, phlebotonics, pulmonary artery thromboembolism, diosmin.

**МАТЛУБОВ Мансур Муратович**

д.м.н., профессор

**МУМИНОВ Абдухалим Абдувакил**

PhD, Ассистент

**ХУДОЙБЕРДИЕВА Гулрух Собировна**

PhD, Ассистент

**УМАРОВА Бибиixonум Азимовна**

Резидент магистратуры

Самаркандский государственный медицинский университет

**ЭФФЕКТИВНОСТЬ ПОСЛЕОПЕРАЦИОННОЙ ИНТЕНСИВНОЙ ТЕРАПИИ У БЕРЕМЕННЫХ С ВАРИКОЗНОЙ БОЛЕЗНЬЮ (ОБЗОР)**

## АННОТАЦИЯ

Хронические заболевания вен нижних конечностей являются одной из наиболее распространенных медицинских проблем в общей популяции. Беременность стоит в ряду ведущих причин развития венозной недостаточности у женщин вследствие обструкции венозного оттока беременной маткой и прогрессирующего воздействия гормонов плаценты на сосудистую стенку.

В этой статье рассматриваются различные источники, касающиеся правильного применения флеботоников в послеоперационной интенсивной терапии.

**Ключевые слова:** беременность, варикозная болезнь вен нижних конечностей, флеботоники

**MATLUBOV Mansur Muratovich**

DSc, professor

**MO`MINOV Abduhalim Abduvakil**

PhD, Assistant

**XUDOYBERDIYEVA Gulrux Sobirovna**

PhD, Assistant

**UMAROVA Bibihonum Azimjon qizi**

Magistratura rezidenti

Samarqand Davlat Tibbiyot Universiteti, O`zbekiston

**VARIKOZ MAVJUD BO`LGAN HOMILADORLARDA OPERATSIYADAN  
KEYINGI INTENSIV TERAPIYANING SAMARADORLIGI (ADABIYOTLAR SHARHI)**

## ANNOTATSIYA

Периферик веноз қон томirlarining patologiyalari zamonaviy tibbiyotda aholining katta qismini qamrab olgan dolzarb muammolardan biri hisoblanadi. Homiladorlik fiziologik holat bo'lish bilan birga, ayrim hollarda xomilador bachadon hisobiga vena qon tomirining obstruksiyasiga bu esa vеноз қон томir yetishmovchiligiga olib keladi. Bu holat, avvalo, o'sib borayotgan bachadonning mexanik ta'siri hamda plasentadan ajralib chiqadigan gormonlarning qon томir devorlariga ko'rsatayotgan ta'siri bilan izohlanadi.

Mazkur maqolada turli manbalar asosida operatsiyadan keyingi davrda flebotonik vositalar, xususan diosmin saqllovchi preparatlarning samarali va xavfsiz qo'llanilishiga oid ilmiy dalillar tahlil qilingan.

**Kalit so'zlar:** varikoz kasalligi, flebotoniklar, tromboemboliya, diosmin, o'pka arteriyasi tromboemboliyasi.

**Varikoz kasalligi** — bu venalarning tuzilmasida ularning kengayishi ko'rinishida namoyon bo'ladigan barqaror o'zgarish bo'lib, bu ularning devorlari va klapan apparati yetishmovchiligining chuqur o'zgarishlari natijasida yuzaga keladi. Ushbu patologiyaning birlamchi sabablari orasida qon томir devorining irsiy yetishmovchiligi, ikkilamchi sabablari sifatida esa oyoqlarga doimiy va uzoq muddatli yuklama kiradi. Statistik ma'lumotlarga ko'ra, homilador ayollarning 40–95 %ida varikoz kengayishi hech bo'lmaganda bir marta kuzatiladi[1,4]. Eng ko'p xavf guruhiga ortiqcha tana vazniga ega bo'lgan homilador ayollar kiradi. Periferik vena qon tomirlarining varikoz kasalligi dunyo aholisining 20–64% da uchraydi va ayollar erkaklarga nisbatan 1,5–2 barobar ko'proq zararlanadilar. Ilmiy ma'lumotlarga ko'ra, har yili ayollar orasida varikoz kasalligining yangi holatlari o'rtacha 2,6% ga ortib bormoqda[6,8]. Homiladorlik — ushbu patologiyaning rivojlanishida yetakchi etiopatogenetik omillardan biri bo'lib, u surunkali vеноз yetishmovchanlik (SVE), limfostaz va gemodinamik buzilishlarni keltirib chiqaradi[4,6].

Homiladorlik vaqtida organizmdagi gormonal fonning keskin o'zgarishi, ayniqsa plasentadan ajraladigan progesteron va relaksin darajasining ortishi natijasida vеноз devorlardagi mioelastik strukturalar susayib, qon томir tonusi pasayadi. Bu o'zgarishlar natijasida vеноз dilatatsiya, klapaning funksional yetishmovchanligi va staz holatlari rivojlanadi[8,10].

Shuni ta'kidlash kerakki, varikoz venalar ko'pincha oyoqlarda joylashgan bo'lsa-da, patologiya boshqa sohalarda ham paydo bo'lishi mumkin. Ayniqsa, homiladorlikning kech bosqichlarida qin yoki vulvada venoz ektaziyalar uchraydi. Buning sababi — bachadon hajmining kattalashishi natijasida atrofdagi organlar va venalarga bosim oshishidir[1,4].

Tug'ish yoshidagi ayollar orasida eng ko'p uchraydigan ekstragenital patologiyalardan biri — pastki oyoqlarning varikoz kengayishidir. Bu — pastki oyoqlarning yuzaki venalarining patologik kengayishi bo'lib, venaning devorida qon oqimining buzilishi va klapan apparati yetishmovchiligi bilan kechadi. Belgilari — oyoqlarda og'irlik hissi, charchoqlik, kuydiruvchi og'riq va boldir mushaklarida tutqanoqlar[5,6]. Tadqiqotlarga ko'ra, homilador ayollarning 7–35 %ida venoz yetishmovchilik aniqlanadi, ulardan 50–96 %ida bu holat homiladorlik davrida birinchi marta paydo bo'ladi. Ko'pincha varikoz II trimestrda aniqlanadi, I trimestrda esa 30 % hollarda uchraydi[7,8].

Birlamchi varikoz kengayishi, ya'ni klapan yetishmovchiligi bilan kechuvchi vena kengayishi odatda irsiy tusga ega bo'ladi va ko'pincha boshqa sabablar bo'lmasdan paydo bo'ladi. Homiladorlik davrida qon tomirlarining kengayishi va proliferatsiyasi kuzatiladi, ularning o'tkazuvchanligi oshadi, venoz staz esa teri va teri osti yog' qavati shishiga sabab bo'ladi, ayniqsa vulva va boldir sohalarida[3,4].

Venoz ektaziyalar nafaqat homilador ayol va homilaning umumiy holatini yomonlashtiradi, balki tromboz va tromboemboliyalar kabi xavfli asoratlarni ham keltirib chiqaradi. Ayrim manbalarga ko'ra, tug'ish yoshidagi ayollarda venoz tromboembolik asoratlarning 50 %i homiladorlik bilan bog'liq. Trombozlar homiladorlikda 0,4 %, tug'ruqdan keyin esa 3,5 % hollarda uchraydi[9,10].

Shuning uchun ayrim mualliflar venoz tizim patologiyasi homiladorlik, tug'ruq va tug'ruqdan keyingi davrni murakkablashtirib, onalar orasida kasallanish va hatto o'limni oshiradi, deb ta'kidlashadi.

Kasallik keng tarqalgan bo'lishiga qaramay, uning etiologiyasi va patogenezini to'liq o'rganilgan emas. Varikoz rivojlanish xavf omillari: yosh, irsiy moyillik, homiladorlik, semizlik, chuqur venalar trombozining avvalgi holatlari, kamharakat turmush tarzi, uzoq davom etuvchi statik yuklamalardir.

Varikoz rivojlanishida endotelial disfunktsiya va gemostaz buzilishlari muhim rol o'ynaydi — ular qon tomiri devorining reaktivligini o'zgartiradi, ivish kaskadini faollashtiradi va tomir devori yaxlitligini buzadi.

Homilador bachadonning kattalashishi va qorin ichi bosimining oshishi pastki kovak vena va yon venalarga mexanik bosim o'tkazadi, bu esa venoz to'siqqa va qonning turg'unlashishiga olib keladi. Venoz staz esa endotelial hujayralarda nuqsonlar paydo bo'lishiga sabab bo'ladi, natijada qon ivish omillarining jigar orqali chiqarilishi buziladi yoki ular ingibitorlar bilan o'zaro ta'sirga kirishadi[4,8].

Fiziologik homiladorlikda vena devorlari butunligicha saqlanadi, ammo yuqoridagi buzilishlar mavjud bo'lsa, venoz gipertenziya rivojlanish xavfi ortadi. Venoz gipertenziya kuchayishi gidrostatik va kolloid-osmotik bosim muvozanatini buzadi va natijada shish paydo bo'ladi[3,5].

Endotelial hujayralarning disfunktsiyasi ularning tuzilma shikastlanishiga olib keladi, mikrotsirkulyatsion tizimda patologik o'zgarishlarning “yomon aylana”sini yuzaga keltiradi. Leykotsitlarning vena devorlariga yopishishi, ekstrasellulyar joyga chiqishi, fibrin cho'kishishi va biologik faol moddalar ajralishi venoz disfunktsiyani kuchaytiradi.

Venoz klapan yetishmovchiligi — venoz gipertenziya shakllanishining asosiy omillaridan biridir. Tadqiqotlarda venoz devor va klapanlarda monotsit va makrofag to'planishlari aniqlangan, bu qon oqimini buzib, varikozni rivojlantiradi[3,5]. Bundan tashqari, silliq mushak hujayralari va elastin tolalarining arxitektonikasidagi buzilishlar ham varikoz mexanizmida rol o'ynaydi.

Bu jarayonlar oqibatida venalarda gipertrofiyalangan va atrofiyalangan qismlar paydo bo'ladi, ularning cho'ziluvchanligi va elastikligi kamayadi, natijada kengaygan, patologik egri-bugri venalar shakllanadi.

Jarrohlik aralashuvlari vaqtida qon tomir endoteliyasidagi mikroskopik shikastlanishlar to'qima omillarining qon oqimiga chiqishiga sabab bo'ladi, bu esa trombogen faollikni kuchaytiradi.

Shu sababli, venoz tromboembolik asoratlarning (VTEA) profilaktikasi zamonaviy jarrohlik va akusherlik amaliyotining ajralmas qismi hisoblanadi[7,10].

Ilmiy tadqiqotlarda keltirilishicha, qorin bo'shlig'i operatsiyalaridan keyingi 3–5% holatlarda VTEA rivojlanishi qayd etilgan bo'lib, chuqur venalar trombozining 75% gacha qismi klinik jihatdan simptomsiz kechadi. Ayrim hollarda bemorlardagi yagona klinik ko'rinish o'pka arteriyasi tromboemboliyasi (UATE) bo'lishi mumkin[1,4].

Homiladorlikning oxirgi trimestrlarida plasentar gormonlar ta'sirida venoz devorlarda kollagen strukturalarining qayta qurilishi yuz beradi. Shu bilan birga, organizmda qon hajmining fiziologik jihatdan 20–30% ga ko'payishi va bachadonning vena qon tomirlariga bosim ko'rsatishi natijasida pastki qismlarda venoz gipertenziya rivojlanadi. Bu holat, ayniqsa chalqancha yotgan yoki o'ng tomonga og'gan holatlarda quyi kovak venaning to'liq siqilishiga olib kelishi mumkin. Natijada, qon qaytishi buziladi, varikoz dilatatsiyasi va klapan yetishmovchanligi kuchayadi.

Diosminning farmakologik xususiyatlari va klinik ahamiyati:

Hozirgi klinik amaliyotda tromboembolik asoratlarning oldini olishda antikoagulyant terapiya bilan bir qatorda flebotonik vositalardan keng foydalanilmoqda. Shulardan biri — diosmin, yarim sintetik flavonoid bo'lib, gesperidindan olinadi.

**Diosminning klinik ta'siri** ushbu preparatning bir nechta ta'sir nuqtalaridan iborat.

**1. Venoz devor tonusi va o'tkazuvchanligini boshqarish:**— limfa drenajini yaxshilaydi; kapillyarlarning o'tkazuvchanligini kamaytiradi.

**2. Yallig'lanishni susaytirish:** leykotsitlarning endoteliyga yopishishini va qon oqimiga signal molekularining ajralishini kamaytiradi.

**3. Endoteliyhimoya (endotelioprotektiv) ta'siri:** venoz devor to'qimalarining kislorod bilan ta'minlanishini yaxshilaydi; hujayra tuzilmalarining erkin radikallar tomonidan shikastlanishini va matrits metalloproteinazalar faolligini kamaytiradi.

**4. Qon ivish jarayonlariga ta'siri:** trombositlarning mahalliy agregatsiyasini bostiradi; fibrinolizni faollashtiradi[7,9].

Preparatning organizmdagi taqsimlanish xususiyatlari va to'qimalarga bo'lgan tropizmi shundayki, uni yuborgandan so'ng eng yuqori miqdori venoz to'qimalarda aniqlanadi. Shu sababli qon tomiri devorining tonusi asosan shu darajada oshadi, ammo bu jarayon qon tomirlarining umumiy periferik qarshiligi yoki arterial bosimning oshishiga olib kelmaydi.

Taxmin qilinishicha, ushbu ta'sir mexanizmi **diosminning katexolamin-O-metiltransferaza** fermentini ingibitsiya qilish qobiliyati bilan bog'liq — bu ferment noradrenalinni normetadrenalina aylantirish uchun javobgar hisoblanadi (2-rasm).

Noradrenalinning tanlab to'planishi nafaqat venoz tonusning oshishiga va limfa oqimining yaxshilanishiga, balki kapillyarlarning o'tkazuvchanligini kamayishiga ham olib keladi (bu biotlavonoidlar — vitamin P ning tarixan birinchi aniqlangan ta'siridir). Klinik jihatdan preparatning ushbu ta'sirlari oyoq-qo'llarda shishlarning kamayishiga olib keladi [8].

Tajriba sharoitida diosmin miotsitlarning kalsiy ionlariga sezuvchanligini oshirishi mexanizmi to'liq aniqlanmagan. **Kalsiy sintezatori** sifatida u muhitdagi kontsentratsiyasi ortganda, kaltsiyning ta'siri ostida ajratilgan sichqonning son venasida qisqarish kuchini oshirgan [9].

**Diosmetinning yallig'lanishga qarshi ta'siri** esa uning leykotsitlar va monotsitlarning endoteliy bilan o'zaro ta'sirini modulyatsiya qilish qobiliyati bilan izohlanadi. Immunokompetent hujayralarning tomir devoriga yopishish qobiliyati kamaygani tufayli trombositga bog'liq va komplementga bog'liq mexanizmlar susayadi, natijada qon oqimiga tizimli yallig'lanish javobi signallarining va gistaminning chiqishi to'xtatiladi[10,11].

Diosmin organizmda diosmetinga aylanib, glyukuronid bilan kon'yugatsiyalanganidan keyin peshob orqali chiqariladi. Uning farmakodinamik ta'siri venoz tonusni oshirish, kapillyarlar so'zilishini kamaytirish, limfodrenajni yaxshilash va yallig'lanish mediatorlarini ingibirlash bilan tavsiflanadi.

### **Xulosa**

Operatsiyadan keyingi davrda tromboembolik asoratlarning xavfi yuqori bo'lgan homilador ayollarning kompleks terapiyasida diosmin saqlovchi preparatlarning o'рни beqiyosdir. Ushbu

vositalar nafaqat venoz gemodinamikani barqarorlashtiradi, balki mikrosirkulyator tizimdagi yallig'lanish va spazmni kamaytiradi.

Shu munosabat bilan kesar kesish yoki boshqa akusherlik jarrohlik amaliyotlari oldidan yuqori xavf guruhiga kiruvchi ayollarda, varikoz kasalligi bo'yicha skrining tekshiruvi majburiy ravishda amalga oshirilishi lozim. Yuqori xavf guruxiga kiruvchi xomiladorlarda, operatsiyadan keyingi ilk kunlarda ayol umumiy axvolini kompleks baholash va fleboprotector terapiyani o'z vaqtida boshlash tavsiya etiladi.

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