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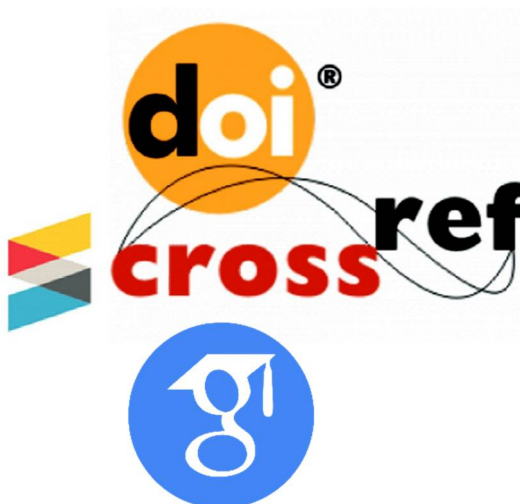
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ORCID ID: 0000-0002-6616-5428

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педиатрия тиббиёт институти Факультет болалар
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№2-сон Педиатрия, неонатология ва болалар
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ORCID ID: 0000-0003-2442-1523

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тиббиёт фанлари доктори, профессор
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доктор медицинских наук, профессор Самаркандского
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ORCID ID: 0000-0002-6142-7054

Ответственный за публикацию:

Шаханова Шахноза Шавкатовна
DSc, доцент кафедры онкологии Самаркандского
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хирургии Самаркандского государственного медицинского
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акушерства и гинекологии Семейной медицины
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ORCID ID: 0000-0002-9313-4918

Очилов Улугбек Усманович
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<https://orcid.org/0000-0003-3553-8727>

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

Юлдашев Равшан Захидович
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Алимов Жалолиддин Усмон угли
PhD, Доцент Чирчикского филиала Ташкентского
Государственного медицинского университета, ORCID
ID: 0009-0009-3959-9878

Саидов Садаммир Абборович
доктор медицинских наук, Ташкентский
фармацевтический институт
ORCID ID: 0000-0002-6616-5428

Бабаджанов Ойбек Абдужаббарович
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ORCID ID: 0000-0002-3022-916X

Теребаев Билим Алдамуратович
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ORCID ID: 0000-0002-5409-4327

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

Ибрагимова Малика Худайбергеновна
доктор медицинских наук, профессор
Ташкентский государственный
медицинский университет
ORCID ID: 0000-0002-9235-1742

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

Даминов Феруз Асадуллаевич
Декан лечебного факультета №2 Самаркандского
государственного медицинского университета, доктор
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доктор медицинских наук, доцент кафедры хирургии,
Ташкентский государственный медицинский университет.
ORCID: 0009-0004-7661-9253.

Сайфутдинов Зайниддин Асамутдинович
PHD, Республиканский специализированный научно-
практический медицинский центр педиатрии ORCID ID: 0009-
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Samieva Gulnoza Utkurovna
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ORCID ID: 0000-0002-0615-0144

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ORCID ID: 0000-0003-2650-4445

Magzumova Nargiza Makhamovna

Doctor of Medical Sciences, Professor, Department
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Medical University. **ORCID ID:** 0000-0002-9313-4918

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DSc, Docent, Head of the Psychiatry Course at the Faculty of
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<https://orcid.org/0000-0001-7859-9955>

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PhD, Associate Professor at Chirchik Branch of Tashkent State
Medical University, **ORCID ID:** 0009-0009-3959-9878

Saidov Saidamir

Doctor of Medical Sciences,
Tashkent Pharmaceutical Institute,
ORCID ID: 0000-0002-6616-5428

Babadjanov Oybek Abdurjabbarovich

Doctor of sciences in medicine, Tashkent State
Medical University, Docent the Department of
Dermatovenerology, pediatric dermatovenerology
and AIDS, **ORCID ID:** 0000-0002-3022-916X

Terebaev Bilim Aldamuratovich

Doctor of Medical Sciences, Associate Professor,
Tashkent Pediatric Medical Institute,
Faculty of Children Department of Surgery.
ORCID ID: 0000-0002-5409-4327.

Yuldashev Botir Akhmatovich

Doctor of Medical Sciences, Associate Professor of
Pediatrics, Neonatology and Propaedeutics of Pediatrics,
Samarkand State Medical University No. 2.
ORCID ID: 0000-0003-2442-1523

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Doctor of Medical Sciences, Professor,
Tashkent State Medical University
ORCID ID: 0000-0002-9235-1742

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Samarkand State Medical University
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Professor. Tashkent, Uzbekistan
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Tagaev Sher Kabul Baykabulovich

Doctor of Medical Sciences, Associate Professor
of Surgery Department, Tashkent State Medical University
ORCID: 0009-0004-7661-9253.

Sayfutdinov Zayniddin Asamutdinovich

PHD, Republican Specialized Scientific and Practical Medical
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БИОМЕДИЦИНА ВА АМАЛИЁТ ЖУРНАЛИ

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RAKHMONOV Shokhimordon Sherkul ugli

Assistant

Samarkand State Medical University

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ABSTRACT

In the article arthroscopic patients with old malignant lesions when the scientific literature devoted to modern rehabilitation treatments applied after repair was analyzed, it was found that the main aspects of restorative treatment depended on the efficient use of physical exercises and physiotherapy procedures.

The main way to prevent contracture is to start active movement in the legs early by conditioning muscle tone. The article states that rehabilitation treatment treatments can achieve good results by taking them under the supervision of an outpatient doctor in the basis of recommended home programs.

Key words: plastic repair, restorative treatment, arthroscopy of the frontal lobe.

Рахмонов Шохимордон Шеркул угли

Ассистент

Самаркандский Государственный медицинский университет

СОВРЕМЕННЫЕ МЕТОДЫ АРТРОСКОПИЧЕСКОЙ ВОССТАНОВИТЕЛЬНОГО ЛЕЧЕНИЯ ПЕРЕДНЕЙ КРЕСТООБРАЗНОЙ СВЯЗКИ КОЛЕННОГО СУСТАВА (ОБЗОР ЛИТЕРАТУРЫ)

АННОТАЦИЯ

Сбор и анализ доступных научных публикаций посвященных современным методам восстановительного лечения больных после артроскопической пластики передней крестообразной связки установлено, что основными аспектами восстановительного лечения является разумное сочетание охранительного режима (комплекс физических упражнений).

В основе профилактики контрактур – лежат ранняя активация функции конечности и поддержание тонуса мышц. Основной задачей иммобилизации послеоперационном периоде является предотвращение или снижение блевого синдрома. В статье приведены примеры успешного проведения реабилитационных мероприятий в домашних условиях под амбулаторным наблюдением специалиста.

Ключевые слова: реконструктивная пластика передней крестообразной связки, восстановительное лечение, артроскопия.

RAXMONOV Shoximardon Sherqul o'g'li

Assistent

Samarqand davlat tibbiyot universiteti

**TIZZA BO'G'IMINING OLD XOCHSIMON BOYLAMINI ARTROSKOPIK
TIKLASHDAN SO'NG REABILITATSIYA QO'LLASHNING ZAMONAVIY USULLARI
(ADABIYOTLAR TAHLILI)**

ANNOTATSIYA

Maqolada old xochsimon boylam jarohatlangan bemorlarni artroskopik ta'mirlashdan keyin qo'llaniladigan zamonaviy rehabilitatsion davolash usullarga bag'ishlangan ilmiy adabiyotlar tahlil qilinganda tiklovchi davolashning asosiy jihatlari jismoniy mashqlar va fizioterapiya muolajalaridan unumli foydalanishga bog'liq ekanligi aniqlandi.

Kontrakturani oldini olishning asosiy usuli mushaklar tonusini chiniqtirib oyoqlarda faol harakatni erta boshlash. Maqolada rehabilitatsiya davolash muolajalari ambulatoriya shifokori nazoratida uy sharoitida tavsiya etilgan dasturlar asosida qabul qilib yaxshi natijalarga erishish mumkin.

Kalit so'zlar: old xochsimon boylamni plastik ta'mirlash, tiklovchi davolash, artroskopiya.

Dolzarbligi. Tizza bo'g'imining old xochsimon boylamini jarohatlanishlari tizza bo'g'imining keng tarqalgan jarohatlanishlaridan bo'lib ko'pgina mualliflarning ma'lumotlariga ko'ra 60-62%gacha kuzatiladi [1].

Jarohatlanish mexanizmi ko'p hollarda bo'g'imda to'satdan kuzatiladigan faol takroriy harakatlar (sakrash, yugurish) natijasida, ayniqsa sportchilarda ko'proq kuzatiladi [2]. Shuningdek mazkur jarohatlanishlar yo'l-transport jarohatlanishlarida va tizza bo'g'imida bevosita zarba tushish natijasida kuzatilishi mumkin. Bugungi kunda mazkur jarohatlanishlarda yuqori texnologik dasturlar asosida tibbiy yordam ko'rsatish va tiklashga qaratilgan davolash muolajalari faol rivojlanmoqda. Shunga qaramasdan old xochsimon boylam to'laqonli plastik operatsiyadan so'ng bemorlar ambulator davolanishga tavsiya etilib davolovchi xirurg nazoratidan chetda qolmoqda. Natijada, davolashning rehabilitatsiya samaradorligini baholashda bashorat qilib bo'lmaydigan holatlar kuzatilmog'da. Butun jahon statistikasi ma'lumotlariga ko'ra artroskopik operatsiya qilingan har 10 bemorning birida ta'mirlangan yangi boylamning funksional harakatida qoniqarsiz natijalar kuzatilgan [7]. Shuni esda tutish zarurki, yangi ta'mirlangan boylamning mustahkam bitib tiklanishi uchun kamida bir yil muddat zarur bo'ladi.

Maqsad – tizza bo'g'imining jarohatlangan old xochsimon boylamini zamonaviy ta'mirlovchi plastik davolash usullariga bag'ishlangan ilmiy manbalarni yig'ib tahlil qilish.

Material va tekshirish usullari. Tizza bo'g'imining old xochsimon boylami jarohatlangan bemorlarni artroskopik plastik ta'mirlovchi davolash usullariga bag'ishlangan dolzarb ilmiy manbalar tahlil qilingan. Bibliografik ma'lumotlarni izlash va tahlil qilishda PubMed ma'lumotlar bazasidan va "old xochsimon boylamni ta'mirlashdan keyin rehabilitatsion muolajalar" kalit so'zlaridan foydalanib qidirish amalga oshirildi. Mazkur ish oxirgi o'n yilliklarda nashr etilgan mahalliy va xorijiy ilmiy manbalarga asoslanib tayyorlandi. Olingan barcha maqolalardan dolzarblik, ta'mirlashga qaratilgan yangi texnologiyalarning joriy etilishi va natijalari me'yoriy asos qilib olindi.

Natijalar. Jarohatlangan old xochsimon boylamni davolashda asosan xirurgik usullar qo'llaniladi. Mazkur boylamni tiklashning ommaviylashgan usullaridan biri tizza qopqog'ini boylamining markaziy uchdan bir qismini, yarimpaysimon mushak payidan yoki uzun kichik boldir mushak payidan autotransplantat olinib ta'mirlash keng qo'llaniladi [7,11,18].

Operatsiyani amalga oshirishda orqamiya orqali yoki umumiy kombinatsiyalashtirilgan og'riqsizlantirish usullari qo'llaniladi [20].

Operatsiyadan so'ng oldxochsimon boylamning tiklanish jarayoni mazkur sohada qon aylanishining tiklanishi bilan bevosita bog'liq bo'lib kamida olti oy davom etadi [1,7]. Mazkur davrda bemor tizza bo'g'imini zo'riqtirmasdan harakat qilishi zarur bo'ladi. Mazkur yo'nalishda D.V.Fedulova va hammualliflar old xochsimon boylam jarohatlangan bemorlarda rehabilitatsiya muolajalarini qo'llashning to'rt davrini farq qiladilar: operatsiyadan keyingi erta davr (bir hafta

davomida), operatsiyadan keyingi kechki davr (2-4 hafta), funksional davr (5-8 hafta) va chiniqtiruvchi- tiklanish davri (9-24 hafta)(10). Har bir davrning o'ziga xos vazifalari, muddatlari va chora-tadbirlari mavjud bo'lib bemorning yoshi, jarohat va qo'llanilgan operatsiya xarakteriga qo'ra amalga oshiriladi.

Ko'pgina manbalarga ko'ra old xochsimon boylamning to'laqonli tiklanishi 12 oydan so'ng tiklanadi [1,9], holbuki bemorlarda tizza bo'g'imining funksional tiklanishi 8 oydan so'ng kuzatilishi mumkin [14]. Shunga binoan, yuqorida qayd etilgan davrlar e'tiborga olinib reabilitatsiya dasturi 24-32 haftaga mo'ljallab tayyorlanadi.

Bugungi kunda operatsiya qo'llanilgan oyoqda faol harakatni boshlab erta nagruzka berish keng muhokamada turibdi. Lekin bemorning funksional faolligi ta'mirlangan boylamning funksional imkoniyatlariga ko'ra jismoniy mashqlar asta-sekinlik bilan oshirib borilishi maqsadga muvofiq bo'ladi [14]. N.E. Marshall hammualliflari bilan (2018 yil) yosh sportchilarda old xochsimon boylam plastik usulda ta'mirlangandan so'ng operatsiyadan keyingi davrni kechishini kuzatib bordilar [19]. Mualliflar 143 nafar bemorning klinik holatini tahlil qilishib barcha bemorlarga ortezi immobilizatsiya qo'llanilib 2 oy muddatgacha operatsiyadan keyingi erta nagruzka berishni istisno qilishgan. Reja bo'yicha to'liq reabilitatsiya kursi 12 oy davom etishi rejalashtirilgan bo'lgan. Holbuki, yosh sportchilarning 67% sport bilan ertaroq shug'ullanish maqsadida immobilizatsiya qo'llanilishidan erta voz kechib operatsiyadan keyingi ikki haftadan so'ng oyoqqa to'liq nagruzka berib 6 oydan so'ng sport bilan to'laqonli shug'ullana boshladilar. Mualliflar operatsiya qo'llanilgan oyoqqa erta nagruzkaning qo'llanilishi reabilitatsion dasturdan oqilona samarali foydalanilganda og'ir asoratlar kuzatilmashligini kuzatdilar. Ya'ni bemorni erta faollashtirish harakatlar hajmini kamaytirmasdan reabilitatsiya davriga ijobiy ta'sir ko'rsatib tiklanish jarayonini jadallashtiradi.

Old xochsimon boylam ta'mirlangandan so'ng shifobaxsh jismoniy mashqlarning kompleks qo'llanilishi reabilitatsiyaning asosi hisoblanib oyoq mushaklarining tonusini chiniqtirishga yo'naltirilgan. Tizza bo'g'imining to'laqonli tiklanishi operatsiyadan keyingi o'tgan muddat davriga emas, balki tizza bo'g'imida harakat hajmining tiklanishiga bog'liq.

Tixilov R.M. hammualliflari bilan har bir davr uchun alohida jismoniy mashqlar kompleksini qo'llashni tavsiya qiladilar [9]. Mashqlar kompleksi quyidagi tartibda amalga oshirish zarurligini ta'kidlaydilar:

- operatsiyadan keyingi erta davrda – yotgan holatda boldir va son mushaklarini qo'llab-quvvatlash;
- operatsiyadan keyingi kechki davrda – tizza va chanoq-son bo'g'imlarini passiv ravishda harakatlantirish;
- funksional davrda – qarshilik ko'rsatiladigan mashqlar yordamida mushaklarni harakatlantirish;
- to'laqonli mashqlar bajarib tiklanish davri – muvozanatni tiklash, trenajyor zalda mashqlar bajarish, sekin yugurish va o'tirib-turish.

Lazishvili G.D. va hammualliflar (2013) operatsiyadan keyingi erta davrda (operatsiyadan keyingi birinchi 4 hafta)

Vazifalar:

1. Tizza bo'g'imida passiv mashqlar bajarib harakat hajmini yaxshilash;
2. Shishni kamaytirishga qaratilgan muolajalar qo'llash;
3. To'rt boshli mushakni chiniqtirish;
4. Tizza bo'g'imida harakatni mo'tadillashtirish;
5. Yurishni mo'tadillashtirish;
6. Oyoq mushaklarining harakatini kuchaytirish;
7. Asoratlarni oldini olish [7].

Old xochsimon boylam ta'mirlangandan so'ng jismoniy mashqlar kompleksi nafas gimnastikasi, umumiy quvvat oshiruvchi mashqlar, oyoq mushaklari uchun maxsus mashqlar bajarishni o'z ichiga olib barcha bajariladigan mashqlarning 50%ini tashkil etishi lozim [1,5]. Operatsiyadan keyingi davrda son va boldir mushaklar tonusini yaxshilash uchun har ikki soatda oshiq-boldir bo'g'imida 30 martadan bukuvchi-yozuvchi mashqlar bajarish, sonning old va orqa

guruh mushaklariga har 2 soatda 10-15 martadan muqobil bo'shashtiruvchi va kuchaytiruvchi mashqlarni navbat bilan bajarish [9]. Passiv mashqlar bajarishda bemor to'shakda yoki kushetkada o'tirib operatsiya qilingan oyoqni tizzadan to'liq bukib sog'lom oyoq bilan tutib turgan holda kuniga 3-4 marta 10-15 minutdan mashqlar bajarish tavsiya etiladi [5]. Tizza qopqog'ini yuqori va pastga harakatlantirishni choklar olingandan boshlash maqsadga muvofiq bo'ladi. Tizza qopqog'ini pastga harakatlantirish bukishni yaxshilashga, yuqoriga – tizza bo'g'imini yozish harakatini yaxshilash imkoniyatini beradi. Bo'g'imda shish kuzatilganda fizik omillardan (sovuq va magnit bilan davolash) qo'llaniladi. Magnit bo'g'imda shish holatini kamaytirish imkoniyatini beradi. Operatsiyadan keyingi erta davrda asosiy maqsad gipostatik asoratlarni oldini olish va mushaklar tonusini yaxshilashga qaratiladi. Tromboembolik asoratlarni oldini olish maqsadida limfodrenajli massaj, magnit, ultrazvuk tavsiya etiladi [3]. Oyoq mushaklarining tonusini yaxshilash maqsadida elektrostimulyatsiya tavsiya etiladi. Natijada mushaklarning fiziologik qisqaruvchanligi yaxshilanib kontrakturaning miogen va neyrogen komponentlarining rivojlanish xavfi kamayib mushaklar tonusi yaxshilanadi. Avvaliga tok kuchi kattaligi 10-12 minutdan (2-3 seans) qo'llanilib so'ng 20-30 minutgacha yetkaziladi (5-8 seans). Elektrostimulyatsiya asosan kambalasimon mushakka muntazam elektr impulslari bilan ta'sir etib mushaklarning davriy ravishda qisqaruvchanligi mushaklar tonusini faollashtirib immobilizatsiya davrida, ayniqsa to'shakda yotgan bemorlarda venoz dimlanishni bartaraf etish imkoniyatini beradi.

Operatsiyadan keyingi erta davrda gipsli longeta yoki funksional sharnirli ortezi qo'llanilishi og'riqni va ta'mirlangan boylamning jarohatlanishini kamaytirib, tizza bo'g'imida harakat hajmini nazorat qilish imkoniyatini berib jismoniy nagruzkaga moslashtiradi [9].

Operatsiyadan keyingi davrda og'riq alomatini va shishni kamaytirish maqsadida yallig'lanishga qarshi nesteroidli dori- darmonlar (ketorolak), mahalliy og'riqsizlantiruvchi dori- darmonlar (ropivakain, lidokain) yoki opoidlardan tramadol tavsiya etiladi. Ko'pgina mualliflar old xochsimon boylam ta'mirlangan bemorlarga og'riq alomatini kamaytirish maqsadida turli variantdagi blokadalar qo'llashni tavsiya qilishadi. M.D. Ivanov hammualliflari bilan (2021) iliofassial blokada bilan son nervini blokada qilishib solishtirma baholashgan [4]. Og'riqsizlantiruvchi dori vositasi sifatida ropivakainning 0,2%li eritmasidan foydalanib uzaytirilgan usulda soatiga 3-4 ml dan kiritilgan. Og'riqsizlantirish qo'llanilgan bemorlarda natijalar baholanganda iliofassial blokadalar qo'llash samarali ekanligi aniqlandi. Chunki mazkur usul qo'llanilganda son, yopqich va lateral teridagi nerv shoxlarini bir vaqtda og'riqsizlantirishga erishiladi [4]. Lekin, daniyalik anesteziologlardan Lanz K. rahbarligida (2018), italiyalik Ambrosoli rahbarligidagi anesteziologlar (2019) yopqich va teri nervlari alohida-alohida og'riqsizlantirilganda yanada samaraliroq og'riqsizlantirishga erishganliklarini ta'kidlaydilar [12,17]. Og'riq alomati yengillashgandan so'ng (operatsiyadan 5 kun o'tgandan so'ng) yotgan holatda operatsiya qilingan oyoq statik va dinamik xarakterda ko'tarib mashq qilish avsiya etiladi. Mashqlar sonning ichki serbar mushagini faollashtirish imkoniyatini beradi. Bemor to'shakda o'tirgan holatda tizzalar oralig'ida koptokchani siqib tutib sonning ichki serbar mushagini taranglashtirib bo'shashtirib mashq qiladi.

Gavda og'irligi bilan erta nagruzka berish og'riq alomatini kamaytirish imkoniyatini beradi. Lekin mazkur holatda tizza bo'g'imida sinovit xuruji kuchayishi mumkin. Shuning uchun 2 hafta davomida nagruzkani gavda og'irligining 50%gacha kamaytirib, so'ng 75%ga, 3 -4 haftadan so'ng 100%ga ko'paytirish maqsadga muvofiq bo'ladi.

Mustaqil yurishning buzilishi uzoq muddat bir necha oylar davomida saqlanib qolishi mumkin. Shuning uchun mo'tadil yurishga o'rganishga mashq qilish zarurati bo'ladi. Operatsiya qilingan oyoqqa nagruzka berishni nazorat qilish uchun oynaga qarab yurib mashq qilinadi (biologik teskari bog'lanish). Oyoqlarda mushaklar gipotrofiyasini bartaraf etish uchun quyidagicha mashqlar bajarish tavsiya etiladi: oyoqni orqaga va yonga tomon ko'tarish, ikkala oyoq uchida tik turish tavsiya etiladi. Sovuq (muz) qo'llab shishni kamaytirish to'rt boshli mushakni faollashtirish imkoniyatini beradi. Mushaklar qisqaruvchanligi o'z navbatida operatsiya qo'llanilgan sohada limfa aylanishini yaxshilash imkoniyatini beradi.

Funksional (operatsiyadan keyingi kechki 4 haftadan 4 oygacha bo'lgan) davr.

1. Harakat hajmini tiklash. Mushaklarni chiniqtirish.

2. Shishni nazorat qilish.
 3. Mustaqil yurishni mo'tadillashtirish.
 4. Muvozanatni mashq qilish.
 5. Oyoq mushaklarini mashq qilishni asta-sekin kuchaytirish.
 6. Asoratlarni odini olish [8].
- Jismoniy mashqlarni bajarish va fizioterapiya qo'llash usullari.

Mazkur davrda reabilitatsion chora-tadbirlar quyidagi prinsiplarga asoslanib amalga oshiriladi:

- Mashqlarni og'riqsiz bajarish. Yengil og'riq yoki 30 sek. davomida kuzatiladigan o'tkir og'riqlar xavfli emas.
- Mashqlarni asta-sekin kuchaytirib borish. Mashqlar avvaliga ikkala oyoqda bajarilib so'ng bitta oyoqda bajariladi.
- Mashqlarni alohida-alohida bajarish. Mashqlarni harakat hajmini kpaytirishga qaratilib har kuni bajarish, kuch ishlatib bajariladigan mashqlarni kunora bajarish.
- Kuch ishlatib bajariladigan mashqlarni jadal ko'paytirish bo'g'imda faol harakat to'liq tiklangandan so'ng amalga oshirish. Odatda operatsiyadan so'ng ikki oy muddat o'tgach mashqlarni jadal bajarish optimal variant hisoblanadi.
- Tog'ay jarohatlanishi kuzatilganda operatsiya qilingan oyoqda tayanish, sakrash, yugurish bir oy kechiktirilib tavsiya etiladi.

Reabilitatsiya jarayonida to'rt boshli va sonning ichki serbar mushagini chiniqtirishga alohida e'tibor berish zarur bo'ladi.

Reabilitologlar old xochsimon boylam plastik operatsiyasi qo'llanilgan bemorlarga 6-haftadan boshlab basseynda cho'milishni tavsiya etadilar. Basseynda bemorlar sekin yurish, oyoqni uzatilgan holatda yengil silkitib va uzoqlashtirib yurish mashqlarini bajaradilar. Bemorlarga brass usulida suzish qat'iyman etiladi [6,9].

Tizza bo'g'imida yo'ldosh jarohatlanish kuzatilganda bemorni operatsiyadan keyingi davrda parvarishlashning o'ziga xos xususiyatlari

Tog'ayning yo'ldosh jarohatlanishlarida old xochsimon boylam allotransplantat qo'llab revizion plastik operatsiya qo'llanilib nagruzka berish muddatlari kechiktirilib qo'llaniladi [19]. Birinchi 3-4 haftada butun gavda bilan nagruzka berish istisno qilinib avvaliga qisman so'ng to'liq nagruzka berish operatsiyadan so'ng 6-8 oy muddat o'tgach qo'llaniladi.

Birinchi ikki hafta davomida tizza bo'g'imida mashqlar tez-tez (tovon bilan surilish, oyoq kafti bilan 10-15 sm surilish) bajarilib turiladi. Asta-sekin kuchaytiriluvchi mashqlar kuniga 2 marta bajariladi. Faol funksional harakatlarni bajarish (sakrash, yugurish), cheklanmagan faol harakatlar bajarish 2-3 oyga kechiktiriladi. Bir vaqtda old va orqa xochsimon boylamlar tiklanib operatsiya qilinganda gipsli longeta (tizza bo'g'imida) 4 hafta muddatga qo'llaniladi [20].

Old xochsimon boylam ta'mirlangandan so'ng bemorlar statsionarda o'rtacha 4-5 kun davomida davolanadilar. Har bir bemor o'z qo'lida maxsus dastur asosida mustaqil uy sharoitida yoki ambulator sharoitda shifokor ko'rigida bo'lib davolash muolajalarini tartibli ravishda qabul qilishi mumkin. 2023 yil B.W. Brewer hammualliflari bilan o'z kuzatuvlarini yakunlab old xochsimon boylam ta'mirlangandan so'ng reabilitatsion muolajalarni uy sharoitida ham qabul qilib yuqori samaradorlikka erishish mumkinligini asoslab berdilar [13,15]. Yakuniy tadqiqotlarda dastur bo'yicha tavsiya eilgan muolajalarni reja asosida uy sharoitida va klinikada qabul qilingandan so'ng natijalar solishtirma tahlil qilinganda ular o'rtasida farq yo'qligi aniqlandi. Mualliflar ishlab chiqilgan dastur uy sharoitida foydalanilganda u bemorlar uchun nisbatan qulay, tushunarli va ishonchli ekanligini asoslab berdilar [16,19].

Xulosalar.

1. Ilmiy-uslubiy va tibbiy adabiyotlar tahlili shuni ko'rsatdiki, jarohatlangan old xochsimon boylam kaminvaziv xirrgik usullarda ta'mirlanganda bo'g'imga kam jarohat yetkazilib erta harakatlantirish va mehnatga layoqatsizlik muddatlarini kamaytirish imkoniyatini beradi.
2. Davolash natijalarini tahlil qilish fizik reabilitatsiya usullari va vositalaridan unumli va samarali foydalanish jarohatlangan tizza bo'g'imining qisqa muddatlarda tiklanishini ta'minlaydi.

3. Aksariyat bemorlarni to'laqonli tekshirib operatsiyadan keyingi reabilitatsion muolajalarni bemorlar tomonidan statsionar va uy sharoitida ma'lum reja va ko'rsatmalar asosida qabul qilinganda davolash natijalari o'rtasida farq yo'qligi taklif etilgan reabilitatsion dasturning samarador ekanligini tasdiqlaydi.

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