Impact Factor: 5.723

ISSN: 2181-0982
DOI: 10.26739/2181-0982
www.tadqiqot.uz

JNNR

JOURNAL OF NEUROLOGY AND NEUROSURGERY RESEARCH



Volume 7, Issue 6
2026

ISSN 2181-0982

Doi Journal 10.26739/2181-0982

ЖУРНАЛ НЕВРОЛОГИИ И НЕЙРОХИРУРГИЧЕСКИХ ИССЛЕДОВАНИЙ

ТОМ 7 НОМЕР 6

JOURNAL OF NEUROLOGY AND NEUROSURGERY RESEARCH

VOLUME 7, ISSUE 6

МАҚОЛАДА КЕЛТИРИЛГАН ДАЛИЛЛАРНИНГ ТЎҒРИЛИГИ УЧУН МУАЛЛИФ МАСЪУЛДИР | АВТОР НЕСЕТ ОТВЕТСТВЕННОСТЬ ЗА ДОСТОВЕРНОСТЬ ФАКТОВ ИЗЛОЖЕННЫХ В СТАТЬЕ

ТОШКЕНТ-2026

МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ РЕСПУБЛИКИ УЗБЕКИСТАН ОБЩЕСТВЕННОЕ ОБЪЕДИНЕНИЕ НЕВРОЛОГОВ УЗБЕКИСТАНА

ЖУРНАЛ НЕВРОЛОГИИ И НЕЙРОХИРУРГИЧЕСКИХ ИССЛЕДОВАНИЙ

Бухарский государственный медицинский институт и tadqiqot.uz

Главный редактор:

Ходжиева Дилбар Таджиевна
доктор медицинских наук, профессор Бухарского государственного медицинского института. (Узбекистан).
ORCID ID: 0000-0002-5883-9533

Зам. главного редактора:

Хайдарова Дилдора Кадировна
доктор медицинских наук, профессор Ташкентский государственный медицинский университет. (Узбекистан).
ORCID ID: 0000-0002-4980-6158

Рецензируемый научно-практический журнал "Журнал неврологии и нейрохирургических исследований" Публикуется 6 раза в год
№6 (07), 2026
ISSN 2181-0982

Адрес редакции:
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

Макет и подготовка к печати проводились в редакции журнала.

Дизайн - оформления:
Хуршид Мирзахмедов

Журнал зарегистрирован в Управлении печати и информации г. Ташкента Рег. № от 01.07.2020 г.

Электронная версия журнала на сайтах:
https://tadqiqot.uz, www.bsmi.uz

- - -

Журнал включен в перечень научных изданий, рекомендованных к публикации основных научных результатов диссертаций по медицинским наукам с 27 сентября 2024 года Высшей аттестационной комиссией Республики Узбекистан (письмо № 361/6 от 2024 года).

РЕДАКЦИОННАЯ КОЛЛЕГИЯ:

Хайдаров Нодиржон Кадирович – доктор медицинских наук, профессор, ректор Ташкентский государственный медицинский университет. (Узбекистан).
Нуралиев Неккадам Абдуллаевич - доктор медицинских наук, профессор, иммунолог, микробиолог, проректор по научной работе и инновациям Бухарского государственного медицинского института. (Узбекистан).
Кариев Гайрат Маратович – доктор медицинских наук, профессор, директор Республиканского научного центра нейрохирургии Узбекистана. (Узбекистан).
Федин Анатолий Иванович - доктор медицинских наук, профессор, заслуженный врач РФ. Российский национальный исследовательский медицинский университет имени Н.И. Пирогова. (Россия).
Маджидова Екутхон Набиевна - доктор медицинских наук, профессор, Ташкентский государственный медицинский университет. (Узбекистан).
Рахимбаева Гулнора Саттаровна - доктор медицинских наук, профессор, Ташкентский государственный медицинский университет. (Узбекистан).
Джурабекова Азиза Тахировна – доктор медицинских наук, профессор Самаркандского государственного медицинского института. (Узбекистан).
Мамадалиев Абдурахмон Маматкулович - доктор медицинских наук, профессор Самаркандского государственного медицинского института. (Узбекистан).
Чутко Леонид Семенович - доктор медицинских наук, профессор, руководитель Центра поведенческой неврологии Института мозга человека им. Н.П. Бехтеревой. (Россия).
Муратов Фахмитдин Хайритдинович - доктор медицинских наук, профессор Ташкентский государственный медицинский университет. (Узбекистан).
Дьяконова Елена Николаевна - доктор медицинских наук, профессор, Ивановская государственная медицинская академия. (Россия).
Труфанов Евгений Александрович – доктор медицинских наук, профессор Национальный университет охраны здоровья Украины имени П.Л. Шупика и указать его расположение (Украина)
Норов Абдурахмон Убайдуллаевич – доктор медицинских наук, профессор, главный врач Бухарского областного многопрофильного медицинского центра. (Узбекистан)
Абдуллаева Наргиза Нурмаматовна – доктор медицинских наук, профессор Самаркандского государственного медицинского института. (Узбекистан).
Азизова Раъно Баходировна - доктор медицинских наук, доцент Ташкентский государственный медицинский университет. (Узбекистан).
Давлатов Салим Сулаймонович - Начальник отдела надзора качества образования, доцент Бухарского государственного медицинского института. (Узбекистан).
Артыкова Мавлюда Абдурахмановна - доктор медицинских наук, профессор Бухарского государственного медицинского института. (Узбекистан).
Уринов Мусо Болтаевич - доктор медицинских наук, доцент Бухарского государственного медицинского института. (Узбекистан).
Киличев Ибодулла Абдуллаевич – доктор медицинских наук, профессор Ургенчского филиала Ташкентской медицинской академии. (Узбекистан).
Рашидова Нилуфар Сафоевна - доктор медицинских наук, доцент Ташкентский государственный медицинский университет. (Узбекистан).
Ганиева Манижа Тимуровна - кандидат медицинских наук, доцент Таджикского государственного медицинского университета (Таджикистан).
Хазраткулов Рустам Бафоевич - доктор медицинских наук, руководитель научного отдела сосудистой патологии центральной нервной системы Республиканского специализированного научно – практического медицинского центра нейрохирургии, профессор кафедры нейрохирургии Центра развития профессиональной квалификации медицинских работников (Узбекистан).
Нуралиева Хафиза Отаевна - кандидат медицинских наук, доцент Тошкентского фармацевтического института. (Узбекистан).
Исмаилова Раъно Олимджановна – DSc, руководитель научного отдела патологии позвоночника и спинного мозга Республиканского специализированного научно – практического медицинского центра нейрохирургии (Узбекистан).
Югай Игорь Александрович – старший научный сотрудник отделения нейрохирургии детского возраста Республиканского специализированного научно – практического медицинского центра нейрохирургии. Доцент кафедры нейрохирургии Центра развития профессиональной квалификации медицинских работников (Узбекистан).
Иноятова Ситора Ойбековна - DSC, доцент кафедры Неврологии и народной медицины, Ташкентского государственного медицинского университета.
Абдукодиров Элдор Исроилович - DSC, доцент кафедры Неврологии и народной медицины, Ташкентского государственного медицинского университета.
Ахророва Шахло Ботировна - доцент кафедры неврологии Бухарского государственного медицинского института (DSc)

MINISTRY OF HEALTH OF THE REPUBLIC OF UZBEKISTAN PUBLIC ASSOCIATION OF NEUROLOGISTS OF UZBEKISTAN

JOURNAL OF NEUROLOGY AND NEUROSURGICAL RESEARCH

Bukhara State Medical Institute and tadqiqot.uz

Chief Editor:

Khodjieva Dilbar Tadjiyevna
Doctor of medical Sciences, Professor, Bukhara state medical Institute. (Uzbekistan).
ORCID ID: 0000-0002-5883-9533

Deputy editor-in-chief:

Khaydarova Dildora Kadirovna
Doctor of Medical Sciences, Professor of the Tashkent State Medical University. (Uzbekistan).
ORCID ID: 0000-0002-4980-6158

Peer-reviewed scientific and practical journal "Journal of Neurology and Neurosurgical Research"
Published 6 times a year
#6 (07), 2026
ISSN 2181-0982

Editorial address:
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

Layout and preparation for printing held in the editorial office of the journal.

Design – pagemaker:
Khurshid Mirzakhmedov

Journal is registered at the Office of Press and Information Tashkent city, Reg. No. July 1, 2020

Electronic version of the Journal on sites:
www.tadqiqot.uz, www.bsmi.uz

- - -

The journal is included in the list of scientific publications recommended for publication of the main scientific results of dissertations in medical sciences since September 27, 2024 by the Higher Attestation Commission of the Republic of Uzbekistan (letter No. 361/6 dated 2024).

EDITORIAL TEAM:

Khaydarov Nodirjon Kadirovich - Doctor of Medicine, Professor, Rector of Tashkent State Medical University. (Uzbekistan).
Nuraliev Nekkadam Abdullaevich - Doctor of Medical Sciences, Professor, Immunologist, Microbiologist, Vice-Rector for Research and Innovation of the Bukhara State Medical Institute. (Uzbekistan).
Kariev Gayrat Maratovich - Doctor of Medicine, Professor, Director of the Republican Scientific Center for Neurosurgery of Uzbekistan. (Uzbekistan).
Anatoly Ivanovich Fedin - Doctor of Medical Sciences, professor, Honored Doctor of the Russian Federation. Russian National Research Medical University named after N.I. Pirogova. (Russia).
Madjidova Yokutxon Nabievna - Doctor of Medicine, Professor, Tashkent State Medical University. (Uzbekistan).
Rakhimbaeva Gulnora Sattarovna - Doctor of Medical Sciences, Professor, the Tashkent State Medical University. (Uzbekistan).
Djurabekova Aziza Taxirovna - Doctor of Medicine, Professor, the Samarkand State Medical Institute. (Uzbekistan).
Mamadaliev Abdurakhmon Mamatkulovich - Doctor of Medical Sciences, Professor of the Samarkand State Medical Institute. (Uzbekistan).
Chutko Leonid Semenovich - Doctor of Medicine, Head of the Center for Behavioral Neurology of the Institute of Human Brain named after N.P. Bekhtereva. (Russia).
Muratov Fakhmitdin Khayritdinovich - Doctor of Medical Sciences, Professor, the Tashkent State Medical University. (Uzbekistan).
Dyakonova Elena Nikolaevna - Doctor of Medicine, professor of the Ivanovo State Medical Academy. (Russia).
Trufanov Evgeniy Aleksandrovich - Doctor of Medical Sciences, Professor, P.L. Shupyk National University of Health Protection of Ukraine and indicate its location (Ukraine).
Norov Abdurakhmon Ubaydullaevich - Doctor of Medicine, professor, Chief Physician of the Bukhara Regional Multidisciplinary Medical Center. (Uzbekistan).
Abdullaeva Nargiza Nurmamatovna - Doctor of Medicine, professor of the Samarkand State Medical Institute. (Uzbekistan).
Azizova Rano Baxodirovna - doctor of medical Sciences, associate Professor of the Tashkent State Medical University. (Uzbekistan).
Davlatov Salim Sulaimonovich - Head of the Department of education quality supervision, associate Professor of the Bukhara state medical Institute. (Uzbekistan).
Artykova Mavlyuda Abdurakhmanovna - Doctor of Medical Sciences, Professor of the Bukhara State Medical Institute. (Uzbekistan).
Urinov Muso Boltaevich - Doctor of Medicine, Associate Professor, Bukhara State Medical Institute. (Uzbekistan).
Kilichev Ibodulla Abdullaevich - Doctor of Medicine, professor of the Urgench branch of the Tashkent Medical Academy. (Uzbekistan).
Rashidova Nilufar Safoevna - doctor of medical Sciences, associate Professor of the Tashkent State Medical University. (Uzbekistan).
Ganieva Manizha Timurovna - Candidate of Medical Sciences, Associate Professor, Tajik State Medical University. (Tajikistan).
Hazratkulov Rustam Bafoevich - Doctor of Medicine, head of the scientific department of vascular pathology of the central nervous system of the Republican specialized scientific and practical medical center for neurosurgery, professor of the department of neurosurgery at the Center for the development of professional qualifications of medical workers (Uzbekistan).
Nuralieva Hafiza Otayevna - Candidate of medical Sciences, associate Professor, Toshkent pharmaceutical Institute. (Uzbekistan).
Ismailova Rano Olimdjanovna - Doctor of Medicine, head of the spine department of the Republican specialized scientific and practical medical center of neurosurgery (Uzbekistan).
Yugay Igor Aleksandrovich - senior research of the scientific department of pediatric of the Republican specialized scientific and practical medical center for neurosurgery. Associate professor of the department of neurosurgery at the Center for the development of professional qualifications of medical workers (Uzbekistan).
Inoyatova Sitora Oybekovna – DSc Associate Professor, Department of Neurology and Traditional Medicine, Tashkent State Medical University
Abdukodirov Eldor Isroilovich – DSc Associate Professor, Department of Neurology and Traditional Medicine, Tashkent State Medical University
Akhrorova Shakhlo Botirovna - Associate Professor of the Department of Neurology, Bukhara State Medical Institute, Doctor of Science (DSc).

СОДЕРЖАНИЕ | CONTENT

1. Толибов Дилшод Сирожович, Абдурасулова Нозимахон Абдувохид қизи
БОШ МИЯ СУРУНКАЛИ ИШЕМИЯСИ ФОНИДА СОМАТОВЕГЕТАТИВ СИНДРОМ РИВОЖЛАНИШИДА КОРТИЗОЛ ВА β-ЭНДОРФИННИНГ ДИАГНОСТИК АҲАМИЯТИ ҲАМДА ИНДИВИДУАЛЛАШТИРИЛГАН ТЕРАПИЯ САМАРАДОРЛИГИ……7

2. Tulyaganov Davron Baxtiyarovich, Maksudova Laylo Baxtiyarovna, Berdiyev Nodirbek Fayziyevich, Yavkachov Avazbek Azizbekovich, Bokiyeva Fayziniso Adxam qizi, Jabborova Mamura Ismatullo qizi
O‘TKIR ISHEMIK INSULTDA INTENSIV TERAPIYA VA KLINIK NATIJALARNI PROGNOZLASHNING ZAMONAVIY YONDASHUVLARI……12

3. Davlatbayev Alisher Faxraddin o‘g‘li, Majidova Yoqutxon Nabiyevna
ISHEMIK INSULTDAN KEYINGI KOGNITIV BUZILISHLARDA TRANSKUTAN VAGUS NERV STIMULYATSIYASI: NEYROPLASTIKLIK, BDNF, EEG BIOMARKERLARI VA PRECIZION REABILITATSIYA MODELI……..18

4. Xodjiyeva Dilbar Tadjiyevna, Farmonov Hayotbek Fakhriddin o‘g‘li
SERVIKOGEN BOSH OG‘RIG‘IDA MIOFASSIAL TRIGGER NUQTALARNING KLINIK AHAMIYATI: FENOTIPLASHDAN MAQSADLI BOTULIN TOKSINI-A TERAPIYASIGACHA……..25

5. Fayziyeva Ra’nogul Hoji qizi, Azizova Ra’no Bahodirovna
GENERALIZATSIYALASHGAN VA STRUKTUR FOKAL EPILEPSIYADA INTERIKTAL ELEKTROENSEFALOGRAFIK KO‘RSATKICHLARNING QIYOSIY TAHLILI……...32

6. Yavkachov Avazbek Azizbekovich, Alimov Doniyor Anvarovich, Berdiyev Nodirbek Fayziyevich, Bokiyeva Fayziniso Adxam qizi, Jabborova Mamura Ismatullo qizi
INSULTDA D-DIMER, GFAP VA FAST SHKALASINING DIAGNOSTIK VA PROGNOSTIK AHAMIYATI (ADABIYOTLAR SHARHI)……...37

7. Mamajonov Farrux Erkin o`gli, Musayeva Yulduz Alpisovna
YUZ NERVI NEVROPATIYASIDA KECHKI ASORATLARNI ERTA BASHORATLASHDA ELEKTRONEYROMIOGRAFIYA VA PROYALLIG'LANISH SITOKINLARI KO'RSATKICHLARINING PROGNOSTIK AHAMIYATI……...44

8. Раҳимбаева Гулнора Саттаровна, Нажмутдинова Дилором Камардиновна, Абдураҳмонова Қутлибика Бахтиёр қизи
ИНСУЛИНРЕЗИСТЕНТЛИКНИНГ ИШЕМИК ИНСУЛЬТ ПАТОГЕНЕЗИ ВА ПРОГНОЗИДАГИ АҲАМИЯТИ……...50

9. Абдукадирова Дилфуза Тахировна, Шохобиддинова Гулираъно Каримжон кизи, Солижонов Мухаммадрузи Ихтиёржон угли
НАРУШЕНИЯ СНА ПРИ СИНДРОМЕ БЕСПОКОЙНЫХ НОГ: КЛИНИЧЕСКИЕ И ГЕНДЕРНЫЕ ОСОБЕННОСТИ…..56

10. Maftuna Baxtiyor qizi Ibodulloyeva, Zarifboy Rajabovich Ibodullayev
ISHEMIK INSULTDAN KEYIN QO‘SHIMCHA PSIXOMOTOR TERAPIYANING SAKKIZ HAFTALIK KURSI DAVOMIDA QO‘L VA OYOQ HARAKAT FAOLIYATINING TIKLANISHI……..63

11. Узакова Мусавара Хисравовна, Джурабекова Азиза Тахировна
КЛИНИКО-НЕЙРОФИЗИОЛОГИЧЕСКИЕ И НЕЙРОПСИХОЛОГИЧЕСКИЕ КОРРЕЛЯТЫ ТЯЖЕСТИ ТИКОЗНЫХ РАССТРОЙСТВ У ДЕТЕЙ……69

12. Каримбердиев Азиз Даврон угли, Рахимбаева Гульнара Саттаровна, Вахабова Наргиза Максудовна
КЛИНИЧЕСКАЯ ЭФФЕКТИВНОСТЬ РИТМИЧЕСКОЙ ТРАНСКРАНИАЛЬНОЙ МАГНИТНОЙ СТИМУЛЯЦИИ В ПЕРИОД РАННЕЙ РЕАБИЛИТАЦИИ ПОСЛЕ ИШЕМИЧЕСКОГО ИНСУЛЬТА……...74

13. Клычева Раушания Ислямовна, Рахимбаева Гулнора Саттаровна
ОСОБЕННОСТИ УРОВНЕЙ МОЗГОВОГО НЕЙРОТРОФИЧЕСКОГО ФАКТОРА BDNF И КОРТИЗОЛА У ПАЦИЕНТОВ С РАЗЛИЧНЫМИ ФОРМАМИ ЭПИЛЕПСИИ……..79

14. Абдуллаева Муборак Бекқуловна, Абдуллаева Муниса Мансуровна, Ҳамидов Отабек Ҳаётбекович, Актамова Мадинабону Ўктам қизи, Маҳмудов Абдуллоҳ Салоҳиддин ўғли
КОМПРЕССИОН ВА ЯЛЛИҒЛАНИШ ГЕНЕЗЛИ ПЛЕКСОПАТИЯЛАРДА ЭЛЕКТРОНЕЙРОМИОГРАФИК НАМУНАЛАРНИНГ КЛИНИК ВА НЕЙРОФИЗИОЛОГИК ХУСУСИЯТЛАРИ……..83

15. Madjidova Yakutxon Nabiyevna, Nizamxo‘jayeva Shahzoda Baxtiyor qizi
SURUNKALI MIYA ISHEMIYASI BO‘LGAN BEMORLARNING PSIXOEMOTSIONAL VA KOGNITIV PROFILI…….89

16. Абдуллаева Муборак Бекқуловна, Ҳамидов Отабек Ҳаётбекович, Халилов Дилшод Равшан ўғли, Актамова Мадинабону Ўктам қизи, Маҳмудов Абдуллоҳ Салоҳиддин ўғли
ТУНГИ ЭНУРЕЗНИНГ НЕЙРОФИЗИОЛОГИК АСОСЛАРИ: ЗАМОНАВИЙ ДИАГНОСТИК ЁНДАШУВЛАР ВА КЛИНИК АҲАМИЯТИ (адабиётлар шарҳи)……...96

17. Садыкова Гулчехра Кобуловна, Хаитбаева Шукуржон Хаитбаевна
РАННЯЯ ДИАГНОСТИКА ДЕТСКОГО ЦЕРЕБРАЛЬНОГО ПАРАЛИЧА: СОВРЕМЕННЫЕ МЕТОДЫ НЕЙРОРАЗВИТИЙНОЙ ОЦЕНКИ И АЛГОРИТМ КЛИНИЧЕСКОГО ВЫЯВЛЕНИЯ…….102

18. Сирожидинова Нилуфар Шарофидиновна, Хайдаров Нодир Кадирович
ПСИХОЭМОЦИОНАЛЬНЫЕ НАРУШЕНИЯ В ПЕРИОД ЛАКТАЦИИ: НЕЙРОЭНДОКРИННЫЕ, ГЕМОДИНАМИЧЕСКИЕ МЕХАНИЗМЫ И ЭФФЕКТИВНОСТЬ КОМПЛЕКСНОЙ АМБУЛАТОРНОЙ РЕАБИЛИТАЦИИ……112

19. Ярашев А.Р., Эшонов О.Ш.
ИММУННЫЕ МЕХАНИЗМЫ РЕПЕРФУЗИОННОГО СИНДРОМА ПРИ ИШЕМИЧЕСКОМ ИНСУЛЬТЕ ПОСЛЕ СИСТЕМНОЙ ВНУТРИВЕННОЙ ТРОМБОЛИТИЧЕСКОЙ ТЕРАПИИ…….116

20. Садикова Адиля Назруллаевна, Маджидова Якутхон Набиевна, Бобоев Кодиржон Тухтабаевич
ГЕНЕТИЧЕСКИЕ МАРКЕРЫ ЭНДОТЕЛИАЛЬНОЙ И ГИПОКСИЧЕСКОЙ ДИСРЕГУЛЯЦИИ ПРИ ХРОНИЧЕСКОЙ ИШЕМИИ МОЗГА РАЗЛИЧНОЙ СТЕПЕНИ ТЯЖЕСТИ……...123

21. Узаков Журабек Бахтиерович, Мавлянова Зилола Фархадовна
ДИАГНОСТИЧЕСКАЯ ЗНАЧИМОСТЬ НЕЙРОФИЗИОЛОГИЧЕСКИХ И СТРУКТУРНО-ГЕМОДИНАМИЧЕСКИХ ИЗМЕНЕНИЙ ПРИ ГЕМИФАЦИАЛЬНОМ СПАЗМЕ……129

22. Нестерова Светлана Ивановна, Ходжаева Дилбар Таджиевна, Каюмов Холмурод Найимович,
МКБ-11: ГЛАВА 26, ФАКУЛЬТАТИВНОЕ ДВОЙНОЕ КОДИРОВАНИЕ И ИНТЕГРАТИВНАЯ РЕАБИЛИТАЦИЯ ДЕТЕЙ С ДЕТСКИМ ЦЕРЕБРАЛЬНЫМ ПАРАЛИЧОМ……134

23. Хайдарова Дилдора Кадировна, Кудратова Шаходат Рамазоновна
КОГНИТИВНЫЕ ФУНКЦИИ ПО ШКАЛАМ SLUMS И MINI-COG У БОЛЬНЫХ ХРОНИЧЕСКОЙ ИШЕМИЕЙ МОЗГА НА РАЗНЫХ СТАДИЯХ ХРОНИЧЕСКОЙ БОЛЕЗНИ ПОЧЕК……..138

24. Рахимова К.Э., Омонова У.Т.
НЕЙРОВИЗУАЛИЗАЦИОННЫЕ И ЭЛЕКТРОЭНЦЕФАЛОГРАФИЧЕСКИЕ ОСОБЕННОСТИ У ДЕТЕЙ С ДЕТСКИМ ЦЕРЕБРАЛЬНЫМ ПАРАЛИЧОМ И СОПУТСТВУЮЩИМ РАССТРОЙСТВОМ АУТИСТИЧЕСКОГО СПЕКТРА……142

25. Ахтамова Шахзода Фозиловна
РЕЧЕВЫЕ НАРУШЕНИЯ У ДЕТЕЙ С ДЕТСКИМ ЦЕРЕБРАЛЬНЫМ ПАРАЛИЧОМ……..147

26. Холиков Шухрат Ашурович
НЕЙРОФИЗИОЛОГИЧЕСКИЕ КРИТЕРИИ ОГРАНИЧЕНИЯ ОБЪЁМА РЕЗЕКЦИИ ИНТРАМЕДУЛЛЯРНЫХ ОПУХОЛЕЙ СПИННОГО МОЗГА……154

ISSN: 2181-0982
www.tadqiqot.uz
JOURNAL OF NEUROLOGY AND NEUROSURGERY RESEARCH
ЖУРНАЛ НЕВРОЛОГИИ И НЕЙРОХИРУРГИЧЕСКИХ ИССЛЕДОВАНИЙ

UDC 616.831-005.1-036.8:615.825

Maftuna Baxtiyor qizi Ibodulloyeva,
Zarifboy Rajabovich Ibodullayev
Toshkent davlat tibbiyot universiteti

ISHEMIK INSULTDAN KEYIN QO‘SHIMCHA PSIXOMOTOR TERAPIYANING SAKKIZ HAFTALIK KURSI DAVOMIDA QO‘L VA OYOQ HARAKAT FAOLIYATINING TIKLANISHI

http://dx.doi.org/10.5281/zenodo.23945565

ANNOTATSIYA

Ushbu tadqiqotning maqsadi ishemik insultdan keyingi bemorlarda standart reabilitatsiyaga qo‘shimcha ravishda psixomotor terapiya (PMT) qo‘llanilgan va qo‘llanilmagan holatlarda Fugl-Meyer baholash shkalasi (Fugl-Meyer Assessment, FMA) bo‘yicha oyoq-qo’llarning harakat funksiyasi ko‘rsatkichlaridagi o‘zgarishlarni taqqoslashdan iborat edi. Ushbu prospektiv, ochiq turdagi nazoratli tadqiqotda bemorlar tasodifiy taqsimlash usuli asosida guruhlarga ajratildi va yakuniy tahlilga har bir guruhda 50 nafardan, jami 100 nafar bemor kiritildi. PMT sakkiz hafta davomida, haftasiga to‘rt marta, har bir mashg‘ulotning rejalashtirilgan davomiyligi 60 daqiqani tashkil etgan holda o‘tkazildi va zaruratga qarab individual ravishda 90 daqiqagacha uzaytirildi. FMA shkalasi bo‘yicha harakat funksiyasi ko‘rsatkichlari boshlang‘ich bosqichda va 8-haftada baholandi. O‘zgarishlar 2 × 2 aralash dizaynli dispersiya tahlili yordamida baholanib, o‘rtacha o‘zgarishlarning guruhlararo farqlari, 95% ishonch oraliqlari (IO) va ta’sir kattaliklari keltirildi. Qo’l ko‘rsatkichlari PMT guruhida 33,56 balldan 49,28 ballgacha, solishtirma guruhda esa 32,18 balldan 37,44 ballgacha oshdi, oyoq ko‘rsatkichlari esa mos ravishda 23,26 balldan 30,78 ballgacha va 22,82 balldan 25,84 ballgacha oshdi. O‘rtacha o‘zgarishlarning guruhlararo farqlari PMT foydasiga yuqori ekstremita uchun 10,46 ballni (95% IO: 8,77-12,15), pastki ekstremita uchun esa 4,50 ballni (95% IO: 3,20-5,80) tashkil etdi. Har ikkala ko‘rsatkich bo‘yicha «vaqt × guruh» omillarining o‘zaro ta’siri statistik jihatdan ahamiyatli bo‘ldi ($p < 0,001$) va guruhlararo o‘zgarishlar bo‘yicha har ikkala taqqoslash Holm tuzatishidan keyin ham statistik ahamiyatini saqlab qoldi ($p < 0,001$). Shunday qilib, qo‘shimcha PMT qo‘llanilishi yakuniy tahlilga kiritilgan bemorlarda sakkiz hafta davomida FMA shkalasining har ikkala harakat funksiyasi bo‘limi bo‘yicha yanada sezilarli yaxshilanish bilan bog‘liq bo‘ldi. Biroq tadqiqot davomida ayrim ishtirokchilarning chiqib ketishi, tadqiqotning ochiq dizayni va qo‘shimcha terapevtik ta’sir hajmi natijalarni sabab-oqibat nuqtayi nazaridan talqin qilish hamda umumlashtirish imkoniyatlarini cheklaydi.

Kalit so‘zlar: ishemik insult; psixomotor terapiya; Fugl-Meyer baholash shkalasi; qo’llar; oyoqlar; harakat funksiyalarining tiklanishi; reabilitatsiya.

Maftuna Bakhtiyor qizi Ibodulloyeva,
Zarifboy Rajabovich Ibodullayev
Tashkent State Medical University

UPPER AND LOWER LIMB MOTOR RECOVERY DURING EIGHT WEEKS OF ADJUNCTIVE PSYCHOMOTOR THERAPY AFTER ISCHEMIC STROKE

ANNOTATION

This study aimed to compare changes in upper- and lower-extremity Fugl–Meyer Assessment (FMA) motor scores following standard rehabilitation with or without adjunctive psychomotor therapy (PMT) in patients after ischemic stroke. This prospective, open-label controlled study used random allocation and included 100 patients in the final analysis, with 50 patients per group. PMT was administered over eight weeks, four sessions per week, with a planned session duration of 60 minutes, individually extended to 90 minutes when required. FMA motor scores were assessed at baseline and week 8. Changes were evaluated using a 2 × 2 mixed-design analysis of variance, with between-group differences in mean change, 95% confidence intervals (CIs), and effect sizes reported. Upper-extremity scores increased from 33.56 to 49.28 in the PMT group and from 32.18 to 37.44 in the comparison group, while lower-extremity scores increased from 23.26 to 30.78 and from 22.82 to 25.84, respectively. The between-group differences in mean change favored PMT by 10.46 points (95% CI 8.77–12.15) for the upper extremity and 4.50 points (95% CI 3.20–5.80) for the lower extremity. Both time × group interactions were statistically significant ($p < 0.001$), and both between-group change contrasts remained significant after Holm adjustment ($p < 0.001$). Adjunctive PMT was therefore associated with greater improvement in both FMA motor domains over eight weeks among patients included in the final analysis. However, attrition, the open-label design, and additional treatment exposure limit causal interpretation and generalizability.

Keywords: ischemic stroke; psychomotor therapy; Fugl-Meyer Assessment; upper extremity; lower extremity; motor recovery; rehabilitation.

Ибодуллоева Мафтуна Бахтиёр кизи
Ибодуллаев Зарифбой Раджабович
Ташкентский государственный медицинский университет

ВОССТАНОВЛЕНИЕ ДВИГАТЕЛЬНОЙ ФУНКЦИИ ВЕРХНИХ И НИЖНИХ КОНЕЧНОСТЕЙ В ХОДЕ ВОСЬМИНЕДЕЛЬНОГО КУРСА ДОПОЛНИТЕЛЬНОЙ ПСИХОМОТОРНОЙ ТЕРАПИИ ПОСЛЕ ИШЕМИЧЕСКОГО ИНСУЛЬТА

АННОТАЦИЯ

Целью данного исследования было сравнение изменений показателей двигательной функции верхних и нижних конечностей по шкале Фугля–Мейера (Fugl–Meyer Assessment, FMA) после стандартной реабилитации с дополнительным применением психомоторной терапии (ПМТ) или без неё у пациентов, перенёсших ишемический инсульт. В этом проспективном открытом контролируемом исследовании с рандомизированным распределением в окончательный анализ были включены 100 пациентов, по 50 человек в каждой группе. ПМТ проводилась в течение восьми недель, четыре занятия в неделю, с запланированной продолжительностью одного занятия 60 минут, которая при необходимости индивидуально увеличивалась до 90 минут. Показатели двигательной функции по шкале FMA оценивались на исходном уровне и на 8-й неделе. Изменения оценивались с использованием двухфакторного дисперсионного анализа смешанного типа (2 × 2 ANOVA) с представлением межгрупповых различий средних изменений, 95% доверительных интервалов (ДИ) и размеров эффекта. Показатели двигательной функции верхней конечности увеличились с 33,56 до 49,28 балла в группе ПМТ и с 32,18 до 37,44 балла в группе сравнения, тогда как показатели двигательной функции нижней конечности увеличились с 23,26 до 30,78 и с 22,82 до 25,84 балла соответственно. Межгрупповые различия средних изменений составили 10,46 балла (95% ДИ: 8,77–12,15) для верхней конечности и 4,50 балла (95% ДИ: 3,20–5,80) для нижней конечности в пользу ПМТ. Взаимодействия факторов «время × группа» были статистически значимыми для обоих показателей ($p < 0,001$), а оба межгрупповых сравнения изменений оставались статистически значимыми после поправки Холма ($p < 0,001$). Таким образом, дополнительное применение ПМТ было связано с более выраженным улучшением двигательных функций по обоим разделам шкалы FMA в течение восьми недель среди пациентов, включённых в окончательный анализ. Однако выбытие участников из исследования, открытый дизайн и дополнительный объём терапевтического воздействия ограничивают причинно-следственную интерпретацию и возможность обобщения результатов.

Ключевые слова: ишемический инсульт; психомоторная терапия; шкала Фугля-Мейера; верхняя конечность; нижняя конечность; восстановление двигательных функций; реабилитация.

Introduction.

Motor impairment after ischemic stroke can restrict selective limb movement and coordinated task performance. An evaluation of rehabilitation should therefore distinguish changes in impairment from changes in independence or participation. The Fugl–Meyer Assessment provides a structured assessment of post-stroke sensorimotor impairment, with separate motor sections for the upper and lower extremities [1]. This separation permits a focused comparison of arm and leg recovery without conflating different clinical outcomes.

Reliability studies support use of the upper- and lower-extremity FMA motor sections in the early post-stroke period, while emphasizing consistent administration and scoring [2,3]. Their use is particularly relevant when a rehabilitation programme combines several forms of movement practice: a shared impairment measure can describe the overall motor response without assuming that a specific exercise caused the observed improvement.

The PMT programme investigated here combined body awareness, sensory input, postural control, movement coordination, purposeful actions, and relaxation. Its clinical rationale was to help patients attend to and control the affected body segments during progressively more complex movement. Whether this additional programme was associated with greater motor improvement than standard rehabilitation alone was examined using the FMA outcomes from the dissertation cohort.

The objective of this article was to compare baseline-to-week-8 changes in upper- and lower-extremity FMA motor scores between the two treatment groups. This report is restricted to FMA motor outcomes; it does not evaluate treatment effects on other clinical scales.

Materials and methods

Study design and participants. The source study was a prospective, randomized, controlled, open-label clinical investigation involving patients after ischemic stroke who attended the neurology department of the multidisciplinary clinic of Tashkent State Medical University. The dissertation describes simple random allocation using an Excel spreadsheet. Allocation concealment and blinded outcome assessment were not documented in the supplied source. The present article reports the available aggregate FMA results rather than a new analysis of individual patient records.

A total of 130 patients after ischemic stroke were initially involved, and 100 were included in the final statistical analysis. Thirty patients were not included: 23 did not complete the rehabilitation course, three were readmitted because of comorbid illness, and four declined participation. The timing of these exclusions relative to allocation and their distribution by treatment group were not specified. Consequently, the available analysis is treated as a completer analysis, not an intention-to-treat analysis. The final PMT and comparison groups each comprised 50 patients. An additional 30 healthy participants contributed baseline comparisons in the dissertation but were not included in the treatment-effect analyses reported here.

Eligibility required a first ischemic stroke confirmed by MRI or CT, age 30–70 years, and a post-stroke interval of seven days to six months. Participants had stable neurological status, sufficient cognitive and sensory capacity to understand instructions, and the ability to undertake the assessment tasks.

The stated NIHSS eligibility range was 5–20. Recurrent stroke, severe comorbid somatic or psychiatric disease, and severe neurological impairment outside the eligibility range were exclusion criteria. Participation was voluntary, and written informed consent was obtained.

Rehabilitation interventions. Both groups received standard rehabilitation, including therapeutic physical exercises and other clinically indicated rehabilitation measures adapted to functional status. The intervention group additionally received PMT over eight weeks. Four sessions per week were planned, giving 32 sessions and 1,920 planned treatment minutes at 60 minutes per session. Sessions could be extended to 90 minutes according to individual needs and tolerance. Planned exposure was not assumed to equal actual exposure for every patient.

Sessions consisted of an introductory phase, a main practice phase, and a concluding phase. Preparation included breathing control, relaxation, and attention to body sensations. The main phase addressed body schema, sensory–motor integration, posture, coordination, and purposeful movement. The concluding phase reduced exertion and encouraged awareness of the movements performed. Exercise difficulty and assistance were adjusted to the patient's functional response.

During weeks 1–2, practice emphasized body awareness, simple voluntary movements, visual guidance, eye–hand coordination, and initial postural control. Weeks 3–4 introduced sit-to-stand preparation, supported standing, weight transfer, rhythmic movement, and walking coordination. Weeks 5–6 emphasized grasping and placing objects, changes of direction, movement sequences, and additional tasks during movement. Weeks 7–8 consolidated coordinated limb and trunk actions and, where safe, reduced visual dependence to increase use of proprioceptive information. Blood pressure, general condition, fatigue, and tolerance were monitored, with reduction or cessation of exercise when clinically indicated.

FMA outcome assessment. Assessment took place before rehabilitation and after the eight-week course. The reported motor domains were the FMA upper extremity (FMA-UE; 0–66 points) and FMA lower extremity (FMA-LE; 0–34 points); higher scores indicate less motor impairment [1]. Change was defined as the week-8 score minus the baseline score. No combined FMA total or separate sensory, joint-motion, or pain treatment effect was reconstructed, because the supplied results did not provide the necessary longitudinal estimates for those outcomes.

Statistical analysis. The dissertation used jamovi for statistical analysis. Baseline values were summarized as means and standard deviations (SDs), and baseline group comparisons used the Mann–Whitney U test. Longitudinal FMA outcomes were assessed using a 2 × 2 mixed-design analysis of variance, with time as the within-participant factor and group as the between-participant factor. The time × group interaction tested whether the trajectories differed between treatments. All reported F tests had 1 and 98 degrees of freedom.

Differences in mean change were expressed in FMA points with 95% CIs. Partial eta squared (η^2p) and Hedges g were retained as reported in the dissertation. Holm-adjusted p values were taken from the source's multiple-outcome analysis and were not recalculated as a separate two-outcome family. Tests were two-sided, with $p < 0.05$ considered statistically significant. Follow-up SDs were not available in the relevant source summaries and were not imputed; the figures therefore distinguish mean trajectories from confidence intervals for between-group change contrasts.

Results

Baseline characteristics. The final cohort contained 56 men and 44 women. Mean age was 59.26 ± 9.31 years in the PMT group and 61.50 ± 7.74 years in the comparison group. Baseline characteristics and FMA scores are summarized in Table 1. The dissertation reported no significant baseline group differences in FMA scores ($p > 0.05$), although exact FMA baseline p values were not supplied. This does not establish equivalence between groups.

Table 1. Baseline characteristics of the analyzed treatment groups

Characteristic	PMT + standard rehabilitation (n = 50)	Standard rehabilitation (n = 50)
Age, years	59.26 ± 9.31	61.50 ± 7.74
Men, n (%)	27 (54.0)	29 (58.0)
Women, n (%)	23 (46.0)	21 (42.0)
FMA-UE, points	33.56 ± 7.27	32.18 ± 5.72
FMA-LE, points	23.26 ± 5.95	22.82 ± 4.56

Values are mean ± SD unless otherwise stated. PMT, psychomotor therapy; FMA-UE and FMA-LE, upper- and lower-extremity Fugl–Meyer motor scores.

Upper and lower extremity motor recovery. FMA-UE improved by 15.72 points with adjunctive PMT and by 5.26 points with standard rehabilitation alone. FMA-LE improved by 7.52 and 3.02 points, respectively. The between-group differences in change were 10.46 points (95% CI 8.77–12.15) and 4.50 points (95% CI 3.20–5.80). Both contrasts remained significant after Holm adjustment (Table 2).

Table 2. FMA motor scores before and after rehabilitation and differences in change

Outcome and group	Baseline mean	Week 8 mean	Mean change
FMA-UE: PMT + standard	33.56	49.28	+15.72
FMA-UE: standard only	32.18	37.44	+5.26
FMA-LE: PMT + standard	23.26	30.78	+7.52
FMA-LE: standard only	22.82	25.84	+3.02

All scores are points; n = 50 per group. Between-group differences in change (PMT minus comparison): FMA-UE, 10.46 (95% CI 8.77–12.15), Hedges g = 2.39; FMA-LE, 4.50 (95% CI 3.20–5.80), Hedges g = 1.33. Both Holm-adjusted p < 0.001. Follow-up SDs are not provided in the source summaries.

Figure 1 shows the mean trajectories on the respective domain scales. Improvement occurred in both groups, but the separation between groups increased over the eight-week course. Figure 2 displays the between-group differences in change and their reported 95% CIs. The upper- and lower-extremity domains have different score ranges, so their raw point changes should not be interpreted as directly interchangeable measures of benefit.

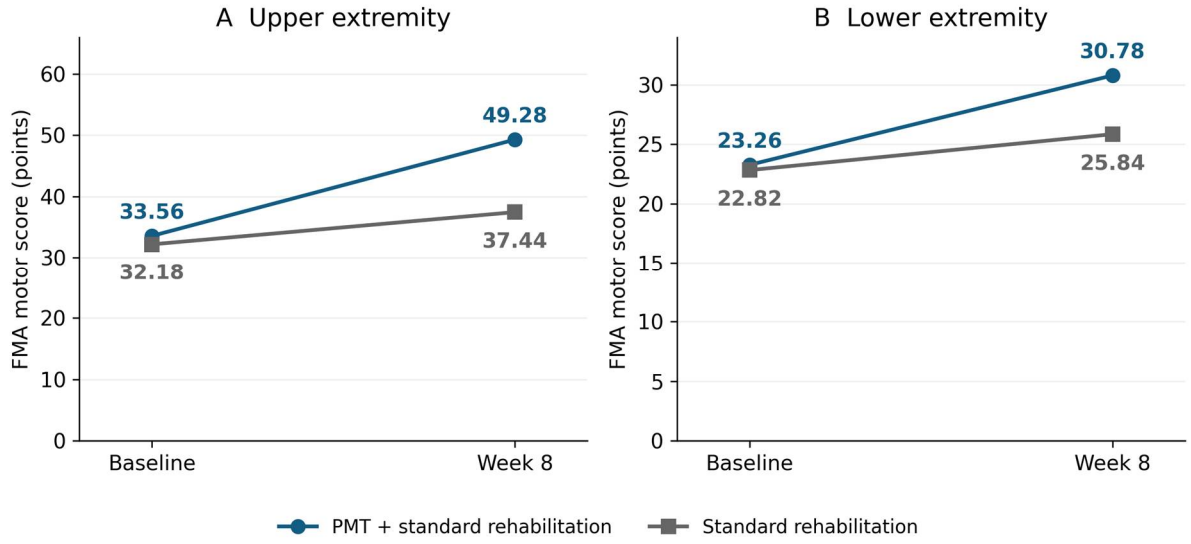


Figure 1. Mean FMA motor scores at baseline and week 8. Panel A: upper extremity (0–66 points). Panel B: lower extremity (0–34 points). Each group included 50 patients. Lines connect group means and do not depict individual trajectories. Error bars are omitted because follow-up dispersion was not provided.

Mixed-design analysis of variance. For FMA-UE, the time effect was significant (F = 582.38, p < 0.001), as was the group effect (F = 35.74, p < 0.001). The time × group interaction was also significant (F = 144.76, p < 0.001; η^2p = 0.60). For FMA-LE, the corresponding effects were F = 248.00 (p < 0.001) for time, F = 9.67 (p = 0.002) for group, and F = 45.21 (p < 0.001; η^2p = 0.32) for the interaction (Table 3). The interaction terms support a difference in change over time between treatments; the time effects alone do not isolate an effect of PMT.

Table 3. Mixed-design ANOVA for upper- and lower-extremity FMA motor scores

Domain	Effect	F(1,98)	p	η^2p
FMA-UE	Time	582.38	<0.001	0.86
FMA-UE	Group	35.74	<0.001	0.27
FMA-UE	Time × group	144.76	<0.001	0.60
FMA-LE	Time	248.00	<0.001	0.72
FMA-LE	Group	9.67	0.002	0.09
FMA-LE	Time × group	45.21	<0.001	0.32

ANOVA, analysis of variance; η^2p, partial eta squared. Values reproduce dissertation Tables 3.3 and 3.4. Interaction effect sizes are rounded to two decimals here; the source summary reports 0.596 for FMA-UE and 0.316 for FMA-LE.

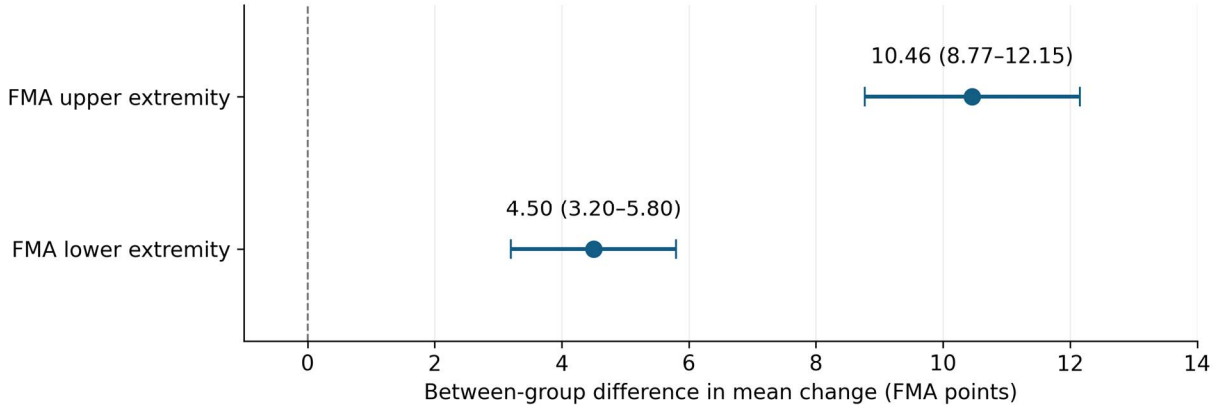


Figure 2. Between-group differences in mean FMA change with 95% confidence intervals. Positive values favor PMT plus standard rehabilitation. The dashed line indicates no difference. The estimates are reproduced from dissertation Table 3.11; both Holm-adjusted p values are <0.001. Domain score ranges differ.

Discussion

The principal finding was a larger eight-week improvement in both FMA motor domains among patients receiving PMT in addition to standard rehabilitation. The advantage was supported by the differences in change and by significant time × group interactions. These findings describe the incremental outcome associated with the combined programme in the analyzed cohort. They do not establish that PMT alone accounts for the full observed recovery, since standard rehabilitation, spontaneous recovery, and additional therapist contact may all have contributed.

The programme repeatedly linked attention to body position with purposeful limb movement, sensory feedback, and graded coordination tasks. Such practice offers a plausible explanation for improvement in the motor abilities sampled by the FMA. However, the study did not directly measure neural plasticity, sensory integration mechanisms, or changes in cortical networks. These remain possible explanations rather than demonstrated mechanisms. Because the programme contained several interacting components, the results also cannot identify the independent contribution of body-awareness exercises, rhythmic movement, relaxation, or task practice.

The FMA is useful for documenting motor impairment, but score increases should not automatically be equated with full functional recovery. Reliability studies support its use when testing is standardized [2,3]. In this study, the mean week-8 FMA-UE score of 49.28 remained below the maximum of 66, indicating residual impairment at the group level. The PMT group's FMA-LE mean of 30.78 was closer to its maximum of 34. This proximity raises the possibility of a ceiling constraint on further measurable improvement; it does not show that all participants reached the ceiling.

Clinical importance requires a separate assessment from statistical significance. Hiragami and colleagues estimated an FMA-UE minimal clinically important difference of 12.4 points in a small convalescent-stroke cohort with moderate to severe hemiparesis [4]. The PMT group's mean within-group improvement of 15.72 points exceeded that estimate, but the 10.46-point between-group contrast is a different quantity. A threshold derived for individual change should not be applied as a definitive threshold for a group treatment contrast. Differences in population and post-stroke timing further limit transferability, and individual responder proportions cannot be determined from the available aggregate results.

Evidence from other rehabilitation trials also argues for attention to treatment exposure and comparator content. The ICARE randomized trial did not demonstrate superiority of its structured task-oriented upper-limb programme over the comparison approaches on its principal outcome [5]. That trial evaluated a different intervention and outcome, so it neither confirms nor refutes the present FMA findings. It illustrates why improvement during a structured programme is not, by itself, sufficient evidence that its specific therapeutic content is responsible for the improvement.

Study limitations

Several limitations affect interpretation. First, 30 of the 130 initially involved patients were absent from the final analysis, including 23 who did not complete treatment. The lack of group-specific attrition information prevents assessment of differential loss and limits confidence that the analyzed groups represent all allocated patients. Second, the open-label design and absence of documented assessor blinding allow performance and detection bias. Details of allocation concealment were also unavailable.

Third, PMT was added to standard care, and an attention- or dose-matched comparator was not documented. The observed advantage therefore cannot separate PMT content from increased practice time and professional contact. Fourth, follow-up ended at eight weeks; persistence of the motor gains is unknown. The broad inclusion interval after stroke may also encompass different recovery trajectories, and the supplied results did not establish treatment effects separately by post-stroke phase.

Finally, this manuscript uses the dissertation's aggregate estimates. Follow-up SDs, individual FMA data, and complete model diagnostics were not available for independent reanalysis. The source did not provide sufficient longitudinal results to evaluate the nonmotor FMA domains. These limitations favor a focused interpretation of the reported upper- and lower-extremity motor outcomes rather than a claim about all components of the FMA.

Conclusion

Among 100 patients included in the final analysis, adding an eight-week PMT programme to standard rehabilitation was associated with greater improvement in FMA upper- and lower-extremity motor scores. The between-group differences in mean change were 10.46 and 4.50 points, respectively, and both remained significant after Holm adjustment. The findings support further evaluation of adjunctive PMT with concealed

allocation, blinded assessment, a comparator matched for treatment exposure, and longer follow-up.

Ethics and source reporting

Written informed consent was obtained, and the dissertation states that procedures followed applicable ethical standards. The supplied source did not specify the ethics committee name or approval identifier. This article presents the FMA component of the authors' dissertation research; all cohort values and statistical estimates were taken from that source. Ethics approval details, funding, competing interests, and corresponding-author contact information require author confirmation before journal submission.

References

1. University of Gothenburg. Fugl-Meyer Assessment. Department of Clinical Neuroscience, Rehabilitation Medicine. Available at: https://www.gu.se/en/neuroscience-physiology/fugl-meyer-assessment. Accessed 9 October 2026.

2. Hernández ED, Galeano CP, Barbosa NE, Forero SM, Nordin Å, Sunnerhagen KS, Alt Murphy M. Intra- and inter-rater reliability of Fugl-Meyer Assessment of Upper Extremity in stroke. J Rehabil Med. 2019;51(9):652–659. doi:10.2340/16501977-2590.

3. Hernández ED, Forero SM, Galeano CP, Barbosa NE, Sunnerhagen KS, Alt Murphy M. Intra- and inter-rater reliability of Fugl-Meyer Assessment of Lower Extremity early after stroke. Braz J Phys Ther. 2021;25(6):709–718. doi:10.1016/j.bjpt.2020.12.002.

4. Hiragami S, Inoue Y, Harada K. Minimal clinically important difference for the Fugl-Meyer assessment of the upper extremity in convalescent stroke patients with moderate to severe hemiparesis. J Phys Ther Sci. 2019;31(11):917–921. doi:10.1589/jpts.31.917.

5. Winstein CJ, Wolf SL, Dromerick AW, et al. Effect of a task-oriented rehabilitation program on upper extremity recovery following motor stroke: the ICARE randomized clinical trial. JAMA. 2016;315(6):571–581. doi:10.1001/jama.2016.0276.

ISSN 2181-0982

Doi Journal 10.26739/2181-0982

ЖУРНАЛ НЕВРОЛОГИИ И НЕЙРОХИРУРГИЧЕСКИХ ИССЛЕДОВАНИЙ

JOURNAL OF NEUROLOGY AND NEUROSURGERY RESEARCH

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

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