



# INTERNATIONAL CONFERENCE ON MEDICINE, SCIENCE, AND EDUCATION

<https://universalconference.us>

# INTERNATIONAL CONFERENCE ON MEDICINE, SCIENCE, AND EDUCATION

Volume 02, Issue 07, 2025 (17-AUGUST)

## Editor in Chief

**Dr. Rajeev Ojha** - Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi -110025, India

## Editorial Team

Sunita Sarawagi - Indian Institute of Technology Bombay, Mumbai, India.

Dr Manjunatha LH - Professor, REVA University, INDIA

Asish Bera - Edge Hill University, UK, BITS Pilani, India

Dr Sunildro LS Akoijam - Assistant Professor of Management, North Eastern Hill University, India

Madan Mohan Singh - Professor of Mathematics, North-Eastern Hill University, Shillong, India

Dr. Anupam Singh - Associate Professor-CSE, Graphic Era Hill University Dehradun, India

Dr. Sargam Bahl Walia - School of Management, Graphic Era Hill University, Dehradun, Uttarakhand, India

Narayan Pradhan - Indian Association for the Cultivation of Science

Ashok Kumar - Kumar Associate Professor E&CE National Institute of Technology, Hamirpur, India.

Anjali Pal - Department of Civil Engineering, Indian Institute of Technology Kharagpur - 721302, India.

Rajnish Joshi - Professor of Medicine, All India Institute of Medical Sciences, Bhopal, India

Mukul Kumar - IIT Mumbai (India); Meijo University (Japan); HEG Ltd. (India)

Prof. Kuruvilla Joseph - Indian Institute of Space Science and Technology (IIST)

Prof. Yogesh C. Sharma - D.Sc., FRSC, FBRS, FIAPS; FISEES, Department of Chemistry, Indian Institute of Technology

Professor Indra Mani Mishra - Indian Institute of Technology (Indian School of Mines), Dhanbad; Formerly at

Eshkaraev Sadridin Chorievich - Head of the Department of Medicine and Natural Sciences, Doctor of Philosophy in Chemistry, Associate Professor, Termez University of Economics and Service, Termez, Uzbekistan. . ORCID

[esadir\\_74@rambler.ru](mailto:esadir_74@rambler.ru)

## **O‘TKIR TINNITUSNI ERTA BOSQICHDA ANIQLASH VA UNI GIPERBARIK OKSIGENATSIYA (GBO) ORQALI OLDINI OLISH**

**Abdunazarov Toxirjon Sadulla o‘g‘li .**

Central Asian Medical University “Xirurgik kasalliklar” kafedrası assistenti.

Email: tohirjonabdunazarov102@gmail.com

<https://orcid.org/0009-0007-4924-3897>

---

### **Annotatsiya**

O‘tkir tinnitus — bu eshitish organlarida ob‘ektiv tashqi manbasiz shovqin yoki “g‘uvillash” sezilishidir. U ko‘pincha eshitish nervi yoki labirintning ishemik zararlanishi bilan bog‘liq bo‘ladi. Ushbu holatning erta aniqlanishi va GBO (giperbarik oksigenatsiya) yordamida oldini olish orqali surunkali sensor neyral eshitish buzilishlari va bemorning hayot sifatini sezilarli darajada yaxshilash mumkin.

---

### **Kirish**

Tinnitus, ayniqsa o‘tkir shaklda, eshitish nervi yoki ichki quloq qon ta‘minotining buzilishi natijasida paydo bo‘ladi. O‘tkir sensor neyral eshitish pasayishi bilan birga kechadigan tinnituslar nevrologik va otologik tezkor yondashuvni talab qiladi. Erta davrda aniqlanmasa, bu holat surunkali shaklga o‘tib, davolashga chidamli bo‘lib qoladi [1].

---

### **Erta aniqlash muhimligi**

O‘tkir tinnitus erta bosqichda quyidagi yo‘llar bilan aniqlanishi mumkin:

- **Sub‘ektiv audiometriya** — tonal va nutq eshituv chegarasini aniqlash;
- **Timpanometriya** — o‘rta quloq bosimini baholash;
- **Otoakustik emissiya (OAE) va BERA** — eshitish nervi darajasidagi zararni baholash.

Erta aniqlangan holatlarda **3–5 kun ichida** GBO boshlansa, tiklanish ehtimoli sezilarli ortadi [2].

---

### **Giperbarik oksigenatsiya (GBO) roli**

GBO usuli bosim ostida 100% kislorodni nafas orqali berishga asoslangan bo‘lib, u ichki quloq va eshitish nervining ishemik zonalarini reoksygenatsiya qilishga yordam beradi. GBO:

- Qon aylanishini yaxshilaydi (mikrosirkulyatsiya);
- Gipoksiyani kamaytiradi;
- Neyroprotektiv ta’sir ko‘rsatadi;
- Antioksidant faollikni kuchaytiradi [3,4].

**Optimal kurs:** 10–15 seans, har biri 60–90 daqiqa, 1.5–2 ATA bosimda.

---

### **Klinik amaliyotda qo‘llash tavsiyalari**

- Tinnitus boshlanganidan 72 soat ichida GBO boshlash maksimal samara beradi;
- Toshqinli shovqin, eshitish pasayishi va bosh aylanishi bilan kechayotgan hollarda kechiktirmasdan yondashuv talab qilinadi;
- Parvoz, tovushli shovqin (industrial zonalar) yoki tog‘li hududdan kelgan bemorlar profilaktik ko‘rikka jalb qilinishi lozim.

---

### **Xulosa**

O‘tkir tinnitus erta aniqlansa va GBO yordamida kechiktirilmagan davolash boshlangan taqdirda, surunkali eshitish yetishmovchiligining oldi olinadi. Giperbarik kislorod terapiyasi zamonaviy neyrootologiyada samarali, xavfsiz va ilmiy asoslangan profilaktik vosita sifatida o‘z o‘rnini topmoqda.

### **Kalit so‘zlar:**

tinnitus, GBO, giperbarik oksigenatsiya, eshitish nervi, audiometriya, neyroproteksiya.

### **Adabiyotlar:**

1. Baguley DM, McFerran DJ, Hall D. Tinnitus. *Lancet*. 2013;382(9904):1600–1607.
2. Lefebvre PP, Staecker H, Van de Heyning P. Hyperbaric oxygen therapy for idiopathic sudden sensorineural hearing loss. *Acta Otolaryngol*. 2007;127(9):988–993.
3. Furuhashi A, Matsuda K, Asahi K, et al. Hyperbaric oxygen therapy for sudden deafness. *Acta Otolaryngol Suppl*. 2002;(546):6–10.
4. O‘zbekiston Respublikasi SSV. O‘tkir eshitish pasayishini davolashda giperbarik oksigenatsiya protokoli. Toshkent, 2021.

## ITALYAN VA O'ZBEK ERTAKLARIDA YAXSHILIK VA YOMONLIK G'OYALARINING MADANIY TALQINI

**Ergashova Baxora Sayfillo qizi**  
O'zDJTU mustaqil tadqiqotchisi  
[ergashova.baxoram@gmail.com](mailto:ergashova.baxoram@gmail.com)

### Annotatsiya

Mazkur tezisdagi italyan va o'zbek ertaklarida ilgari suriladigan axloqiy va falsafiy g'oyalar tahlili ko'rib chiqiladi hamda "yaxshilik va yomonlik" tushunchalarining g'oya sifatida talqiniga alohida to'xtalib o'tiladi, ularning madaniy funksiyalari yoritiladi. Asosiy tahlil obyekti sifatida Janni Rodarining Chippolino obrazi hamda o'zbek ertagidagi To'g'rivoy obrazi olinadi.

**Kalit so'zlar:** qadriyat, yaxshilik va yomonlik tushunchasi, Chippolino, To'g'rivoy, satira, yumor.

### Annotation

This thesis analyzes the moral and philosophical ideas presented in Italian and Uzbek fairy tales, with particular focus on the interpretation of the concepts of "good and evil" as ideas and their cultural functions. The main subjects of analysis are the character of Cipollino by Gianni Rodari and the character of To'g'rivoy from Uzbek fairy tales.

**Keywords:** values, the concept of good and evil, Cipollino, To'g'rivoy, satire, humor

### Аннотация

В данной тезисной работе рассматривается анализ моральных и философских идей, представленных в итальянских и узбекских сказках, с особым вниманием к трактовке понятий «добро и зло» как идей и их культурных функций. Основными объектами анализа являются образ Чипполино Джанни Родарии и образ Тугривой из узбекских сказок.

**Ключевые слова:** ценности, понятие добра и зла, Чипполино, Тугривой, сатира, юмор

**Kirish.** Ertaklar har bir xalq madaniyatining ildizlarini, axloqiy qadriyatlarini va milliy dunyoqarashini aks ettiruvchi og'zaki ijod shaklidir. Italyan va o'zbek ertaklarini lingvokulturologik nuqtayi nazardan o'rganish, til va madaniyatning o'zaro bog'liqligini aniqlashga, shuningdek, madaniyatlararo tafovut va o'xshashliklarni chuqurroq anglashga imkon beradi. Lingvokulturologiya – bu tilni

faqat aloqa vositasi sifatida emas, balki madaniyatni o'zida mujassamlashtiruvchi muhim fenomen sifatida o'rganadigan fan bo'lib, u frazeologizmlar, metaforalar, til etiketi kabi birliklar orqali xalqning mentalitetini ochib beradi. V. N. Teliya, A. V. Kunin, E. M. Vereshchagin kabi olimlar til birliklari orqali xalq madaniyatining tarixiy, diniy, ijtimoiy va axloqiy qadriyatlarini tahlil qilishning asoslarini ishlab chiqqan. Italyan ertaklari, ayniqsa Italo Calvino tomonidan to'plangan "Fiabe italiane" asarida jamlangan hikoyalar, aksariyat hollarda diniy, fantastik va ijtimoiy-maishiy motivlarga boy bo'lib, ularning tilida janubiy Italiya dialektlari va mahalliy leksik birliklar faol qo'llaniladi. Masalan, "La Befana" yoki "Giufà" kabi ertak qahramonlari nafaqat milliy, balki diniy ramzlar bilan uyg'unlashgan. Shu bilan birga, bu ertaklar ijtimoiy tengsizlik, mehnatga hurmat, xushomadgo'ylik, kuchli iymon va ma'naviy sabr kabi g'oyalarni o'z ichiga oladi.

O'zbek xalq ertaklarida esa ko'proq axloqiy tarbiya, mehnatsevarlik, donolik, sadoqat, katta-kichikka hurmat kabi qadriyatlar yetakchi o'rinni egallaydi. Bu ertaklarda qo'llanilgan frazeologizmlar – masalan, "ko'zi ochildi", "boshi osmonga yetdi", "og'zidan bol tomdi" kabi ifodalar – xalqning nutqiy madaniyati va tarixiy tajribasi mahsulidir. Italyan ertaklarining yana bir xususiyati shundaki, ularning ko'pi ironik yoki satirik tusda bo'lib, kuchli obrazlar va realistik ifodalar orqali hayotiy haqiqatlarni ochib beradi. Masalan, Jufà obrazining noodatiy harakatlari orqali aslida atrof-muhitdagi nuqsonlar fosh etiladi. Bunday satirik yondashuv italyan xalqining so'z o'yinlari, metaforik ifodalari va dialektlari orqali yanada boyitilgan. O'zbek ertaklarida esa ramzlar ko'proq didaktik xususiyatga ega masalan, qaroqchi dev, sehrli parilar yoki turli sinovlar orqali ertak qahramoni axloqiy kamolotga erishadi. Qahramonlarning yo'li – bu ruhiy va ma'naviy o'sish yo'lidir. Bu holat Vladimir Proppning ertaklar morfologiyasiga oid nazariyasini qo'llash orqali oson anglashiladi: har ikki xalq ertaklarida ham muayyan strukturaviy birliklar – qahramonning sarguzashtlar uchun o'z uyini tark etishi, turli sinovlardan o'tishi, g'alaba qozonishi va mukofotlanishi kuzatiladi, biroq ularning mazmuni madaniy kontekstga bog'liq ravishda farqlanadi. Til madaniyatning ko'zguisidir. O'zbek ertaklarida xalqning odob-axloqi, e'tiqodi va urf-odatlar har bir jumlada sezilib turadi. Masalan, katta yoshdagilarga "ota", "bobo" deb murojaat qilish, mehmonni kutishdagi marosimiy nutqlar, iboralar – bu milliy madaniyatning til orqali aks etishidir.

Shu bilan birga, til etiketi – ya'ni madaniyatda qabul qilingan so'zlashuv qoidalari ham ertak matnlarida muhim rol o'ynaydi. Italyan ertaklarida esa ko'proq ijtimoiy rollar, diniy iboralar va ba'zan parodiya uslubida yozilgan dialoglar orqali madaniy tafovut namoyon bo'ladi. Italo Kalvino o'z to'plamida bu xilma-xillikni dialektlar va

leksik qatlamlar orqali saqlab qolgan. O‘zbek tilida esa ertak matnlari odatda adabiy til normalari asosida yozilgan bo‘lsa-da, xalqona leksik birliklar hisoblangan “uzoq yo‘l yurish”, “qismatga sababchi bo‘lish”, “taqdirga ergashish” kabi tushunchalar orqali madaniyatning aniq xususiyatlari ochib beriladi. Ikki xalq milliy tushunchalari va yashash tarzida madaniyatlararo o‘xshashliklar ham mavjud. Har ikki xalq ertaklarida ham axloqiy g‘oyalar, yaxshilik, yomonlik, haqiqat, sabr, adolat, sadoqat kabi qadriyatlar asosiy mavzu sifatida doimiy takrorlanadi. Biroq ularning talqini va ifoda shakli o‘ziga xosdir: o‘zbek ertaklarida mehr-muhabbat, sabr-toqat orqali halollikka erishish asosiy yo‘l sifatida berilsa, italyan ertaklarida esa ko‘proq donolik, aql bilan yomonlikni yengish g‘oyasi ilgari suriladi. Bu esa til vositalarida ham aks etadi: o‘zbek ertaklarida nasihatga boy nutq shakllari ko‘p uchrasa, italyan ertaklarida esa so‘z o‘yini, allegoriya va satira vositalari orqali badiiy ifoda kuchaytiriladi. Xulosa qilib aytganda, italyan va o‘zbek ertaklarining lingvokulturologik xususiyatlarini o‘rganish orqali har ikki xalqning madaniy tafakkuri, tarixiy tajribasi, til etiketi va axloqiy me‘yorlari haqida chuqur xulosalar chiqarish mumkin. Til birliklari – ayniqsa frazeologizmlar, metaforalar, maqollar ertaklarning badiiy ta’sirchanligini oshirish bilan birga, xalq ruhiyatini ham ifodalaydi. O‘zbek va italyan ertaklari o‘rtasidagi umumiyliklar madaniy universal qadriyatlarning mavjudligidan dalolat bersa, tafovutlar esa har bir xalqning o‘ziga xos madaniy yo‘nalishini ko‘rsatadi. Bu esa lingvokulturologik tadqiqotlar uchun boy tadqiqot maydonidir. Quyida biz sizlar bilan Chippolino hamda To‘g‘rivoy obrazlarining ma’naviy va majoziy xususiyatlarini tahlil qilib chiqamiz. Chippolini obrazi mashhur italyan bolalar yozuvchisi J.Rodarining ertak qahramonlaridan biri hisoblanib, uning obrazi o‘zida qator ma’no maydonlarini mujassamlashtiradi. Chippolino nomining o‘zi lingvokulturologik jihatdan metaforik xarakterga ega bo‘lib, “cipolla” – italyan tilida “piyoz” degani, “-ino” esa kichraytiruvchi qo‘shimcha hisoblanadi, bundan ko‘rinib turibdiki, *Chippolino* – “kichkina piyozcha” degan ma’noni bildiradi. Yozuvchi piyozni(sabzavotni) ijtimoiy sinf vakiliga aylantirib, oddiy xalq timsoli sifatida foydalanadi. Piyoz qavatma-qavat tuzilgan, har bir qavati ajralib turadi – bu esa xalqning turfa qatlamlardan iboratligini, har bir qavat ortida iztirob, mehnat va og‘riq yashiringanini anglatadi. Bu obraz metaforik jihatdan kambag‘allik, mehnatkashlik, oddiylik va halollikni ifodalaydi. Chippolino – italyan jamiyatida mavjud bo‘lgan ijtimoiy tengsizlik, adolat izlash, va xalqparvarlik g‘oyalarini o‘zida mujassamlashtirgan qahramon. Chippolino va uning do‘stlari oddiy, quvnoq, lekin aql bilan harakat qiladigan qahramonlar bo‘lib, ular orqali Rodari italyan xalqining anti-fashistik kayfiyatini, sinfiy kurashga bo‘lgan ehtiyojini badiiy ifodalaydi. Chippolinoning nutqlarida oddiylik, samimiylilik va sadoqat kabi italyan xalqining

muhim madaniy qadriyatlari aks etadi. U do‘stlariga “Biz birlikda kuchmiz”, “Odamlarga yordam berish kerak”, degan oddiy, lekin chuqur ahloqiy nutqlar bilan murojaat qiladi. Bu esa italyan tilidagi madaniy stereotiplardan biri bo‘lgan hamjihatlik va oilaparvarlikning badiiy ifodasidir. Chippolino – bu oddiy bolalar qahramoni emas, balki madaniyatlararo dialogga xizmat qiluvchi obrazdir. Uning tilidagi soddalik – xalqning madaniy xususiyatlarini aks ettiradi; metaforik ismi madaniy kod sifatida ishlaydi; harakatlaridagi ijtimoiy mazmun esa universal qadriyatlarni ifodalaydi. Shu bois, Chippolino nafaqat italyan bolalarining, balki dunyo bolalarining ongida adolatga intilish, do‘stlik va kurash g‘oyalarini uyg‘otadi. U lingvokulturologik jihatdan tahlil qilinganda italyan xalqining tili, etiketi, tarixiy ruhiyati va axloqiy tushunchalarining badiiy modeli sifatida qaraladi.

O‘zbek xalq ertaklaridan biri bo‘lgan “To‘g‘rivoy va Egrivoy”da ham To‘g‘rivoy obrazi orqali rostgo‘ylik, halollik, mardlik va yaxshilik g‘oyalari ilgari suriladi. Egrivoy qanchalik yomonliklar qilmasin, To‘g‘rivoy unga yaxshilik qilishda davom etadi va ertak so‘ngida Egrivoy o‘zi qazigan chohga o‘zi tushadi va jazosini oladi. O‘zbek xalq ertaklarida har doim axloqiy va tarbiyaviy xulosalash muhim ahamiyatga ega, ya'ni “qissadan hissa shuki” deyilganda, albatta o‘quvchi ertakni xulosalay olishi lozim. O‘zbek xalq ertaklarida ham ko‘pincha milliy qadriyatlar, urf-odatlar ulug‘lanadi, ayniqsa, to‘y marosimlariga alohida e‘tibor qaratiladi:”Qirq kecha-yu, qirq kunduz to‘y berishibdi”, “Karnay-surnayning ovozi yetti mahallaga eshilibdi”. Bu kabi iboralar madaniy kodlarni ko‘rsatib berishga xizmat qiladi. Xulosa o‘rnida shuni aytishimiz joizki, folklor xalqlar etnografiyasi va antropologiyasini ko‘rsatib berishda juda muhim ahamiyatga ega, shunday ekan ikki xalq ertaklarining lingvokulturologik tahlili orqali tillardagi allamorfik va izomorfik xususiyatlarni yoritishimiz mumkin bo‘ladi.

#### **Foydalanilgan adabiyotlar:**

1. B.Ergashova. Lingvokulturologiya – til va madaniyatning o‘zaro bog‘liqligi. Xorijiy filologiya №2 (95): 141-146 betlar.  
, 1921 – 103-bet
- 2.Usmonova Sh. “Lingvokulturologiya” (darslik). – Toshkent, 2019 – 82-bet
- 3.V.V. Vorobyov. Лингвокультурология: теория и методы. – РУДН (Rossiya Do‘stlik Universiteti), 1997 – 36-bet
- 4.Eragashova B., O‘zbek folklorshunosligining tarixi va taraqqiyoti. – So‘z san’ati jurnali, 2024.
- 5.V.N. Teliya. “Русская фразеология: Семантический, прагматический и лингвокультурологический аспекты”, Школа «Языки русской культуры», 1996 – 123-bet.

## **ОЦЕНКА ЭФФЕКТИВНОСТИ КЛИНИЧЕСКИХ АЛГОРИТМОВ В ЛЕЧЕНИИ ГЛУБОКОГО ПАРАПРОКТИТА У БОЛЬНЫХ САХАРНЫМ ДИАБЕТОМ**

**Косимов А.Л.  
Ахмаджонов Ж.У.  
Жураев Г.Г.**

Андижанский государственный медицинский институт, кафедра общей  
хирургии и трансплантологии

### **Актуальность.**

У больных сахарным диабетом глубокий парапроктит протекает тяжело, диагностируется поздно и часто сопровождается тяжелыми осложнениями. Из-за ослабления иммунной системы, нарушения микроциркуляции и нейропатических факторов заболевание клинически обострено и быстро распространяется по организму. В истории искусства эти случаи рассматриваются как сложная задача хирургии, и в последние годы широко используются подходы, связанные с индивидуальными алгоритмами и метаболическим контролем.

Цели и задачи.

Целью исследования является оценка влияния комплексного подхода к лечению глубокого парапроктита у больных сахарным диабетом на клинические результаты на основе четких клинических алгоритмов.

Задачи исследования:

1. Изучить влияние сахарного диабета на патогенез глубокого парапроктита;
2. Определение степени точности CRP, HbA1c, МРТ и КТ в диагностике;
3. Категоризация состояния пациента на основе индекса тяжести гангрены Fournier's и шкалы SOFA;
4. Разработка и анализ алгоритмических хирургических методов;

Материалы и методы.

В 2021-2024 годах проведен клинический анализ 68 больных диабетом II типа с диагнозом глубокий парапроктит в стационарных условиях. В диагностике использовались физикальный осмотр, лабораторные анализы (лейкоциты, CRP, HbA1c), инструментальные исследования (УЗИ, МРТ, КТ) и шкалы оценки состояния. Пациенты были разделены на 3 категории в зависимости от тяжести состояния и выполнялись вмешательства (сетон, NPWT, дебридмент, колостома) в соответствии с хирургическими алгоритмами.

### Результаты.

МРТ исследование показало эффективность в выборе правильной хирургической тактики на 94%. У больных с уровнем HbA1c выше 7,5% заживление язв в среднем составило 16,2 дня, тогда как у больных, достигших контроля, этот показатель сократился до 10,4 дня ( $p < 0,05$ ). Частота рецидивов у лечившихся по алгоритму составила 2,4%, а послеоперационные септические осложнения - 3,7%. В контрольной группе эти показатели составили 8,9% и 11,6% соответственно.

### Заключение.

Эффективное лечение глубокого парапроктита у больных сахарным диабетом на основе индивидуальных клинических алгоритмов позволяет контролировать распространение инфекции, снижать частоту рецидивов и послеоперационных осложнений. Оценка состояния на основе МРТ и лабораторных показателей в диагностике дает возможность оптимизировать хирургический процесс. Благодаря комплексному подходу, разработанному на этой основе, сокращается продолжительность пребывания в стационаре, повышается экономическая эффективность лечения и разрабатываются рекомендуемые для практики алгоритмы.

## OQSILLAR TIRIK JONZOTLARNING ASOSI

**P.Uchqunova.**

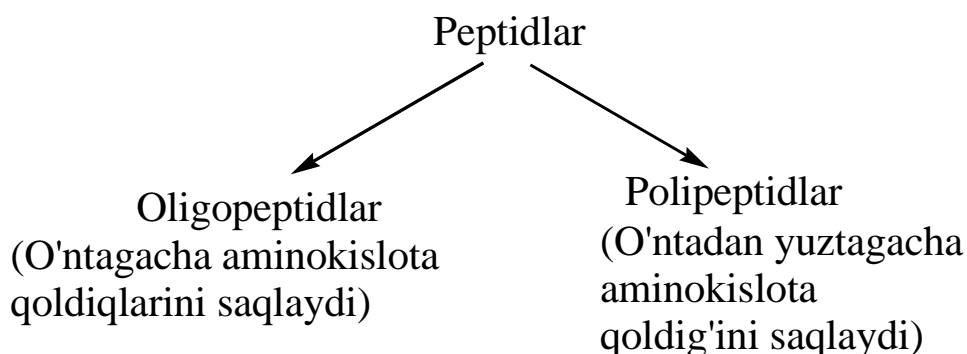
**N.R.Mullabayev**

**TOSHKENT DAVLAT AGRAR UNIVERSITETI**

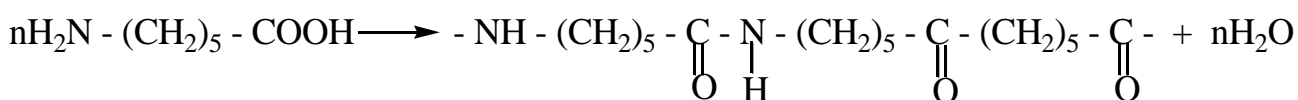
**Annotatsiya :** Ushbu maqolada oqsillar, oqsillarning tuzilishi, oqsillar denaturatsiyasi, oqsillar uchun rangli (sifat) reaksiyalari, oqsilning strukturasi (tuzilishi) va kimyoviy xossalari to'g'risida fikrlar muhokoma qilingan.

**Tayanch so'zlar:** oqsil, peptidlar, polipeptidlar, oqsillar denaturatsiyasi, oqsillar gidrolizi, regulyator, energetik, transport.

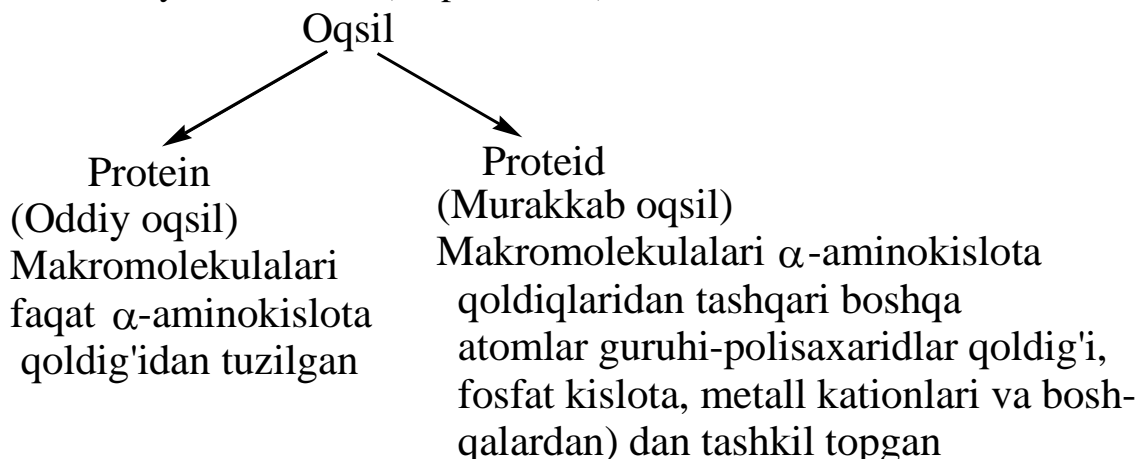
### Oqsillar



Ba'zi normal tuzilishli aminokislotalar sintetik polipeptidlar (poli-amid tolalar) olishda ishlatiladi.  $\epsilon$ -aminokapron kislota polikondensatsiya-langanda kapron tolasi olinadi:

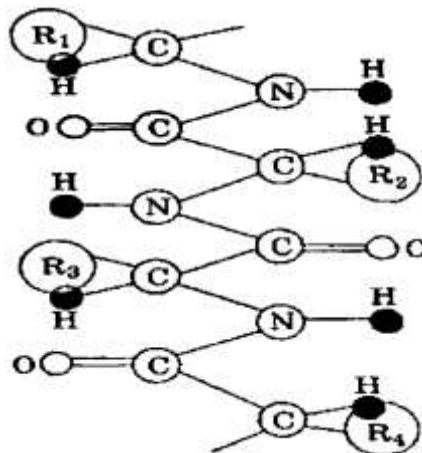


**Oqsil**- $\alpha$ -aminokislota qoldiqlaridan tuzilgan, polipeptid zanjiridan iborat bo'lgan tabiiy yuqori molekulyar birikmalar (biopolimerlar)dir.



Peptid va oqsillar  $\alpha$ -aminokislotalardan tuzilgan yuqori molekulyar birikmalardir. Molekulasida 100 tagacha aminokislotalar qoldiqlari saqlagan yuqori molekulyar birikmalar peptidlar, 100 dan ortiq aminokislotalar qoldiqlarini saqlaganlari esa oqsillar deyiladi. Peptidlar oqsillardan biolo-gik nuqtai nazardan o'z faoliyatlarining cheklanganligi bilan farq qiladi. Peptidlar uchun boshqaruvchanlik xossalari ko'proq xos. Oqsillar esa fer-ment, gormon, tuzuvchi, tashuvchi, qisqaruvchi, himoya vazifalarini bajaradi. Oqsillar suvda eruvchanligiga ko'ra globulyar va fibrillyar oqsillarga bo'linadi. **Globulyar oqsillar**-oddiy oqsillar bo'lib, suvda shuningdek, kislota va ishqorlarning suvli eritmalarida eriydi (masalan, tuxum oqsili albumin), **fibrillyar oqsillar**-suvda erimaydi (Masalan; keratin).

Oqsillar murakkab tuzilishli bo'lib, birlamchi, ikkilamchi, uchlamchi va to'rtlamchi tuzilishlar farqlanadi. Ya'ni oqsillar birlamchi, ikkilamchi, uchlamchi va to'rtlamchi tuzilishga ega. **Oqsilning birlamchi strukturasi** (tuzilishi) deganda oqsil molekulasining peptid (amid) bog'lar orqali ketma-ket tuzilishi tushuniladi.



Oqsilning birlamchi strukturasi

Oqsil tuzilishining polipeptid nazariyasini XX asr boshlarida E. Fisher taklif etgan. Insulin  $C_{254}H_{377}N_{65}O_{75}S_6$  (gormon)ning birlamchi tuzilishga ega ekanligi birinchi marta 1954 yilda ingliz biokimyogari F. Sendjer tomonidan aniqlangan.

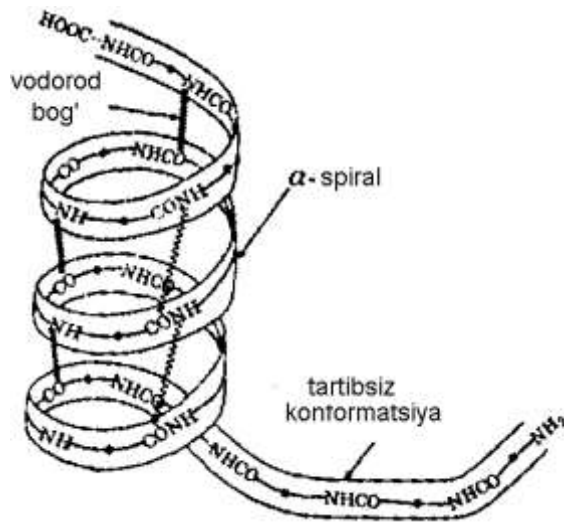
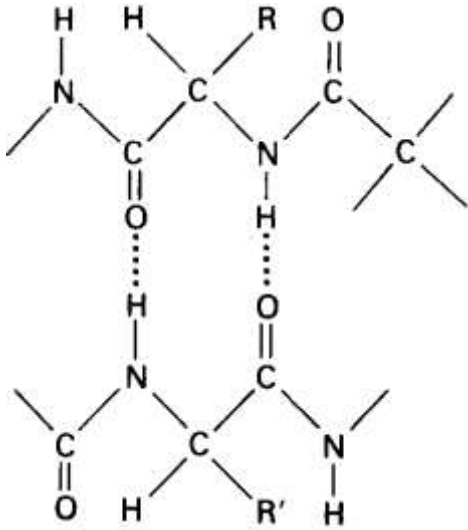
Uning molekulasi 2 ta polipeptid zanjiridan iborat bo'lib, ular bir-biri bilan bog'langan (bir zanjirida 21 ta, ikkinchisida 30 ta aminokislota qoldig'i bor,

$$M_r(\text{insulin}) = 5700).$$

Oqsillarning nisbiy molekulyar massalari 5 mingdan o'nlab milliongacha oraliqda o'zgaradi. Oqsil molekulasining xossasi nafaqat uning birlamchi tuzilishiga, balki polipeptid zanjirining konfiguratsiyasiga ham bog'liq.

**Ikkilamchi tuzilish.** Valent burchaklarga va aminokislota qoldiqlari-ning o'zaro joylashishiga mos ravishda polipeptid zanjir, odatda, spiral-simon (karboksil va aminoguruhlarining orasida hosil bo'ladigan ichki molekulyar vodород bog'lanish

natijasida) buralgan bo'ladi. Bu oqsillar-ning *ikkilamchi tuzilishi* deyiladi. Zanjirlar buralishining asosiy ikki xil usuli mavjud:  $\alpha$ -spiral va  $\beta$ -spiral.

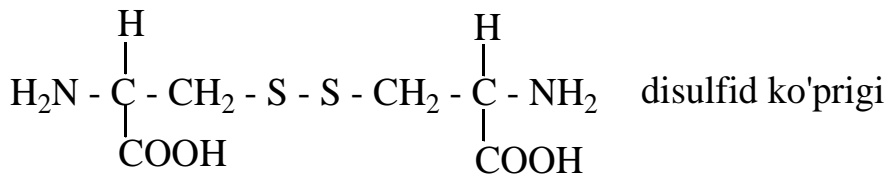
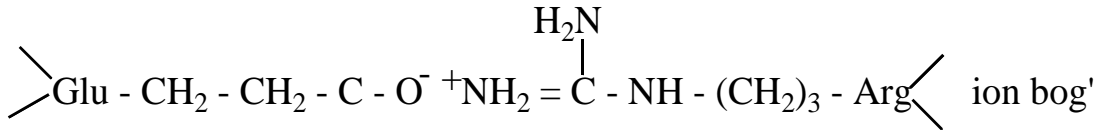
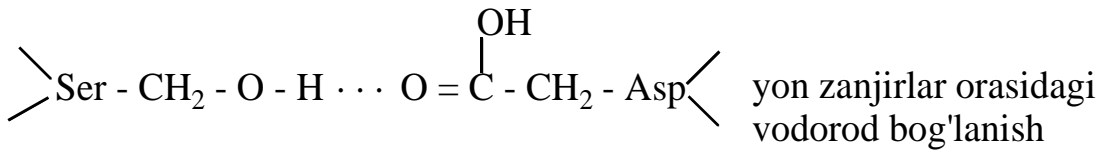


Karboksi guruh va aminoguruh orasidagi vodorod bog'lanish

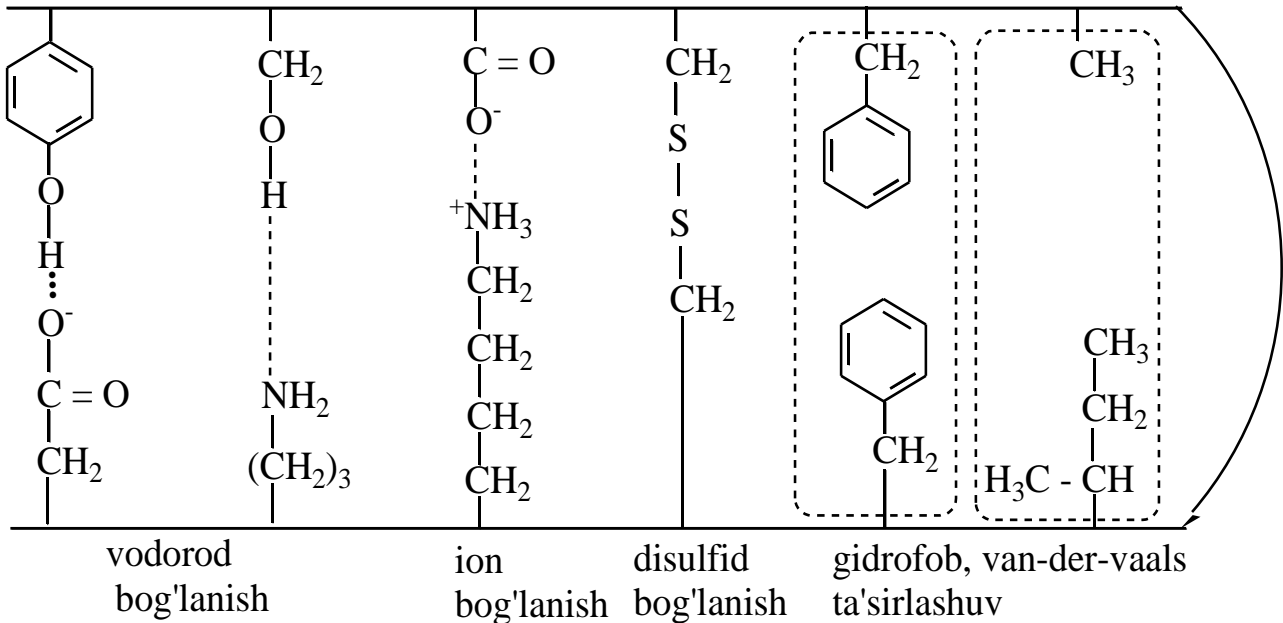
$\alpha$ -spiral

Spiralning mustahkamligi uning qo'shni o'ramlardagi CO va NH guruhlar orasida vodorod bog'lanishning hosil bo'lishi bilan aniqlanadi. Nazariy jihatdan hamma karbonil va imino guruhlar vodorod bog'lanish hosil qilishda ishtirok etishi mumkin, shuning uchun ikkilamchi tuzilish juda mustahkam bo'ladi. *Ikkilamchi tuzilish* 1951 yilda L. Poling tomonidan taklif etilgan. **Oqsilning uchlamchi tuzilishi** - spirallarning fazoviy konfiguratsiyasi.

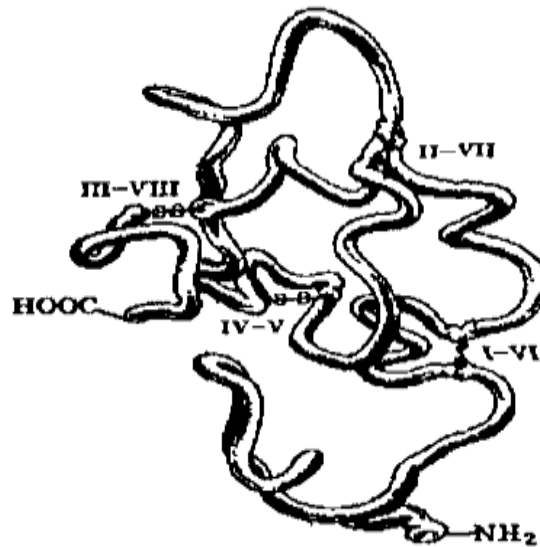
Uchlamchi tuzilish polipeptid zanjiriga birikkan funksional guruhlarining o'zaro ta'siri natijasida saqlanib turadi. Turli funksional guruhlarining ta'sirlashuvi natijasida polipeptid zanjirlarda *disulfid* (-S-S-) ko'prigi, *karboksil va aminoguruhlar orasida tuz ko'prigi* ( $\text{NH}_3^+ \text{COO}^-$ ) (ion bog'); (-karboksil va gidroksil guruhlar orasida) *murakkab efir ko'prigi* hosil bo'ladi:



**Uchlamchi tuzilishni barqarorlovchi bog'lar**



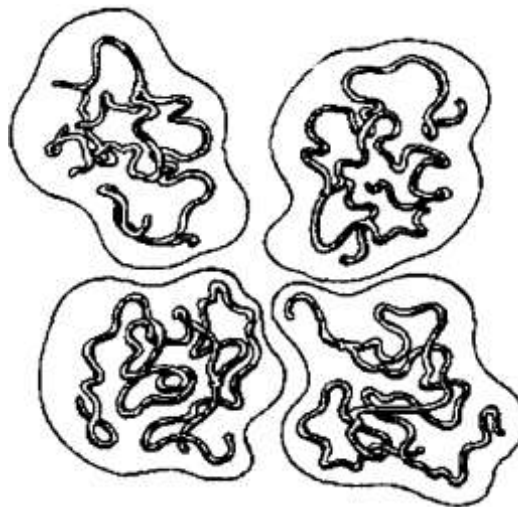
Natijada polipeptid zanjirlar fazoda ma'lum shaklni egallab, oqsilning uchlamchi tuzilishini hosil qiladi:



### Ribonukleazaning uchlamchi strukturasi

Rim raqamlari bilan sistein qoldig'idagi S – S bog'lari ko'rsatilgan

**To'rtlamchi tuzilish**-bir nechta uchlamchi tuzilishga ega bo'lgan polipeptidlardan tashkil topgan birikmalar. To'rtlamchi tuzilish alohida-alohida polipeptid zanjirlar orasidagi vodorod bog'lanish va gidrofob o'zaro ta'sirlanishlar hisobiga saqlanib turadi.



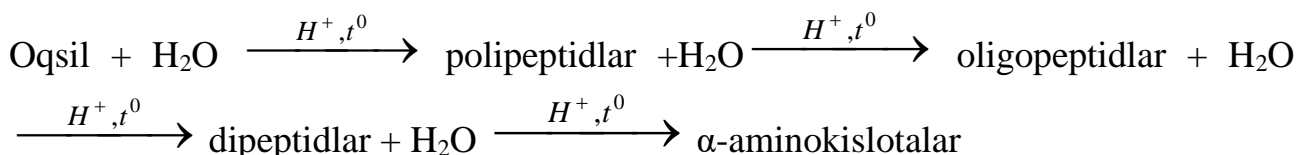
. Bu jarayon natijasida oqsillarning (birlamchi tuzilishi buzilmaydi) ikkilamchi, uchlamchi va to'rtlamchi tuzilishlari (strukturalari) buziladi, natijada oqsillar o'zlarining biologik faolliklarini yo'qotadi.

#### **Denaturatsiya:**

- Harorat 60<sup>0</sup>C gacha va undan yuqori ko'tarilganda;
- Oksidlanish, qaytarilish jarayonlarida disulfid bog'lari buzilganda (uzilganda);
- Kuchli akseptorlar (mochevina, tuzlar va boshqalar) ta'sirida vodorod bog'lanishlar uzilganda;

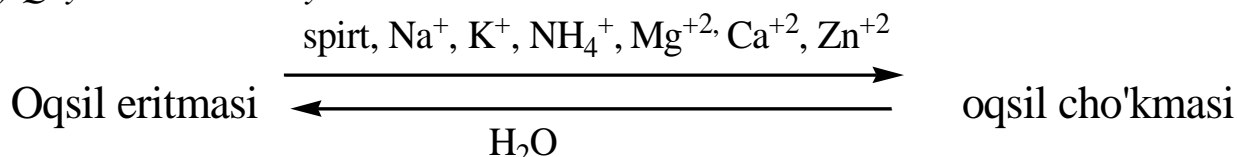
- Fizikaviy ta'sirlar (ultratovush, turli xil nurlar ta'sirida va h.z) natijasida sodir bo'ladi. Oqsillarning aminokislota qoldiqlari radikallarida turli xil funksional guruhlar bo'ladi. Shuning uchun oqsillar oksidlanish-qaytarilish, eterifikatsiya, alkilash, nitrolash reaksiyalariga kirishadi hamda asos va kislota sifatida tuzlar hosil qiladi (oqsillar amfoter biopolimerlardir).

### 1. Oqsillar gidrolizi:

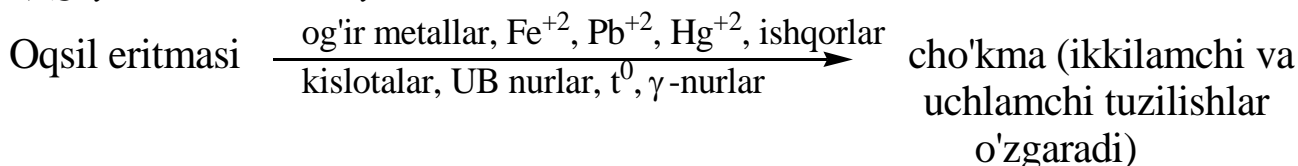


### 2. Oqsillarni cho'ktirish:

a) *Qaytar denaturatsiya:*



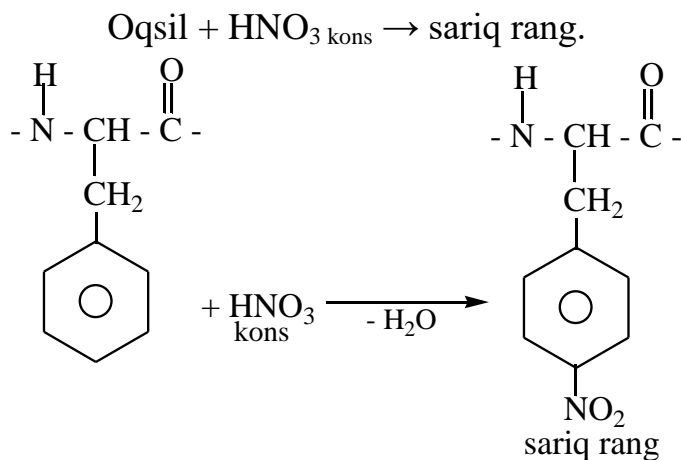
b) *Qaytmas denaturatsiya:*



Masalan; tuxum oqsili-albumin 60-70°C da eritmadan cho'kadi, suvda erish xususiyatini yo'qotadi.

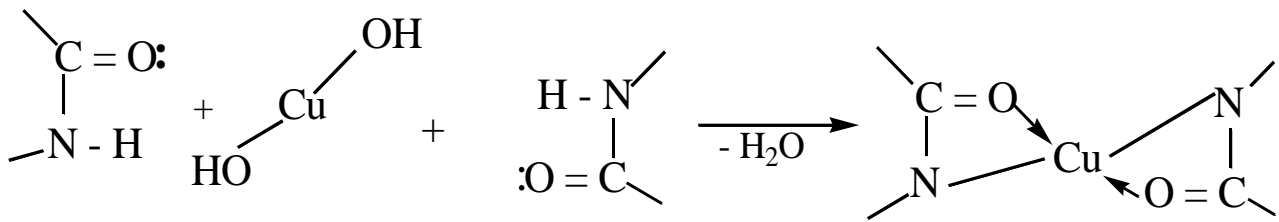
### 3. Oqsillar uchun rangli (sifat) reaksiyalari:

a) *Ksantoprotein reaksiyasi* (benzol halqasini saqlovchi aminokislotalar uchun). Bu reaksiya yordamida fenilalanin, tirozin, gistidin, triptofanlar aniqlanadi:

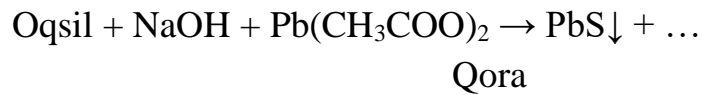


b) *Biuret reaksiyasi* (peptid bog' uchun):

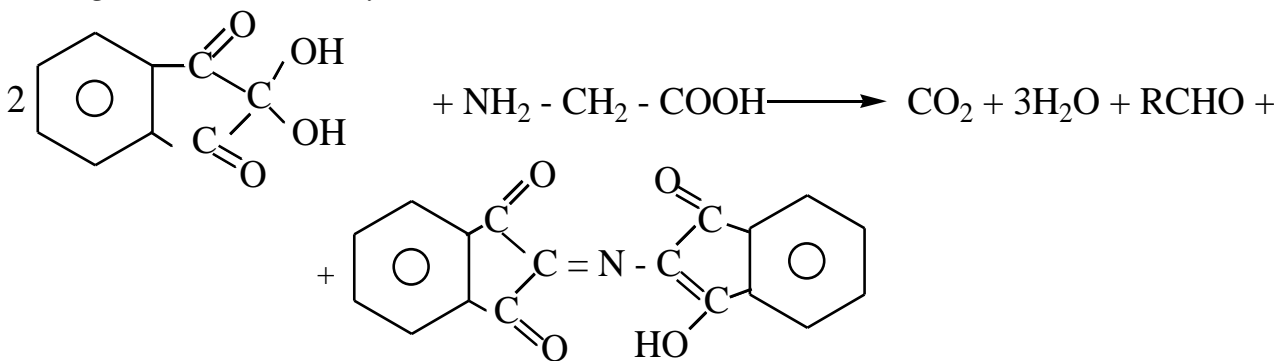




d) Sistein reaksiya (oltingugurt saqlovchi aminokislota qoldig'i uchun):

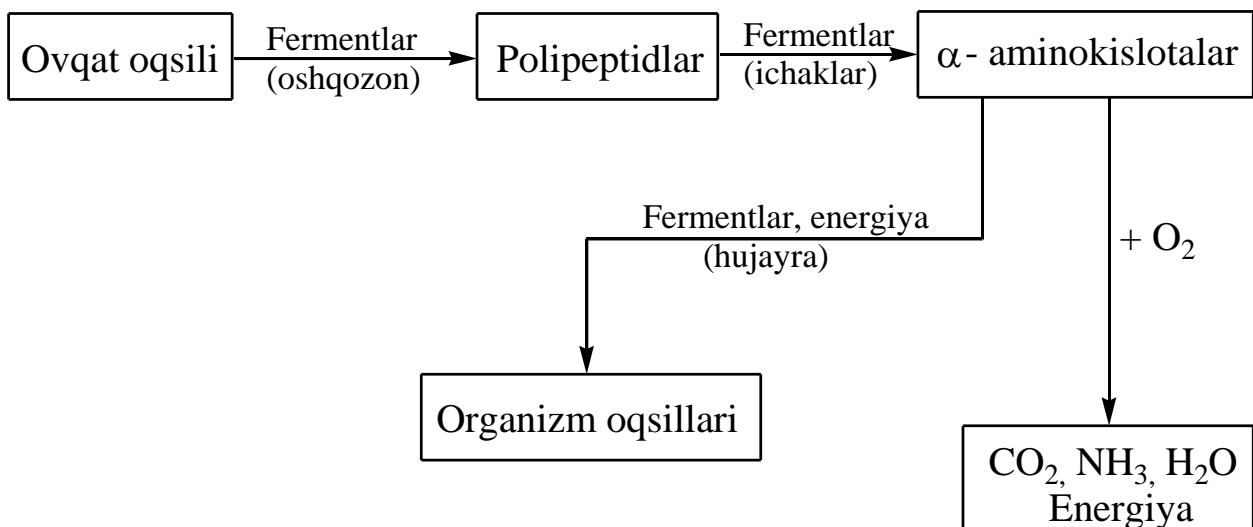


e) Ningidrin bilan reaksiya:



ko'k binafsha rangli modda

### Organizmda oqsillarning o'zgarish sxemasi:



Oqsillar yer yuzasida barcha tirik jonzoatlarning asosi hisoblanadi va ko'pgina funksiyalarni bajaradi:

1. Plastik	Hujayra qurilish materiali	Masalan; kollagen, mem-brana oqsillari
------------	----------------------------	--

2. Transport	Turli moddalarni tashiydi	Masalan; gemoglobin (O <sub>2</sub> va CO <sub>2</sub> tashiydi)
3. Himoya	Organizm uchun yot moddalarni yo'qotadi	Masalan; qon zardobi $\gamma$ -globulini
4. Energetik	Organizmda energiya bilan ta'minlaydi	1 g oqsilning parchalanishidan 17,6 kDj energiya ajraladi
5. Katalitik	Organizmda boradigan kimyoviy reaksiyalarni tezlashtiradi	Barcha fermentlar kimyo-viy tarkibiga ko'ra oqsil hisoblanadi. Masalan; ribonukleaza
6. Qisqaruvchanlik	Organizmdagi va hujayradagi barcha harakatlarni ta'minlaydi	Masalan; miozin (mushak oqsili)
7. Regulyator	Organizmda almashinuv jarayonlarini boshqaradi	Gormonlar, masalan, insulin (glukoza almashinuvi)

Oqsillar organizmda spetsifik (maxsus) vazifalarni bajaradi: Masalan, nerv hujayralari o'rtasida impuls almashinuvini ta'minlaydi.

Oqsillar insonlar ovqat ratsionining muhim tarkibiy qismi hisoblanadi: oziq-ovqat tarkibida oqsillarning yetishmovchiligi yoki bo'lmasligi jiddiy kasalliklarni keltirib chiqaradi. Hayvonlarning oziqlanishining almashtirib bo'lmaydigan asosiy tarkibiy qismi sifatida oqsilning ahamiyati yaxshi ma'lum. Tirik organizm to'qimalarining tarkibiy asosi oqsil bo'lib to'qimalarning o'sishini va yangilanishini ta'minlaydi. Ular tirik materiyaning ishlashida, fiziologik jarayonlarni katalizlashda va tartibga solishda asosiy rol o'ynaydi. Barcha fermentlar va bir qator gormonlar, masalan insulin, oqsil xususiyatiga ega. Kislorodni (gemoglobin), ozuqaviy moddalarni (qon zardobidagi oqsillarni) tashishda oqsillarning roli katta. Tananing immunitet tizimining tarkibiy qismi (antitanalar) bo'lib, oqsillar himoya funksiyasini bajaradilar. Oqsillar va nuklein kislotalar orqali genetik ma'lumotlar almashinishi amalga oshiriladi.

### ADABIYOTLAR

1. Mahsumov A.G., A.J. Jo'rayev Bioorganik kimyo. – T.: O'zbekiston milliy ensiklopediyasi, 2007.
2. Аловитдинов А. Б., Исматуллаева М.Г., Туробжонов С.М., Холмуродов Н.А.. Органик кимё. – Т.: Ўқитувчи нашриёт-матбаа ижодий уйш. 2007.
3. Abdulxayeva M.M., Mardonov O'.M. Kimyo. – T.: O'zbekiston, 2002.
4. Masharipov S., Tirkashev I. Kimyo. – T.; O'qituvchi. 2003.
5. Masharipov S., Tirkashev I. Kimyo. – T.; O'qituvchi. 2003.

6. Пузаков С.А., Попков В.А. Пособие по химии: Программы. Образцы экзаменационных билетов. Вопросы, упражнения, задачи. –М.: Высшая школа, 1997.
7. Кузменко Н.Е., Еремин В.В., Попков В.А. Начала химии: Современный курс для поступающих в вузы. – М.: Экзамен, 1999.
8. Егоров А.С., Аминова Г.Х. Экспресс-курс неорганической и органической химии (для поступающих в вузы). – Ростов и/Д: Феникс, 2002.

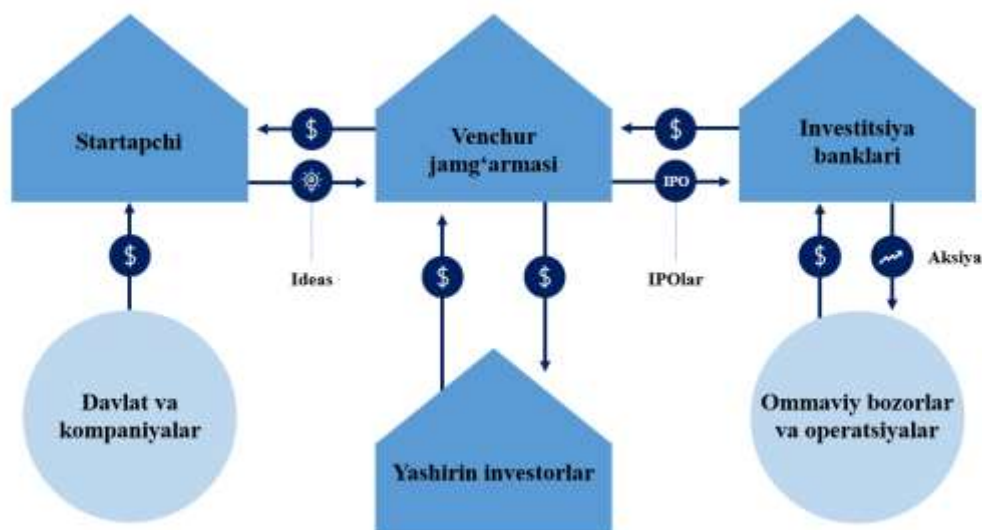
## VENCHUR JAMG‘ARMALARI, YOSHLARNING LOYIHALARINI KRAUDFANDING (OMMAVIY MOLİYALASH) PLATFORMALARI ORQALI MOLİYALASHTIRISH IMKONIYATLARI

**Nuriddinov Davronbek Murodiljon o‘g‘li**

**Annotatsiya:** Kraudfanding (xalq moliyalashtirishi, ingliz tilida crowd funding, crowd - “omma”, funding - “moliyalashtirish”) - bu insonlarning (donorlarning) birlashib, jamoaviy tarzda o‘z mablag‘lari va boshqa resurslarini beg‘araz maqsadda biror loyiha yoki maqsadni amalga oshirmoqchi bo‘lgan tashkilot yoki shaxsga yo‘naltirish jarayonidir.

**Kalit so‘zlar:** Kraudfanding, Venchur jamg‘armalari, startaplar, investitsiya, treninglar, loyiha, mentorlik, koalitsiya, ekspert baholash tizimi, inovatsionlik, rivojlanish potentsiali, investitsiya fondlari, mablag‘ ajratib, texnologik taraqqiyot, “AloqaVentures” venchur.

Venchur jamg‘armalari - yuqori tavakkalchilikka ega bo‘lgan startaplar va innovatsion loyihalarni moliyalashtiruvchi maxsus investitsiya fondlaridir. Ular boshlang‘ich bosqichdagi kompaniyalarga yoki loyihalarga mablag‘ ajratib, ulush evaziga ularga sherik bo‘ladilar. Venchur kapitali innovatsion iqtisodiyotning ajralmas qismi bo‘lib, texnologik taraqqiyot va iqtisodiy rivojlanishga katta ta’sir ko‘rsatadi.



### Venchur jamg‘armalari tomonidan startap loyihalarni moliyalashtirilgan modeli

Startaplar rivojlanish bosqichida ko‘pincha investitsiyaga muhtoj bo‘lib, eng yaxshi qo‘llab-quvvatlash manbalaridan biri venchur va investitsiya fondlari bo‘lishi mumkin.

Ushbu jamg'armalar innovatsion loyihalarga qiziqish bildirishadi, ammo ularning e'tiborini jalb qilish uchun startaplarni qanday tanlashlarini tushunish muhimdir.

Investitsiya fondlari biznesni qo'llab-quvvatlash orqali uning rivojiga hissa qo'shadi. Misol uchun, yetkazib berish platformasi xizmatini kengaytirmoqchi bo'lsa unga ma'lum miqdorda mablag' kerak bo'ladi. Bunday vaziyatda tadbirkor loyihani yangi bosqichga olib chiqish maqsadida fondga ariza beradi va kerakli sarmoyani qo'lga kiritadi. Fond esa, o'z navbatida, kompaniyada ulushga ega bo'ladi.

Jamg'armalar davlat ko'magida faoliyat ko'rsatishi, kompaniyalar guruhining bir qismi yoki mustaqil tashkilot bo'lishi mumkin.

“AloqaVentures” - O'rtacha investitsiya miqdori: \$50-\$250 ming

2021-yilda “Aloqabank” tomonidan “AloqaVentures” venchur fondi startaplarga investitsiya kiritib, qo'llab-quvvatlash maqsadida tashkil etilgan.

Hozirgi kunda “AloqaVentures” venchur fondining kapitali \$6,5 mlanni, kiritilgan investitsiyalar miqdori \$3,7 mln tashkil etadi.

Fond “Pre-Seed” va “Seed” bosqichidagi startaplarga investitsiya, bank ekotizimi bilan integratsiya, xalqaro bozorlarga chiqish imkoniyati, marketing, texnik va yuridik tomondan ko'maklashadi.

Qanday talablarga javob berish kerak: taqdim etilayotgan startaplar MVP tayyor, sinovdan o'tkazilgan va ishga tushgan bo'lib, sotuvlari bo'lishi hamda savdolar oyma-oy o'sish ko'rsatgichiga ega bo'lishi kerak. Bundan tashqari loyiha mahalliy va xalqaro bozorlarda ommalashib, fondning talablariga javob berishi lozim.

“UzVC” - O'rtacha investitsiya miqdori: \$50-\$150 ming.

“UzVC” — O'zbekistondagi birinchi milliy venchur fondi hisoblanadi. Birinchi venchur fondining boshlang'ich kapital miqdori 15 mlrd so'mni tashkil etib, loyihalar va startap ekotizimni har tomonlama qo'llab-quvvatlash, innovatsion infratuzilmani rivojlantirish jarayonini yangi bosqichga olib chiqish maqsadida tuzilgan. 14-oktabr kuni “UzVC” milliy venchur fondi faoliyati venchur jamg'armalarni moliyalashtiruvchi “Fondlar fondi” sifatida qayta tashkil etilib, 150 mlrd so'm miqdorida mablag' ajratilgan.

Bugungi kungacha fond 9ta startapga \$960 ming miqdorida mablag' ajratib, ayni damda kompaniya investitsion portfelining umumiy qiymati \$2 mln hisoblandi.

Qanday talablarga javob berish kerak: taqdim etilayotgan startap iqtisodiy muammolar yechimini taklif etishi, ichki va xalqaro bozorga chiqa olishi bilan bir qatorda MVP tayyor, sinovdan o'tkazilgan bo'lishi lozim.

Venchur jamg'armalari innovatsion iqtisodiyotni rivojlantirishning muhim omillaridan biri hisoblanadi. Ular yangi texnologiyalarni ishlab chiqish, ilmiy tadqiqotlarni

tijoratlashtirish, yuqori texnologik mahsulotlar yaratish va milliy iqtisodiyotning barqaror o'sishini ta'minlashga xizmat qiladi.

#### Foydalanilgan adabiyotlar:

1. Lex.uz
2. Edu.uz
3. G'ulomov S.S. "Tadbirkorlik va kichik biznes". T., 2002
4. G'ulomov S.S. "Investitsiyani loyihaviy tahlili". T., 1995 yil
5. Hargadon Endryu. *Innovatsiyalarni boshqarish. Etakchi kompaniyalarning tajribasi*, M., 2007 — 304-bet. [ISBN 1-57851-904-7](#)
6. 4.2. [Drucker, Piter Ferdinand](#). *Biznes va innovatsiya*, M., 2007 — 432-bet. [ISBN 0-88730-618-7](#).
7. 4.3. Shemetev A.A.. *Innovatsion menejmentning xalqaro standartlari o'quv qo'llanma (oliy o'quv yurtlari talabalari va avangard o'qituvchilari uchun)*, 2014. [ISBN 978-1-62951-210-5](#).

**UDC : 616.8 - 009.11/12 : 612.017.1 - 036 : 615.89**  
**MENTAL DISORDERS IN CEREBRAL PALSY**

**Sharipov A.T.**

Bukhara State Medical Institute

**Abstract.** The article covers in detail modern approaches to complex diagnostics and correction of mental development disorders in children with cerebral palsy (CP). It is shown that mental disorders in CP are diverse and are represented by cognitive disorders (impaired perception, memory, attention, visual-motor coordination, intelligence and speech), residual organic borderline disorders (cerebrosthenic, neurosis-like, psychopathic syndromes), as well as pathological personality development (character accentuation, mental infantilism). Diagnostics of mental disorders in CP is a complex task due to their diverse combination with motor, speech and sensory pathology, which requires an integrated approach. The article describes differential diagnostic criteria for distinguishing between mental retardation and intellectual disability in cerebral palsy, and also covers in detail modern trends in comprehensive rehabilitation (including medical, social, psychological and pedagogical correction) of cognitive, emotional and behavioral disorders in patients with cerebral palsy.

**Key words:** cerebral palsy, mental disorders, cognitive disorders, mental retardation, mental retardation, neurosis-like syndrome.

Cerebral palsy (CP) is a polyetiological disease of the central nervous system that develops as a result of damage that occurred in the perinatal or early postnatal periods. At the same time, the effect of damaging factors on the developing brain determines the diversity of combinations of motor and sensory disorders and underlies mental dysfunction, which must be taken into account when substantiating restorative treatment and social rehabilitation of patients [1, 2, 20]. The incidence of cerebral palsy in the world is detected within 1.8-5, on average 2.5 per 1000 children [1,2,3,5,7,9,11]. The characteristics of mental development disorders in cerebral palsy depend on the etiological factors, the period of ontogenesis at the time of their action, localization, the degree of severity of brain damage, as well as the socio-pedagogical conditions in which the sick child lives [1, 6, 8, 10,12,14]. In children with cerebral palsy, residual organic cerebral insufficiency of the brain can be the basis for the development of both cognitive pathology and psychogenic reactions, pathological formation of personality due to the impact of unfavorable psychosocial influences caused by disability

[2,13,15]. Most researchers emphasize that the disharmonious mental development of children with cerebral palsy is determined primarily by disorders of the motor-kinesthetic analyzer, vision and hearing, as well as the characteristics of life and upbringing [4,19, 20].

Mental disorders in cerebral palsy are represented by: cognitive disorders (disorders of perception, memory, attention, visual-motor coordination, praxis, intelligence and speech); residual organic borderline disorders: cerebrospheric, neurosis-like and psychopathic syndromes; various variants of pathological personality formation: mental infantilism, character accentuations [3, 16,17,18]. For a comprehensive study of cognitive functions, laboratory and instrumental methods are also used: functional MRI, the method of long-latency cognitive evoked potentials, computer tachistoscopes (to study visual perception, functional visual asymmetry of the brain), test computer systems ("Rhythmo-, Mnemo-, Bina test", "Psychomat", "Spike-Children"), determination of the level of autoantibodies to the nerve growth factor in the blood serum (as an early potential molecular predictor of mental development disorders), Eyetracing systems (based on the analysis of eye and head movements, which allows studying visual perception and visual-motor coordination) [1, 20]. Early comprehensive diagnosis of mental disorders, their timely comprehensive correction allow to significantly compensate for cognitive and emotional disorders, prevent pathological formation of personality, significantly reduce the degree of disability, which contributes to more effective social integration and successful social adaptation of patients with cerebral palsy.

**The aim** was to study autoimmune parameters in children with cerebral palsy.

**Materials and methods.** In the blood serum samples of all observed patients with cerebral palsy (n=110), as well as in the blood samples of the control group (n=30), the serum immunoreactivity of natural neurotropic autoantibodies in the blood serum was quantitatively determined using the ELI-N-Test reagent kit (Immunculus LLC). The kit is used to determine IgG autoantibodies that interact with antigens of neurons (NF200 protein), glial cells (GFAP), nerve fibers (MBP), Ca-dependent protein (S100), voltage-dependent Ca channel,  $\beta$ -endorphin and neurotransmitter receptors (cholinergic receptors, GABA receptors, glutamate NMDA and AMPA receptors, dopamine receptors, serotonin receptors, m-opiate receptors). The content of neurotropic autoantibodies (NAAT) was determined according to the method of A.B. Poletaev using the standard solid-phase enzyme immunoassay ELI-N-Test and the test kit of the same name from MIC Immunculus (Russia). The level of serum concentration of e-AT for each neuroantigen was expressed in arbitrary units (i.e., percentage deviation from the standard serum IR).

**Results and discussion.** The data obtained during the study indicate multiple immunopathological processes in children with cerebral palsy, involving both axons and myelin, as well as astrocytic glia and neurotransmitter regulation systems.

Demyelination and axonopathy are confirmed by the simultaneous increase in auto AT to NF 200 and MBP, which correlates with the severity of motor deficit in children with cerebral palsy. Reactive astrocytosis (increased autoantibodies to GFAP and S100 proteins) indicates chronic neuroinflammation and impaired blood-brain barrier permeability. Dysregulation of Ca<sup>2+</sup>-dependent channels and neurotransmitter imbalance form the prerequisites for epileptiform activity, spasticity and cognitive impairment typical of cerebral palsy.

The combined increase in NF 200 and MBP titers indicates the presence of associated degenerative inflammatory changes in axons and their myelin sheaths.

β-endorphin protein is an endogenous opioid, a modulator of pain and stress response. Excessive formation of AT (6.6% vs. 0% in the control group), which can lead to dysregulation of antinociceptive pathways and increased chronic pain in patients

Also, undifferentiated determination of the content of e-AT in the blood serum was carried out for various isoforms of the corresponding receptors (GABA receptors, glutamate NMDA and AMPA receptors, dopamine receptors, serotonin receptors and choline receptors). Increased individual levels of serum immunoreactivity of various e-AT to neurotransmitter receptors were recorded, reflecting the state of neurotransmitter systems.

Different episodes of a decrease in auto AT (especially to regulatory neuropeptides) in some patients indicate more long-standing or severe neurodestructive processes and depletion of the humoral response. An increase in the level of e-AT to the ligand-binding sites of neurotransmitter receptors indicates corresponding changes in the neuronal system. In particular, Hol-P is involved in the regulation of the body's vegetative function, as well as in the regulation of cognitive function and memory.

Early comprehensive diagnostics of mental disorders, their timely complex correction allow to significantly compensate for cognitive and emotional disorders, prevent pathological formation of personality, significantly reduce the degree of disability, which contributes to more effective social integration and successful social adaptation of patients with cerebral palsy.

**Conclusions.** Thus, the obtained data demonstrate that most children with cerebral palsy develop a complex of autoimmune reactions affecting the structural proteins of neurons, myelin and astrocytes, as well as key elements of neurotransmitter and ion channel systems. Such an immune profile confirms the multifactorial nature of the

pathogenesis of cerebral palsy and emphasizes the need for complex therapy, including immunomodulation, neuroprotection and restoration of neuroglial-vascular interaction.

### REFERENCES

1. Alekseeva S.I., Kafidov I.N. Convergent approach to adaptive physical rehabilitation of children with cerebral palsy. VII Interdisciplinary scientific and practical congress with international participation "Cerebral palsy and other movement disorders in children" (Mat. conf.). M. October 30-31, 2017: P.13.
2. Baranov A.A., Namazova-Baranova L.S., Kurenkov A.L., Klochkova O.A., Karimova H.M., Mamedyarov A.M., Zherdev K.V., Kuzenkova L.M., Bursagova B.I. Comprehensive assessment of motor functions in patients with cerebral palsy: training and method. manual; Federal State Budgetary Scientific Institution Scientific Center for Children's Health. M.: PediatrЪ. 2014: 84.
3. Orlova V.A., Mikhailova I.I., Minutko V.L., Simonova A.V. Anomalies in the levels of serum antibodies to nervous tissue antigens in patients with schizophrenia: a multiparametric assessment. Social and Clinical Psychiatry. 2016; 26(1): 12–20. Arino H., Gresa-Arribas N., Blanco Y. et al. Cerebellar ataxia and glutamic acid decarboxylase antibodies: Immunologic profile and long-term effect of immunotherapy // JAMA Neurol. – 2014. – Vol. 71. – P. 1009-1016.
4. Khamdamov I.B. Improving tactical approaches in the treatment of hernias of the anterior abdominal wall in women of fertile age // New day in medicine. Bukhara, 2022.-№10(48)- P. 338-342.
5. Khamdamov I.B. Morphofunctional features of the abdominal press in women of reproductive age // New day in medicine. Bukhara, 2022.-№3(41)- P. 223-227.
6. Khamdamova M.T., Akramova D. E. Genetic aspects of genital prolapse in women of reproductive age // New day in medicine. Bukhara, 2023. - No. 5 (55). - P. 638-643.
7. Khamdamova M.T., Akramova D. E. Genetic aspects of genital prolapse in women of reproductive age // New day in medicine. Bukhara, 2023. - No. 5 (55). - P. 638-643.
8. Khamdamova M.T., Teshayev Sh.Zh., Hikmatova M.F. Morphological changes of the thymus and spleen in renal failure in rats and correction with pomegranate seed oil // New day in medicine. Bukhara, 2024. - N. 3(65). - P. 167-187.
9. Khamdamova M.T., Khasanova M.T. Various mechanisms of pathogenesis of endometrial hyperplasia in postmenopausal women (literature review) // New day in medicine. Bukhara. 2023. - No. 8 (58). - P. 103-107.

10. Khamdamova M.T., Zhaloldinova M.M., Khamdamov I.B. The state of nitric oxide in blood serum in patients with cutaneous leishmaniasis // *New day in medicine*. Bukhara, 2023. - No. 5 (55). - P. 638-643.
11. Khamdamova M.T., Zhaloldinova M.M., Khamdamov I.B. The value of ceruloplasmin and copper in blood serum in women wearing copper-containing intrauterine device // *New day in medicine*. Bukhara, 2023. - No. 6 (56). - P. 2-7.
12. Khamdamov I.B. Improving tactical approaches in the treatment of hernias of the anterior abdominal wall in women of fertile age // *New day in medicine*. Bukhara, 2022.-№10(48)- P. 338-342.
13. Khamdamov I.B. Morphofunctional features of the abdominal press in women of reproductive age // *New day in medicine*. Bukhara, 2022.-№3(41)- P. 223-227.
14. Khamdamova M.T., Akramova D. E. Immediate and long-term results of surgical treatment of genital prolapse in elderly women // *New day in medicine*. Bukhara, 2025. - N3 (77). - P. 201-206.
15. Khamdamova M. T., Khasanova M.T. Genetic mechanisms of development of endometrial hyperplastic processes in women in menopacteric age // *New day in medicine*. Bukhara, 2025. - N3 (77). - P. 207-211.
16. Khamdamova M. T., Umidova N. N. Genetic factors of genital endometriosis // *New day in medicine*. Bukhara, 2025. – N4 (78). - P. 82-87.
17. Mohagheghi M., Alikhani M.Y., Taheri M., Eftekharian M.M. Determining the IgM and IgG antibodies titer against HSV1, HSV2 and CMV in the serum of schizophrenia patients. *Hum. Antibodies*. 2018; 26(2): 87–93. DOI: 10.3233/HAB-170325.
18. Tanaka T., Matsuda T., Hayes L.N., Yang S., Rodriguez K., Severance E.G. et al. Infection and inflammation in schizophrenia and bipolar disorder. *Neurosci Res*. 2017; 115: 59–63. DOI: 10.1016/j.neures.2016.11.002
19. Boronat A., Sabater L., Saiz A. et al. GABAB receptor antibodies in limbic encephalitis and anti-GAD-associated neurologic disorders // *Neurology*. –2011. – Vol. 76. – P. 795-800.

## PATHOLOGICAL CONDITIONS OF THE GASTROINTESTINAL TRACT RESULTING FROM ATTEMPTED SUICIDE

S.A.Khakimov, K.M.Mamadaliyev, A.T.Ismailov

Tashkent state medical university, Republican scientific and practical center for  
forensic medicine

### ANNOTATION

According to literature, people with mental illnesses take various substances and chemicals to commit suicide. Such suicidal behavior is often observed among prisoners and military personnel.

**Keywords:** Suicide, internal organs.

Also, people with mental disorders can swallow piercing and cutting objects. Such patients usually have sewing needles, nails, pieces of metal, stones, and other objects, but to date, no cases of ingestion of nails with a total weight of about 1 kg for the purpose of suicide have been reported. The patient we were observing, a 21-year-old serviceman, swallowed 32 15 cm long iron nails in 1 month, which passed through the esophagus and accumulated in the gastrointestinal tract.

**Case description** Patient N., 21 years old, served in the armed forces for 4 months. There is no data on hereditary mental illnesses. At a young age, he lagged behind his peers in psychophysical development. He was always under the protection and supervision of his parents. In secondary school, he could not master the curriculum, and frequent behavioral disorders were noted. Later, he studied at a boarding school in a class for mentally retarded children, but was also expelled for conflict, breaking windows, beating peers, and violating discipline. Previously, the patient had never undergone examination or treatment in medical institutions. During the conscription, he was examined by a commission of military doctors of the mobilization department and was recognized as fit for military service. In the military unit's personal file, it is noted that from the first day of service, he showed indiscipline, incompetence, carelessness, and negligence towards his duties. Under various pretexts, he evaded the fulfillment of instructions and assignments. Unable to endure the hardships of military service, he swallowed a large amount of nails for 1 month with the aim of suicide, which he later confessed to the commander, unable to bear the pain, and was sent to a medical battalion for examination, treatment, and determination of fitness for further

service. A day after the examination, he was sent to the Main Clinical Hospital of the Armed Forces for psychiatric examination. During an X-ray examination in the hospital's admission department, about 20 foreign bodies were found in the patient's stomach. He was hospitalized in the combined trauma surgery department, where laparotomy, gastrotomy, and removal of foreign bodies (32 nails) were performed on August 17, 2011. Also, the patient was examined by a psychiatrist for suicidal tendencies, after which she was transferred to a psychiatric unit with a suspected mental retardation, as well as to prevent a new suicide attempt.

During examination and treatment in the psychiatric unit, the patient was sluggish, mocked for inappropriate speech and actions, sometimes crying or laughing without reason. Based on the results of a psychiatric professor's examination in accordance with the International Statistical Classification of Diseases and Health Problems, the 10th revision was given the diagnosis "F70.1 Mental retardation of mild degree with significant behavioral disorders requiring care and treatment.

**Physical examination results.** Body structure is normal, nutrition is complete. The subcutaneous fat layer is well developed. The skin and visible mucous membranes are of normal color, and a hardened skin scar approximately 20.0×0.8 cm in size along the white line was found on the anterior abdominal wall. Peripheral lymph nodes are not enlarged, mobile, painless. During auscultation, vesicular breathing was heard in the lungs, with no wheezing. Heart tones are clear, rhythmic. Blood pressure 110/70 mm Hg. Pulse is full, rhythmic, heart rate 78 bpm. The abdomen on palpation is soft, painless. The liver and spleen are not enlarged. Knocking on the back is painless on both sides. Urine and stool in normal neurological state consciousness clear. Cranial nerves are normal. No organic changes were observed in the central nervous system. Muscle and tendon reflexes are moderately excited, D=S. Pathological reflexes were absent. The condition in Romberg's pose is stable, with tremors of the fingers and eyelids. Distal hyperhidrosis and persistent red dermographism were observed.

**Mental state** The patient was oriented in space, situation, time, and their own personality. He spoke tensely, laughing loudly and making inappropriate gestures. He answered the questions briefly, superficially, with excitement and panic. After several sentences, he cried: "I have been sick since childhood. I was always afraid, so they kept me at home, not letting me go anywhere. I don't know what I do, and I don't know what I do in the army!" No perceptual disturbances or delirium were observed. Emotions are weakly expressed. Abstract and logical thinking was absent. He didn't understand the meaning of proverbs and sayings. During the conversation, the mood often changed from pessimistic, hopeless, and helpless to calm or restrained. Can't read or write. He performed simple calculations with difficulty. Has a small amount of knowledge. The

vocabulary is scarce. Simple conclusions and generalizations were difficult for the patient. He is inclined to think concretely. The circle of interests is narrow, needs are primitive. No memory issues observed. Superficial sleep.

**Results of special examinations** According to abdominal radiography data from August 15, 2011, after 200 ml of barium was administered orally, approximately 20 foreign bodies were found in the stomach, presumably nails about 15 cm long. General blood and urine analysis, blood sugar levels, immunological blood tests, chest fluoroscopy, skull X-ray, and electrocardiography results are normal. According to the radiography data of August 19, 2011, there were no foreign bodies in the abdominal cavity. Psychologist's diagnosis: mild intellectual disability, IQ=68. Psychiatric diagnosis: F70.1 Mental retardation of mild degree with significant behavioral disorders requiring care and treatment. Surgical treatment: laparotomy, gastrotomy, removal of foreign bodies (32 nails) in the postoperative state. By the decision of the military medical commission, patient N. was deemed unfit for military service due to a mental illness. The patient was recommended to register with a psychiatrist at their place of residence and receive preventive treatment in outpatient settings.

**Debate** As a rule, suicidal behavior at a young age is the result of an experienced situation (mental trauma), therefore the mechanism of its development resembles a short circuit. It is often caused by real causes, it can be provoked by increasing despair, inability to find a way out of a crisis situation, confidence in the impossibility of solving the problem, subjective assessment of the conflict situation. According to the R.J. Gregory and co. hypothesis, self-harm behavior is used as a technique to overcome negative feelings or stress when a person cannot properly handle a difficult situation. The authors called this phenomenon "magical thinking." Suicide cases among people with mental illnesses mainly occur in the presence of such conditions as depression, paranoia, hallucinatory-paranoid state. Suicidal behavior is most common during periods of severe and exhausting depression (especially after discharge from the hospital). However, even in the presence of mental pathologies, regardless of the severity of the condition, suicide cases are not necessarily associated with the symptoms of the disease. In most cases, suicides are committed in the early stages of the disease due to the presence of stereotypical forms of mental activity of the individual or in a state of remission. Most foreign bodies (67-80%) with sizes of 2.5-6.0 cm are naturally excreted from the digestive tract within a week. In this case, depending on the size and type of foreign body, surgical intervention may be required. Studies have shown that patients with mental illnesses can repeatedly swallow foreign bodies. However, cases where a person with a mental disorder swallowed foreign objects consecutively for a month are extremely rare.

**Conclusion** According to our research and observations, for people with mental illnesses who swallow foreign bodies for the purpose of suicide, the type and shape of the objects used do not matter. In the case under consideration, the patient believed that large nails would kill him quickly. In our opinion, individuals who swallow a large number of objects to commit suicide have a low level.

### **Literature**

1. Carp L. Foreign bodies in the gastrointestinal tract of psychotic patients // Arch Surg. 1950. Vol. 60. P. 1055-1075. doi:10.1001/archsurg.1950.01250011080004.
2. Cascini F., Longo F., Polacco M., Scafetta I. Foreign object ingestion in complex suicide: a case report and review of the literature // Forensic Sci. Int. 2012. Vol. 219, No 1-3. P. e1-e3. doi:10.1016/j.forsciint.2011.11.015
3. Ivanova O.V., Bogomolov N.I., Safronov A.V., Pikulina L.G., Shishov I.V. Foreign body of the appendix as a consequence of a suicide attempt // Surgery. 2005. No 4. P. 76.
4. Masood M. Intentional Foreign Body Ingestions: A Complex, Recurrent and Costly Issue // Am J Case Rep. 2021. Vol. 22. doi:10.12659/AJCR.934164
5. Petrea S., Brezean I. Self-harm through ingestion of foreign bodies - a rare cause of digestive perforation // J Med Life. 2014. Vol. 7, N 1. P. 67-74.
6. Cui J., Cross T., Lockwood D. Ingested razor blades within the appendix: A rare case report // Int. J. Surg. Case Rep. 2018. Vol. 45. P. 29-32. doi:10.1016/j.ijscr.2018.03.018

## FORENSIC MEDICAL ANALYSIS OF RADIOGRAPHIC MATERIALS IN RARE CASES OF DIAPHYSEAL FRACTURES OF THE LEG BONE IN CHILDREN WHEN JUMPING IN THE BATHTUB

**S.A.Khakimov, Z.M.Ruziyeva, B.Z.Safarov**

Tashkent state medical university, Republican scientific and practical center for  
forensic medicine

### ANNOTATION

Considering the significant contribution of childhood injuries to the structure of general problems related to child health, it is important to determine the exact mechanism of fractures, in particular, diaphyseal fractures of the lower leg bones, during examinations, as the specification of the mechanism of formation of bodily injuries leads, in essence, to the origins of injuries and allows for the further development of a set of preventive measures to prevent the occurrence of these situations, moreover, sometimes allows for the accurate distribution of the burden of responsibility for the incident between the defendants in the case.

**Keywords:** diaphyseal fractures; lower leg bones; children; mechanism of fracture occurrence.

Childhood injuries remain one of the main problems in medicine and occupy a significant share in the structure of general health-related problems in children. The main risk group is children aged 10 to 14, who account for approximately 1/3 of all childhood injuries. Childhood injuries remain a serious social problem, especially considering the consequences of significant injuries in the form of fractures. Against this backdrop, the injuries received by children in children's entertainment centers, mostly related to gross violations of the rules for operating sports and entertainment devices and equipment, when the direct "culprits" of young children become victims of their own negligence, attract particular attention. Trauma on the truss is not uncommon, which is not always limited to superficial injuries in the form of hemorrhages, scars, etc. Fractures obtained during batut operation are mainly localized in the metaepiphyseal zones of the long tubular bones of the upper and lower extremities, in the ankle region of the lower leg bones. However, fractures of unusual localization and morphology are encountered, which are a source of expert errors in determining the mechanism of injury, especially in cases where the examinee and their legal representative describe the circumstances of injury that do not correspond to the case materials, as well as the nature of the injury received. In this case, the age-related

characteristics of the child's bone tissue, which contains more organic substances than inorganic ones, are of great importance, which ensures the characteristic features of diaphyseal fractures in children.

**Case description:** The forensic medical examination was conducted by order of the investigator of the investigative committee 2 months after the incident.

**Circumstances of the case:** A statement was received from the legal representative - the mother of young K. - requesting "to bring to justice the guilty persons for providing services that do not meet safety requirements, as a result of which her young daughter was injured as a result of falling from a trampoline in the trampoline center" (accurate quote from the resolution).

For examination, the following were presented: the medical record of the inpatient patient, radiographs, and the infant K., 11 years old. During a forensic medical examination, young K. and her mother stated that the victim's right leg bones were broken when she jumped from the trampoline onto the mat and hit her right leg against the edge of a solid rectangular "postament" placed next to the trampoline. During the forensic medical examination of the subject, no bodily injuries or signs of their healing related to the above-described events were found.

The investigator additionally provided a video recording from the surveillance camera installed to the left and above the location of the trunk section where the incident occurred, with the opposite part of the aforementioned "post" being outside the camera's perimeter. During the slow-motion and frame-by-frame viewing of the video recording, the following was established: young K. jumps on the trampoline, at this moment another girl jumps off the "post" with a height and physique approximately corresponding to the subject under examination. The moment of K. "landing" on the surface of the trampoline (with the supporting right leg) coincides with the "landing" on the trampoline of the second girl, after which K. jumps onto the mat beyond the trampoline with his right leg slightly compressed towards the "postament" falling from the camera field of view, the fact of which cannot be established based on the video recording, and then the child falls onto the mat on his hips.

**Discussion:** During the examination of the radiographs of the right lower leg by a forensic medical expert, it was established that young K. had the following bodily injuries at the time of her medical appeal: a closed screw-fragmented fracture of the middle third of the tibial diaphysis. Bone with displacement of fragments, closed oblique fracture of the middle third of the tibial diaphysis with displacement, closed subperiosteal fracture ("green branch" type) of the upper third of the tibial diaphysis without displacement (subcapital fracture).

Taking into account the above and taking into account the age-specific characteristics of the child's bone tissue (higher water and organic matter content, lower mineral matter content, which ensures greater flexibility, elasticity, and lower fragility compared to adult bones), as well as the morphological features of fractures indicating their structural nature (indirect mechanism of injury): combination of rotation and bending with simultaneous forced longitudinal loading, it can be concluded that these fractures occurred simultaneously, as a result of K. "landing" on the hard, tightly stretched surface of the trampoline on the supporting right leg. Thus, despite the incomplete informativeness of the presented video recording due to the limited camera perimeter, it is possible to completely rule out the possibility of the formation of these fractures as a result of impact on the "solid pedestal," as indicated initially by the victim and her mother.

**Conclusion** The presented case from expert practice demonstrates the importance of thoroughly studying radiographs not only to establish the fact of fractures as such but also their morphological features, which allows the expert at this stage of the examination to determine the nature of fractures (local or structural). However, a complete restoration of the circumstances of the incident is possible only with a comprehensive analysis of both the medical documents and the case materials, while it is important to consider the age and constitutional characteristics of the examinee.

#### Literature

1. Healthcare in Russia. 2021: Statistical Collection. M., 2021. 171 p.
2. Traumatism, orthopedic morbidity, the state of trauma and orthopedic care for the population of Russia in 2015 / edited by S.P. Mironov. M., 2016. 145 p.
3. Solovyova K.S., Zaletina A.V. Traumatism of the Child Population of Saint Petersburg // Orthopedics, Traumatology and Restorative Surgery of Childhood. 2017. Vol. 5, issue
4. Kuptsova O.A., Zaletina A.V., Vissarionov S.V., et al. Indicators of injuries in children during the restrictive measures associated with the spread of the new coronavirus infection (COVID-19) // Orthopedics, Traumatology and Restorative Surgery of Childhood. 2021. Vol. 9, No. 1.
5. Baidurashvili A.G., Shapiro K.I., Drozhzhina L.A., Vishnyakov A.N. Indicators and dynamics of bone-muscle system injuries in children of St. Petersburg in modern conditions // Pediatrician. 2016. Vol. 7, No. 2. P. 113-120.
6. Köhncke S. Frakturen der langen Röhrenknochen bei Kindern - Erhebung epidemiologischer Daten und Vergleich von vier Frakturklassifikationen: Dissertation. Kiel, 2011.

## TABLE OF CONTENTS

<b>1</b>	O‘TKIR TINNITUSNI ERTA BOSQICHDA ANIQLASH VA UNI GIPERBARIK OKSIGENATSIYA (GBO) ORQALI OLDINI OLISH Abdunazarov Toxirjon Sadulla o‘g‘li .	<b>3-4</b>
<b>2</b>	ITALYAN VA O‘ZBEK ERTAKLARIDA YAXSHILIK VA YOMONLIK G‘OYALARINING MADANIY TALQINI Ergashova Baxora Sayfillo qizi	<b>5-8</b>
<b>3</b>	ОЦЕНКА ЭФФЕКТИВНОСТИ КЛИНИЧЕСКИХ АЛГОРИТМОВ В ЛЕЧЕНИИ ГЛУБОКОГО ПАРАПРОКТИТА У БОЛЬНЫХ САХАРНЫМ ДИАБЕТОМ Косимов А.Л., Ахмаджонов Ж.У., Жураев Г.Г.	<b>9-10</b>
<b>4</b>	OQSILLAR TIRIK JONZOTLARNING ASOSI P.Uchqunova., N.R.Mullabayev	<b>11-19</b>
<b>5</b>	VENCHUR JAMG‘ARMALARI, YOSHLARNING LOYIHALARINI KRAUDFANDING (OMMAVIY MOLIYALASH) PLATFORMALARI ORQALI MOLIYALASHTIRISH IMKONIYATLARI Nuriddinov Davronbek Murodiljon o‘g‘li	<b>20-22</b>
<b>6</b>	MENTAL DISORDERS IN CEREBRAL PALSY Sharipov A.T.	<b>23-27</b>
<b>7</b>	PATHOLOGICAL CONDITIONS OF THE GASTROINTESTINAL TRACT RESULTING FROM ATTEMPTED SUICIDE S.A.Khakimov, K.M.Mamadaliyev, A.T.Ismailov	<b>28-31</b>
<b>8</b>	FORENSIC MEDICAL ANALYSIS OF RADIOGRAPHIC MATERIALS IN RARE CASES OF DIAPHYSEAL FRACTURES OF THE LEG BONE IN CHILDREN WHEN JUMPING IN THE BATHTUB S.A.Khakimov, Z.M.Ruziyeva, B.Z.Safarov	<b>32-34</b>
	<b>OUTLINE</b>	<b>35</b>