

возможности его коррекции // Акушерство и гинекология. – 2014. – № 8. – С. 127–132.

2. Рахматуллаева М.М. Лечение бактериального вагиноза: проблемы и перспективы // Фарматека. – 2019. – Т.26, №6. – С.79-83.

3. Mukhamedov IM, Khaldarbekova GZ. Indigenous lactobacteria of vaginal microbioma in fertilized women. Journal of Biomedicine and Practice. 2021;6(2):23-30.

4. Rakhmatullaeva M.M. Clinical and epidemiological features of bacterial vaginosis. The American Journal of Medical Sciences and Pharmaceutical Research. 2020; 02(8):140-145.

5. Santos-Greatti MMV, da Silva MG, Ferreira CST, Marconi C. Cervicovaginal cytokines, sialidase activity and bacterial load in reproductive aged women with intermediate vaginal flora. J Reprod Immunol 2016; 118: 36–41.

УДК: 616.831-001-091.8

TRAVMATIK BOSH MIYA SHIKASTLANISHIDA URUG'DONLARDAGI PATOMORFOLOGIK O'ZGARISHLAR

Raximova Gulnoz Shamsiyevna - <https://orcid.org/0009-0003-5023-0656>

Buxoro davlat tibbiyot instituti

Rezyume. Ushbu maqolada modellashtirilgan miya shikastlanishi sharoitida o'tkazilgan ilmiy tadqiqot natijalari keltirilgan. Uch oylik 150 ta oq zotsiz kalamushlarga "yo'l-transport hodisasi va katatravma" modelida shikast yetkazuvchi bosh miya shikastlanishi o'tkazildi. O'tkir bosqichda kalamush urug'donlari ajratib olindi va morfometrik va morfofunktsional jihatlari o'rganildi. Natijalar shuni ko'rsatdiki, patomorfologik o'zgarishlar urug'donlarning barcha to'qimalarida, jumladan urug' naychalari, stroma, endokrin tuzilmalari, epiteliya-spermatogen qatlamida aniq namoyon bo'ldi va bu ko'rsatkichlar jarohatdan keyingi sutkalarga qarab farq qildi.

Kalit so'zlar: morfometriya, urug'donlar, modellashtirish, travmatik miya shikastlanishi, epiteliya-spermatogen qatlam.

ПАТОМОРФОЛОГИЧЕСКИЕ ИЗМЕНЕНИЯ В СЕМЕННИКАХ ПРИ ЧЕРЕПНО-МОЗГОВОЙ ТРАВМЕ

Рахимова Гулноз Шамсиевна - <https://orcid.org/0009-0003-5023-0656>

Бухарский государственный медицинский институт

Резюме. В этой статье представлены результаты научного исследования, проведенного в условиях моделируемой травмы

головного мозга. 150 белых беспородных крыс в возрасте трех месяцев получили черепно-мозговую травму в модели “дорожно-транспортное происшествие и кататравма”. В острой фазе были выделены семенники крыс и изучены морфометрические и морфофункциональные аспекты. Результаты показали, что патоморфологические изменения ярко проявились во всех тканях семенников, включая семенные канальцы, строму, эндокринные структуры, эпителиально-сперматогенный слой, причем эти показатели варьировались в зависимости от суток после травмы.

Ключевые слова: морфометрия, семенники, моделирование, черепно-мозговая травма, эпителиально-сперматогенный слой.

PATHOMORPHOLOGICAL CHANGES IN THE TESTES IN TRAUMATIC BRAIN INJURY

Rakhimova Gulnoz Shamsiyevna - <https://orcid.org/0009-0003-5023-0656>

Bukhara State Medical Institute

Resume. This article presents the results of a scientific study conducted under conditions of simulated brain injury. 150 white mongrel rats at the age of three months received a traumatic brain injury in the “traffic accident and catatrauma” model. In the acute phase, rat testicles were isolated and morphometric and morphofunctional aspects were studied. The results showed that pathomorphological changes were clearly manifested in all tissues of the testes, including the seminal tubules, stroma, endocrine structures, epithelial-spermatogenic layer, and these indicators varied depending on the day after the injury.

Keywords: morphometry, testes, modeling, traumatic brain injury, epithelial-spermatogenic layer.

Dolzarbliigi: ma'lumki, miya shikastlanishida deyarli barcha ichki a'zolar va to'qimalar zararlanadi. Shuning uchun ko'plab ilmiy tadqiqotlar miyaning turli qismlarida - gipotalamus, gipofiz, yurak-qon tomir tizimi a'zolarida travmatik miya shikastlanishida yuzaga keladigan morfologik o'zgarishlar batafsil o'rganib chiqilgan. Shuningdek, miya shikastlanishida ichki sekretiya bezlarida, shu jumladan erkak jinsiy bezlarida, xususan urug'donlarda sezilarli o'zgarishlar aniqlanadi. Gipotalamus-gipofiz o'qidagi o'zgarishlar to'qima tuzilmalari tuzilishining buzilishiga va urug'donlarning funktsional o'zgarishiga olib keladi.

Tadqiqotning maqsadi: ushbu ishning maqsadi tajribada bosh miya shikastlanishidan keyin kalamushlarda urug'donlardagi morfofunktsional o'zgarishlarni o'rganish.

Tadqiqot materiallari va usullari: tadqiqot metodologiyasi ilmiy bilimlarning zamonaviy tamoyillarini hisobga olgan holda rejalashtirilgan

va maqsadga muvofiq tashkil etilgan. Ishda kalamush urug'donarining parametrlari va miya shikastlanishidan keyin uning reaktiv o'zgarishlari tahlil qilindi, o'tkir miya shikastlanishida urug'donlarning turli bo'limlarida morfometrik va funksional o'zgarishlar o'rganildi. Bundan tashqari, urug'donlarning turli bo'limlari to'qimalarining gisto-topografik xususiyatlari normal va travmatik miya shikastlanishidan keyin taqqoslandi, tuzilmalarning hujayra tarkibi va uning o'zgarishi aniqlandi, shuningdek eksperimental travmatik miya shikastlanishi paytida urug'donlarning morfometrik parametrlari va neyroprotektorlar bilan korrektsiyalashdagi o'zgarishlar qiyosiy baholandi.

Ushbu tadqiqot ob'ekti sifatida og'irligi 150-115 gramm bo'lgan 150 ta 90 kunlik yetuk nar kalamushlar tanlandi. Tajriba davomida kalamushlar birinchi navbatda izofluran bilan karaxt qilindi, yengil karaxtlikka erishish uchun induksiya 1-2 minutni tashkil etdi, bu holat kalamushning dumini chimchilashda refleks reaktsiyasi bilan aniqlandi. Shundan so'ng, kalamush kvadrat platformaga biriktirildi, jag'ning sinishini oldini olish uchun jag'ga yumshoq yostiq qo'yildi va platforma qo'yib yuborildi. Og'irlik inertsiyasi va og'ish burchagi ta'siri tufayli pastga tushirilgan platforma to'siqqa urildi. Bu vaqtda kalamushlarda turli darajadagi bosh miya shikasti berildi.

Natijalar: eksperimental guruh kalamushlarida o'tkazilgan morfometrik tadqiqotda, BMSH dan keyingi birinchi kunida, oqsil qobig'ining qalinligi yuqori qutbda 132,0 dan 198,0 mkmgacha o'zgarganligi aniqlandi. Orqa chekkasida u 112,2 dan 165,0 mkmgacha o'zgardi. Va pastki qutbda va oldingi chekka bo'ylab kamaydi. Pastki qutbda oqsil qobig'ining qalinligi o'rtacha $58,3 \pm 1,18$ mkmni tashkil etdi. Old chetida esa $77,4 \pm 2,10$ mkm.

O'ng urug'dondagi trabekulalarning qalinligi $141,7 \pm 1,28$ mkm, chapda $149,8 \pm 2,14$ mkm, trabekulalardagi kollagen tolalari to'plamlarining qalinligi mos ravishda $89,1 \pm 1,28$ mkm va $97,5 \pm 1,37$ mkm kuzatildi.

Trabekulalar urug'donlarni kichik bo'lakchalarga ajratadi. Bo'lakchalarning shakli ponasimon shaklda, tepasi oraliqqa qaragan. Guruhdagi urug'donlarning intertrabekulyar masofasi BMShdan keyingi birinchi kuni o'ng urug'donda $748,9 \pm 17,49$ mkm, chap urug'donda $758,0 \pm 14,48$ mkm edi.

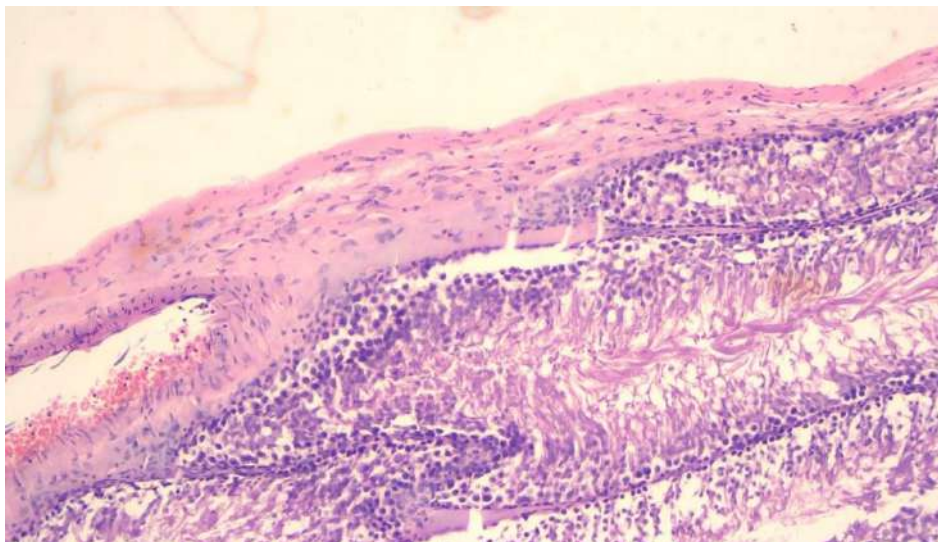
Urug'don bo'lakcharida, burama urug' kanalchalarning halqalari orasida gemo - va limfa tomirlari bo'lgan interstitsial biriktiruvchi to'qima (IBT) mavjud. Kanalchalar orasidagi masofani o'lchashda ikkala urug'dondagi interstitsial biriktiruvchi to'qima qalinligi 74 mkm dan 142 mkmgacha bo'lgan (1-rasm).



1-rasm. BMSH dan keyingi birinchi kuni urug'don bo'lakchasining umumiy ko'rinishi (Kat. 40) gematoksilin-eozin bilan bo'yalgan.

Urug'donlarning ko'ndalang kesimida organ parenximasi turli tekisliklarda joylashgan qalinlashgan diametrdagi ko'plab burama urug' kanalchalardan iboratligini ko'rish mumkin. Kanalchalar o'z membranasi va epiteliospermatogen qatlamdan iborat.

Ekspirimental guruh kalamushlarida mikroskopik bo'laklarni o'rganishda, BMSH dan keyingi uchinchi kuni, oqsil qobig'ining qalinligi yuqori qutbda 138,6 dan 211,2 mkm gacha o'zgarganligi aniqlandi. Orqa chetida u 118,8 dan 171,6 mkm gacha bo'lgan. Va pastki qutbda va oldingi chekka bo'ylab kamaydi. Pastki qutbda oqsil qobig'ining qalinligi o'rtacha $64,2 \pm 1,41$ mkm ni tashkil etdi. Old chetida $85,8 \pm 2,10$ mkm, bu urug'donlar hajmining yanada oshishini ko'rsatdi.



2-rasm. BMSH dan keyingi 3-kun. Urug'donlar oqsil membranasi biriktiruvchi to'qima hujayralari bilan. (Kat.400) gematoksilin-eozin bilan bo'yalgan.

Keltirilgan ma'lumotlar BMSH dan keyingi uchinchi kuni kalamushlarda urug'donlarning mikroskopik tuzilmalari hajmining oshganligini ko'rsatadi, bu giperplaziya va bu organning keyingi atrofiyasi bilan bog'liq (2-rasm).

Shunday qilib, biz travmatik miya shikastlanishidan keyin turli vaqtlarda topilgan urug'donlardagi sifat va miqdoriy morfologik o'zgarishlar, yosh uchun g'ayrioddiy bo'lgan interstitsial biriktiruvchi to'qimalarning skleroz jarayonlari, shuningdek mikrotomirlardagi reduktiv o'zgarishlar urug'donlarda rivojlanadi degan xulosaga kelishimizga imkon beradi.

Xulosa:

Bosh miya travmatik shikastlanishining o'tkir davrida urug'donlarning barcha tuzilmalaridagi o'zgarishlar xarakterlidir: urug' kanalchalari, oqsil membranasi, endokrin tuzilmalar. Eng katta o'zgarishlar burama urug' kanalchalarida, ya'ni epiteliospermatogen qatlamda kuzatiladi. Spermatogen hujayralar soni morfologik jihatdan kamayadi (spermatogoniyalar, spermatidlar, spermatotsitlar), parallel ravishda Leydig hujayralari soni kamayadi, bu testosteronning pasayishiga olib keladi. Tomirlar kengayadi, to'laqonlik qayd etiladi. Bez kapsulasi va stromada yallig'lanish reaksiyasisiz qon quyilish kichik o'choqlari, urug'donlar stromasining sklerozi mavjud, aniq peritubulyar skleroz tufayli kanalcha devorlari va oqsil qobig'ining qalinligi oshadi.

Adabiyotlar:

1. Gao Y, Mruk DD, Cheng CY. Sertoli cells are the target of environmental toxicants in the testis - a mechanistic and therapeutic insight. *Expert Opin Ther Targets*. 2015;19(8):1073-90. doi: 10.1517/14728222.2015.1039513. Epub 2015 Apr 26.

2. Barber TM, Kyrou I, Kaltsas G, Grossman AB, Randevara HS, Weickert MO. Mechanisms of Central Hypogonadism. *Int J Mol Sci*. 2021 Jul 30;22(15):8217.

3. Sansone A, Di Dato C, de Angelis C, Menafrà D, Pozza C, Pivonello R, Isidori A, Gianfrilli D. Smoke, alcohol and drug addiction and male fertility. *Reprod Biol Endocrinol*. 2018 Jan 15;16(1):3.

4. García-Díaz EC, Gómez-Quiroz LE, Arenas-Ríos E, Aragón-Martínez A, Ibarra-Arias JA, del Socorro I Retana-Márquez M. Oxidative status in testis and epididymal sperm parameters after acute and chronic stress by cold-water immersion in the adult rat. *Syst Biol Reprod Med*. 2015;61(3):150-160.

5. Машарипов А.С., Искандаров А.И. Экспертная оценка давности черепно-мозговой травмы по морфологическим изменениям внутренних органов. Сибирский медицинский журнал, 2010, № 2. - С.51-52.

6. Федотов А.В., Астраханцев А. Ф. Морфологические изменения мужских половых желез при черепно-мозговой травме // Судебно-медицинская экспертиза, 2017, №2. – С.18-20.

7. Shamsievna R. G. Secondary Tissue Damage in Acute Traumatic Brain Injury //Web of Synergy: International Interdisciplinary Research Journal. – 2023. – Т. 2. – №. 5. – С. 469-473.

8. Ribeiro CT, De Souza DB, Costa WS, Sampaio FJB, Pereira-Sampaio MA. Immediate and late effects of chronic stress in the testes of prepubertal and adult rats. Asian J Androl. 2018 Jul-Aug;20(4):385-390

9. G. Sh., R. (2023). Morphometric Studies of the Testes of White Mongrel Rats in the Acute Stage of Traumatic Brain Injury. International Journal of Integrative and Modern Medicine, 1(2), 57–60.

10. Hou G, Xiong W, Wang M, Chen X, Yuan TF. Chronic stress influences sexual motivation and causes damage to testicular cells in male rats. J Sex Med. 2014;11(3):653-663.

УДК 612.357.3-611.367

MORPHOLOGICAL CHANGES IN THE NERVOUS STRUCTURES OF THE EXTRAHEPATIC BILE TRACT AFTER REMOVAL OF THE GALLBLADDER

1Rakhmonova Kh.N. <https://orcid.org/0009-0009-3625-3185>

2Rakhmonov Z.M. <https://orcid.org/0009-0006-0813-120X>

1.2Samarkand State Medical University

Resume Changes in the neural structure of the extrahepatic bile ducts after cholecystectomy were studied in order to determine the participation of disruption of neural connections between the biliary sphincters due to cholecystectomy in the pathogenesis of postcholecystectomy syndrome. The morphology of the nervous structures in the area of localization of the sphincters of the extrahepatic bile ducts was studied at various times after cholecystectomy in dogs and rabbits. The operations were performed under xylazine anesthesia, the material was fixed in 12% neutral formaldehyde, neutralized with a saturated solution of sodium tetraborate. Cryostat sections are impregnated with silver nitrate according to the method of Bielschowsky-Gross and Campos. It has been established that during cholecystectomy, as a result of removal of the Lütken's sphincter,