INTERNATIONAL JOURNAL OF INTEGRATIVE AND MODERN MEDICINE

Renal Morphology in Experimental Pulmonary Pneumosclerosis

Shomurodova Muhayya Rahmonovna
Bukhara State Medical Institute

Abstract: In clinical practice, special importance is attached to the elimination of pathological processes that occur in the human body after damage to lung tissue. Currently, among the various problems of clinical pulmanology, the world continues to attract the attention of researchers due to the constantly growing number of patients with fibrosis of the lungs, difficulties in diagnosing patients and insufficient development of treatment schemes. At present, pulmonary fibrosis – patients with respiratory failure and chronic pulmonary heart disease, and complications of internal organs, especially in the gastrointestinal system, are noteworthy, requiring that measures should be taken to predict the nature of the disease in advance, to reduce the share of disability among patients.

Keywords: pulmonary fibrosis, morphology, kidney, glomerulonephritis.

Research objective: study and analysis of renal tissue morphology in experimental pulmonary pneumosclerosis.

Material and methods: the study used 50 bats, which were separated by age into monthly as well as their corresponding control groups. In order to achieve the modeling of pulmonary fibrosis, white-breed rats were selected and the experimental model "pulmonary fibrosis with nitrogen dioxide through the breathing of animals from toxic gases in closed boxing" was used. The room in which the rats were kept complied with the requirements for the conditions of keeping this type of laboratory animal (t 20-24 Co, humidity 60%, light/darkness 12 hours/12 hours). Water was given without restrictions, and when feeding animals all sexually mature rats were quarantined for a week, transferred to a normal vivarium regime after somatic or infectious diseases were excluded.

Before starting the experiment, the animals underwent a two-week quarantine and were trained to be in the experimental chamber (BGMI at the Ethics Committee and Commission requirements for the control and use of laboratory animals). he first group of rats (intakt) was a control group, White broodless rats fed on a simple standard diet to compare the results in the experiment with another group. And in the second group of our experiment, white non-breeding rats caused pulmonary pneumosclerosis for 20 days.

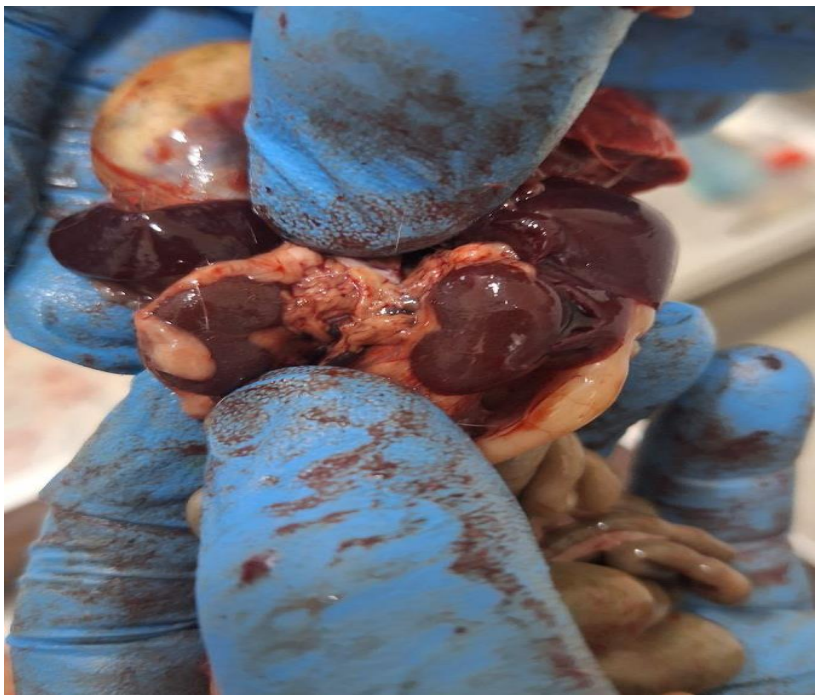
The reaction of the metal with nitric acid resulted in the release of vapors of the toxic substance nitrogen dioxide, which caused inflammatory connective tissue changes in the lung parenchyma when prolonged poisoning for 20 days. The concentration of the poisoning substance in the air was released by chemical and mathematical equations. Animals were coughed up for 30 minutes with an interval of three times a day, 15 minutes between poisonings to the effect of the poisoning substance. Ventilation intervals were carried out in order to release the accumulated carbon dioxide gas, which is released in the release of animal breath.

Table № 1 Distribution of animals according to the content of experience

Groups (c-control, e-experience)	Experience content	Animal youth	Total number of animals (*extinct rats number)
		3month	
I c	Control	20	20
II e	White rats caused by pulmonary pneumosclerosis for 20 days	30(5*)	30(5*)
total		50(5*)	50(5*)

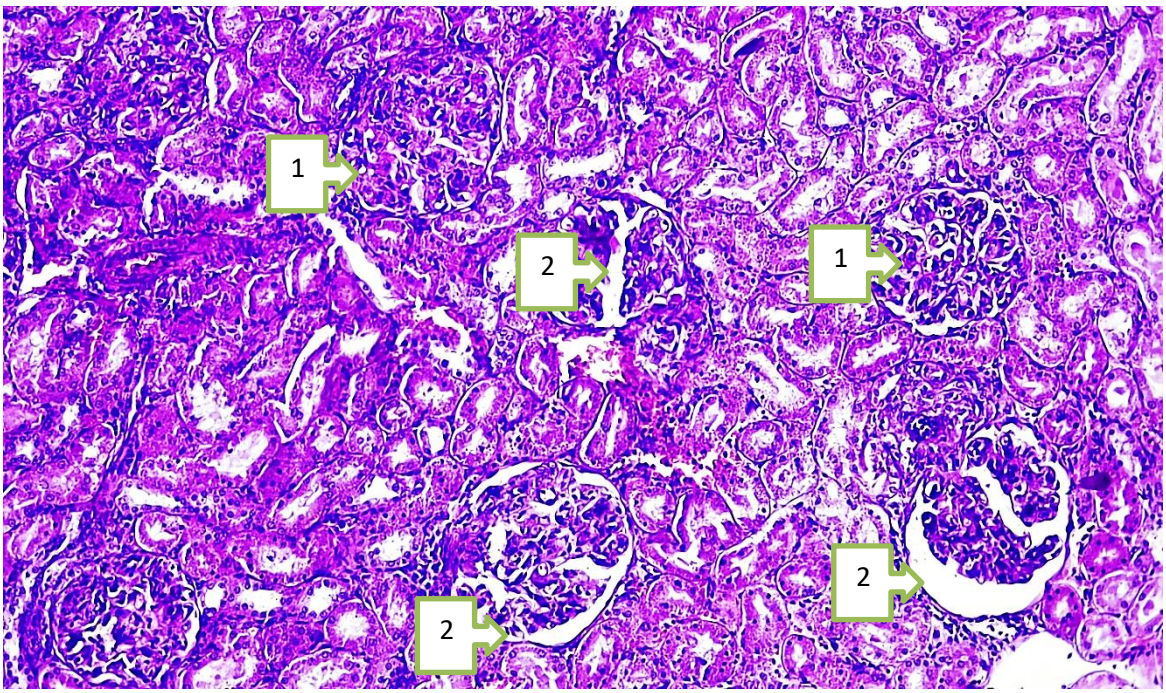
After the animals were decepitated on an empty stomach, the abdominal cavity was opened, the kidneys were separated, the organ was cut in half and fixed in a 10% formalin neutralized solution, hardened for 72 hours, then washed in running water for 2 hours, passed through alcohols with an increased concentration for dehydration, and bricks were prepared with paraffin pouring. 5-8 μm thick incisions were made from them and the overall histological structure was studied by staining in hematoxylin-eosin dye. The cuts were studied under the light microscope of the firm" Leyka " and pictures were taken from their desired areas. Micropreparations were photographed under a microscope measuring 4x10, 10x10, 40x10, 100x10.

Results and conclusions

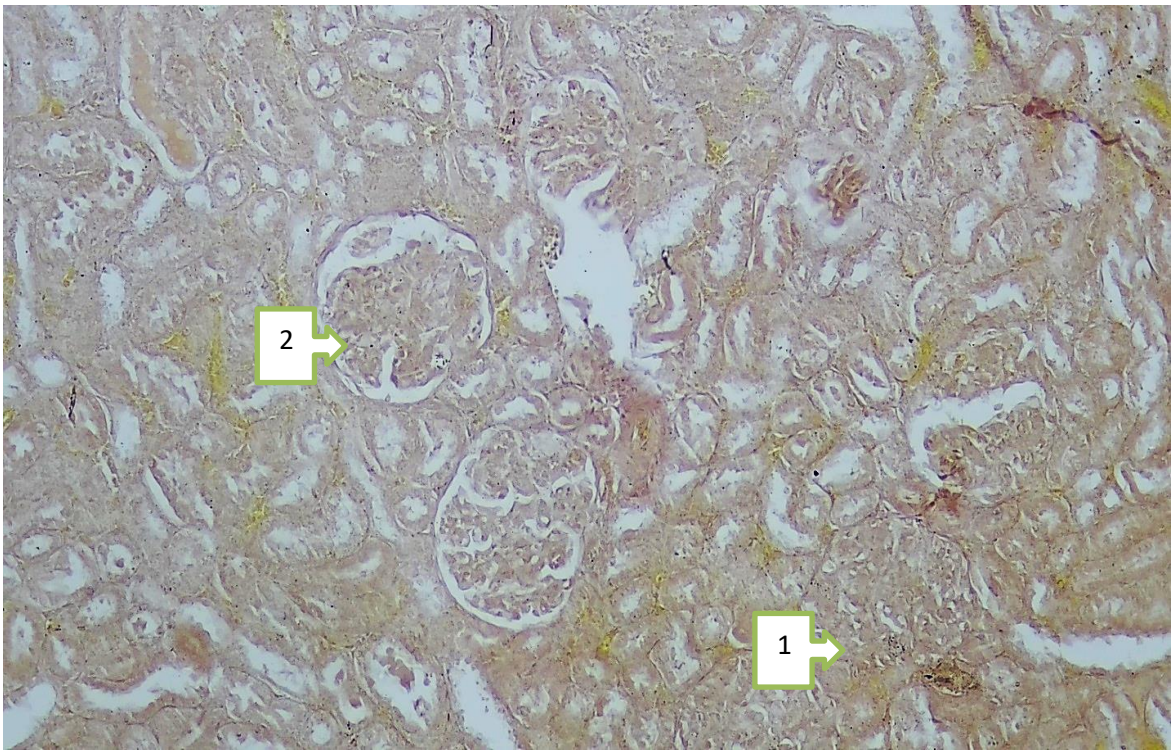


Macroscopic view of the kidney

As a result of the study, it was found that white non-breeding bats belonging to the first main group did not visually observe pronounced changes in the external macroscopic appearance of the kidney organ, when viewed microscopically, pathomorphological signs characteristic of membrane-proliferative glomerulonephritis (figure 2-3) were observed in the kidney tissue. In particular, it was observed that at the expense of the apparent proliferation of mesangiocytes, the Coptic appeared multicellular and dilated, the mesangial Matrix expanded, the cells inside the Coptic appeared fragmented at the expense of proliferative and sclerotic changes, morphological changes characteristic of neutrophilic inflammation appeared, dystrophic and necrobiotic changes appeared in the proximal and distal canals.



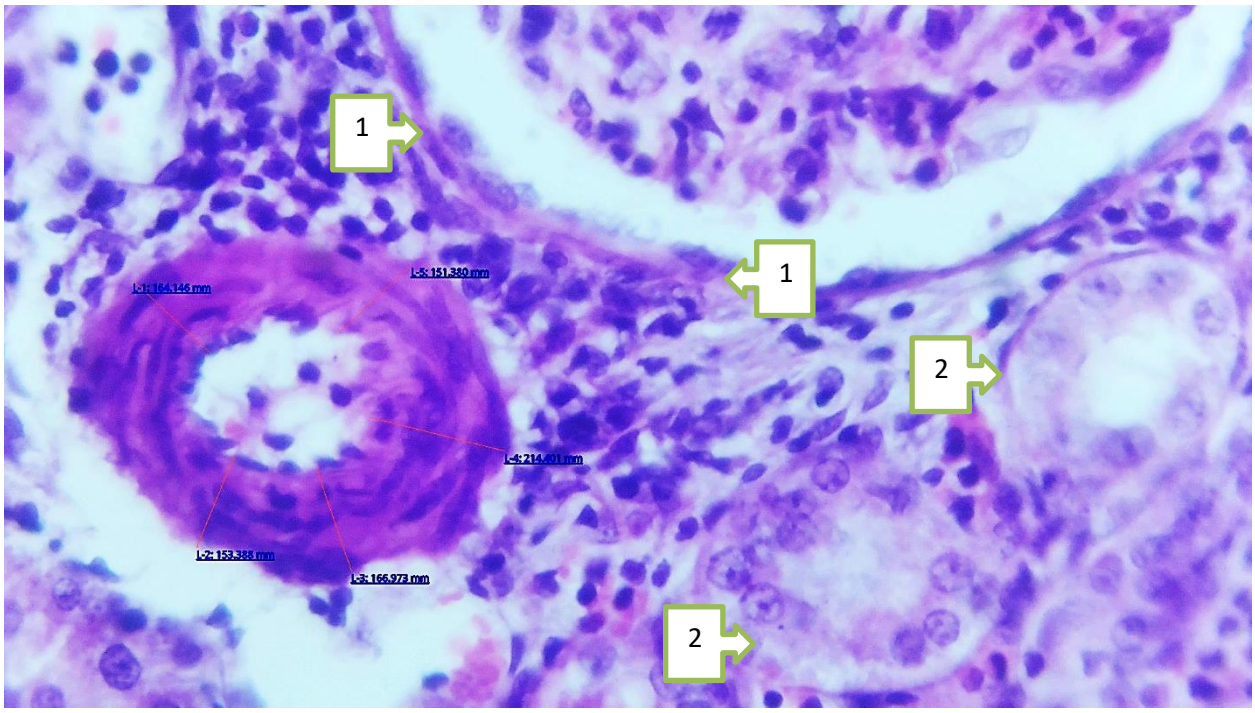
Picture1. Microscopic view of white-breed rat kidney tissue. Membrane-proliferative glomerulonephritis. 1. At the expense of the obvious proliferation of mesangiocytes, the balls appear multicellular and dilated, the mesangial matrix is enlarged. 2. At the expense of proliferative and sclerotic changes, the cells inside the clutch appear to be fragmented. Paint G-E. AB 4x18 ok.



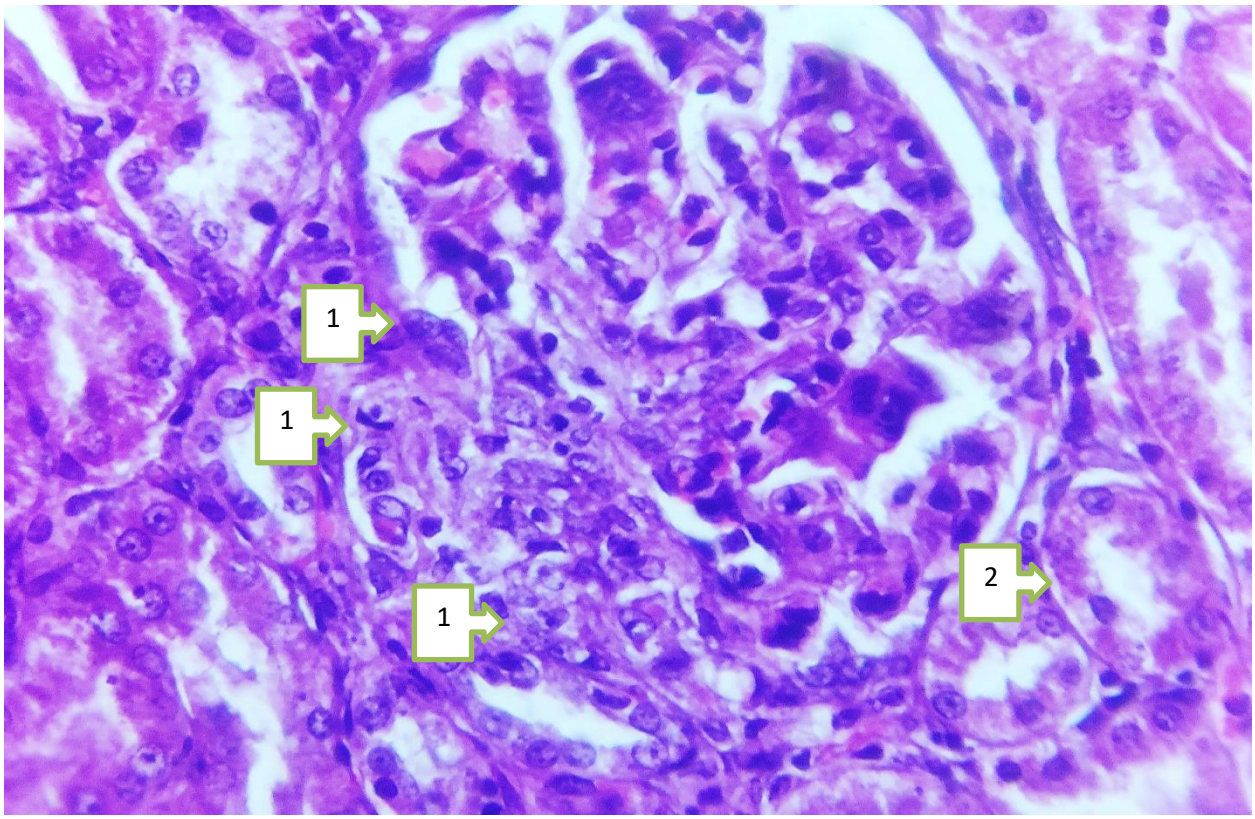
Picture 2. Microscopic view of white-breed rat kidney tissue. Membrane-proliferative glomerulonephritis. 1. At the expense of the obvious proliferation of mesangiocytes, the balls appear multicellular and dilated, the mesangial matrix is enlarged. 2. At the expense of proliferative and sclerotic changes, the cells inside the clutch appear to be fragmented. Paint van-Gison. AB 4x18 ok.

Micropreparations made from experimental animal kidneys, as can be seen from the picture of histological drug in the mirror of the quoted item, it was observed that there were morphological changes characteristic of inflammation in the kidney tissue, diffuse expansion of the basal membrane,

along with changes characteristic of most membranoproliferative glomerulonephritis, and leukocytic infiltration in the surrounding tissue, dystrophic-necrobiotic changes in the proximal and distal These signs are considered to be characteristic of membranous nephropathy.



Picture 3. Microscopic view of white-breed rat kidney tissue. Membranoproliferative glomerulonephritis. 1. Diffuse expansion of the basal membrane and leukocyte infiltration in the surrounding tissue. 2. Dystrophic-necrobiotic changes in proximal and distal ducts. Painted with hematoxylin-eosin, OB 40x20 ok.



Picture 4. Microscopic view of white-breed rat kidney tissue. Membranous Glomerulonephritis. 1. Accumulation of deposits in the basal membrane (immuncomplexes). 2. Dystrophic necrobiotic changes in the ducts. Painted with hematoxylin-eosin, ob 4x20 ok.

In conclusion, under the conditions of the experiment, the first group of white non-breeding rats, in which pulmonary pneumosclerosis was called, were found to have various morphological changes in kidney tissue. These were observed to appear multicellular and dilated at the expense of apparent proliferation of mesangiocytes in kidney tissue, mesangial Matrix dilated, proliferative and sclerotic changes at the expense of cell cleavage within the cap, neutrophilic inflammatory-specific morphological changes appeared, dystrophic and necrobiotic changes appeared in proximal and distal ducts.

The second group of white-noded bats found signs of nodular periarteriitis in the surrounding tissue due to dystrophic-necrobiotic changes in proximal and distal ducts, appearance, including proliferative and sclerotic changes in cells within the coptochap, diffuse expansion of the basal membrane, and leukocyte infiltration in the surrounding tissue.

Literatura

1. Shomurodova Mukhayo Rakhmonovna, (May 6, 2023). Morphological Features and Morphometric Parameters of the Lungs after Correction with an Immunomodulator Under the Conditions of Experimental Chemotherapy. Journal of Natural and Medical Education (pp. 55-60).
2. Shomurodova Mukhayo Rakhmonovna, (05 2023) Mastopatiya. Yosh Patmorfolog Nigohida. Amaliy va tibbiyot fanlari ilmiy jurnali (193-197) https://sciencebox.uz
3. Shomurodova Muxayyo Raxmonovna (05 2023) Morfometricheskie Pokazateli Legkix Posle Korreksii Immunomodulyatorom V Usloviyax Eksperimentalnoy Ximioterapii Amaliy va tibbiyot fanlari ilmiy jurnali (198-202) https://sciencebox.uz
4. Shomurodova M. R. (2023). Morphological Changes in Lungs Caused by Chemotherapy in Breast Cancer. American Journal of Pediatric Medicine and Health Sciences (2993-2149), 1(10), 341–344. Retrieved from http://grnjournal.us/index.php/AJPMHS/article/view/2088
5. Олимова А. З., Шодиев У. М. Репродуктив Ёшдаги эркакларда бепуштлик сабаблари: Бухоро тумани эпидемиологияси //Scientific progress. – 2021. – Т. 2. – №. 7. – С. 499-502.
6. Zokirovna O. A., Abdurasulovich S. B. Ovarian Diseases in Age of Reproductive Women: Dermoid Cyst //IJTIMOIY FANLARDA INNOVASIYA ONLAYN ILMIY JURNALI. – 2021. – Т. 1. – №. 6. – С. 154-161.
7. Olimova A. Z. ECHINOCOCCOSIS OF LIVER OF THREE MONTHLY WHITE RAT //Scientific progress. – 2022. – Т. 3. – №. 3. – С. 462-466.
8. Олимова А. З. Морфологические и морфометрические особенности печени белых беспородных трех месячных крыс после тяжёлой черепно-мозговой травмы вызванной экспериментальным путём //BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI. – 2021. – Т. 1. – №. 6. – С. 557-563.
9. Oglu M. Z. M., Zokirovna O. A. МОРФОЛОГИЧЕСКИЕ И МОРФОМЕТРИЧЕСКИЕ ПАРАМЕТРЫ ПЕЧЕНИ БЕЛЫХ БЕСПОРОДНЫХ КРЫС, ПЕРЕНЕСШИХ ЭКСПЕРИМЕНТАЛЬНУЮ ЧЕРЕПНО-МОЗГОВУЮ ТРАВМУ ПОСЛЕ МЕДИКАМЕНТОЗНОЙ КОРРЕКЦИИ //JOURNAL OF BIOMEDICINE AND PRACTICE. – 2023. – Т. 8. – №. 1.
10. Олимова А. З., Турдиев М. Р. БУХОРО ШАҲРИДА МЕЪДА ВА ЎН ИККИ БАРМОҚЛИ ИЧАК ЯРАСИ УЧРАШ ЭПИДЕМИОЛОГИЯСИ //Oriental renaissance: Innovative, educational, natural and social sciences. – 2022. – Т. 2. – №. 4. – С. 642-647.

11. Zokirovna O. A. Modern Concepts of Idiopathic Pulmonary Fibrosis //American Journal of Pediatric Medicine and Health Sciences. – 2023. – Т. 1. – №. 3. – С. 97-101.
12. Zokirovna O. A. Pathology of Precancerous Conditions of the Ovaries //American Journal of Pediatric Medicine and Health Sciences. – 2023. – Т. 1. – №. 3. – С. 93-96.
13. Зокировна, Олимова Азиза и Тешаев Шухрат Джумаевич. «Морфологические аспекты печени белых беспородных крыс после тяжелой черепно-мозговой травмы, вызванной экспериментально в виде дорожно-транспортного происшествия». *Scholastic: Journal of Natural and Medical Education* 2.2 (2023): 59-62.
14. Zokirovna O. A. Comparative characteristics of the morphological parameters of the liver at different periods of traumatic brain injury //Euro-Asia Conferences. – 2021. – С. 139-142.
15. Zokirovna O. A. Macroand microscopic structure of the liver of threemonthly white rats //Academic research in educational sciences. – 2021. – Т. 2. – №. 9. – С. 309-312.
16. Олимова А. З. Частота Встречаемости Миомы Матки У Женщин В Репродуктивном Возрасте //BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI. – 2021. – Т. 1. – №. 6. – С. 551-556.
17. Zokirovna O. A., Abdurasulovich S. B. Ovarian Diseases in Age of Reproductive Women: Dermoid Cyst //IJTIMOIY FANLARDA INNOVASIYA ONLAYN ILMIY JURNALI. – 2021. – Т. 1. – №. 6. – С. 154-161.
18. Zokirovna O. A. Cytological screening of cervical diseases: pap test research in the bukhara regional diagnostic center for the period 2015-2019. – 2022.
19. Zokirovna O. A., PREVALENCE R. M. M. EPIDEMIOLOGY OF CANCER OF THE ORAL CAVITY AND THROAT IN THE BUKHARA REGION //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 11. – С. 545-550.
20. Olimova A. Z. The frequency of occurrence of my uterus In women of reproductive age //JOURNAL OF ADVANCED RESEARCH AND STABILITY (JARS). – 2021. – Т. 1. – №. 06. – С. 551-556.
21. Olimova Aziza Zokirovna. (2023). MODERN PRINCIPLES OF THE EFFECT OF HEMODIALYSIS THERAPY ON HEART RATE. *International Journal of Integrative and Modern Medicine*, *1*(1), 80–85. Retrieved from http://medicaljournals.eu/index.php/IJIMM/article/view/28
22. Olimova Aziza Zokirovna. (2023). PATHOMORPHOLOGICAL CHARACTERISTICS OF THE EPIDIDYMIS UNDER IRRADIATION. *International Journal of Integrative and Modern Medicine*, *1*(1), 96–100. Retrieved from http://medicaljournals.eu/index.php/IJIMM/article/view/31
23. Olimova Aziza Zokirovna. (2023). THE INCIDENCE OF CANCER OF THE ORAL CAVITY AND PHARYNX IN THE BUKHARA REGION. *International Journal of Integrative and Modern Medicine*, *1*(1), 86–89. Retrieved from http://medicaljournals.eu/index.php/IJIMM/article/view/29
24. Olimova Aziza Zokirovna. (2023). INFLUENCE OF ALCOHOL INTOXICATION ON THE HEART TISSUE OF RATS IN THE EXPERIMENT. *International Journal of Integrative and Modern Medicine*, *1*(1), 90–95. Retrieved from http://medicaljournals.eu/index.php/IJIMM/article/view/30
25. Olimova Aziza Zokirovna. (2023). Modern Aspects of the Etiology of Gastric Ulcer and Its Complications. *American Journal of Pediatric Medicine and Health Sciences (2993-2149)*, *1*(3), 163–166. Retrieved from http://grnjournal.us/index.php/AJPMHS/article/view/208
26. Zokirovna O. A., Jumaevich T. S. Morphological Aspects of the Liver of White Outbred Rats After Severe Traumatic Brain Injury Caused Experimentally in the Form of a Road Accident //Scholastic: Journal of Natural and Medical Education. – 2023. – Т. 2. – №. 2. – С. 59-62.

27. Aziza Zokirovna Olimova GASTRIC ULCER AND ITS COMPLICATIONS // Scientific progress. 2022. №3. URL: https://cyberleninka.ru/article/n/gastric-ulcer-and-its-complications (дата обращения: 28.09.2023).
28. Olimova Aziza Zokirovna. (2022). TECHNIQUE FOR CUTTING BIOPSY AND SURGICAL MATERIAL IN THE PRACTICE OF PATHOLOGICAL ANATOMY AND FORENSIC MEDICINE. *Web of Scientist: International Scientific Research Journal*, *3*(7), 116–120. https://doi.org/10.17605/OSF.IO/PSQ59
29. Zhumayevich N. F., Zokirovna O. A. PATHOMORPHOLOGY OF GASTRIC CANCER //BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI. – 2022. – С. 330-333.
30. Zokirovna O. A. Epidemiological and Etiological Data of Morphogenesis and Pathomorphology of Congenital Heart Diseases in Children //American Journal of Pediatric Medicine and Health Sciences. – 2023. – Т. 1. – №. 4. – С. 88-91.