SCI-CONF.COM.UA

SCIENCE AND SOCIETY: MODERN TRENDS IN A CHANGING WORLD

PROCEEDINGS OF IV INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE MARCH 18-20, 2024

VIENNA
2024

SCIENCE AND SOCIETY: MODERN TRENDS IN A CHANGING WORLD

Proceedings of IV International Scientific and Practical Conference

Vienna, Austria

18-20 March 2024

Vienna,

Austria 2024

TABLE OF CONTENTS

AGRICULTURAL SCIENCES

1. ***Гуменюк В. О.*** 11
ОРГАНІЗАЦІЙНА ОПТИМІЗАЦІЯ ВЕДЕННЯ ПІДПРИЄМНИЦЬКОЇ ДІЯЛЬНОСТІ В МОЛОЧНОМУ АГРАРНОМУ СЕКТОРІ УКРАЇНИ: РОЛЬ КООПЕРАТИВНИХ ТА ІНТЕГРАЦІЙНИХ ПРОЦЕСІВ ТА ЦИФРОВІЗАЦІЇ ВИРОБНИЦТВА ТА УПРАВЛІННЯ
2. ***Завірюха П. Д., Торський І. М., Шутка Т. Г.*** 16
ВИКОРИСТАННЯ МІЖСОРТОВИХ СХРЕЩУВАНЬ ДЛЯ СТВОРЕННЯ ГІБРИДНИХ ФОРМ, ЦІННИХ ДЛЯ ПРАКТИЧНОЇ СЕЛЕКЦІЇ КАРТОПЛІ
3. ***Шевченко Т. В.*** 23
ПРОДУКТИВНІСТЬ КАРТОПЛІ ЗА УМОВ НАСИЧЕННЯ СІВОЗМІН КУЛЬТУРОЮ НА ҐРУНТАХ ПОЛІССЯ УКРАЇНИ

BIOLOGICAL SCIENCES

4. ***Алекперов Рамиз Алекпер оглы, Газиев Афиг Гурбанали оглы, Алиева Дилруба Бурхан кызы, Мирджалалли Ильхама Башарат кызы, Аббасзаде Захраханум Фарахим кызы, Ахмедова Венера Рамиз кызы*** 29
ЕСТЕСТВЕННЫЕ ПУТИ УКРЕПЛЕНИЯ ИММУНИТЕТА
5. ***Ворошилова Н. М., Бурлака Ю. Б.*** 38
ДОСЛІДЖЕННЯ ПОКАЗНИКІВ РІЗНИХ ЛАНОК СИСТЕМИ ГЕМОСТАЗУ У ПАЦІЄНТІВ З СЕНСОНЕВРАЛЬНИМИ ПОРУШЕННЯМИ СЛУХУ ВНАСЛІДОК ПОВТОРНИХ АКУТРАВМАТИЧНИХ УРАЖЕНЬ У ЗОНІ БОЙОВИХ ДІЙ
6. ***Роппе-Тенеїшвілі О. В., Пересада Є. А.*** 45
ДОСЛІДЖЕННЯ ДЕЯКИХ МІСЦЕЗРОСТАНЬ ПОПУЛЯЦІЙ ПУХІВКИ ПІХВОВОЇ (ERIOPHORUM VAGINATUM L.) НА ТЕРИТОРІЯХ УКРАЇНИ (ХАРКІВСЬКІЙ, СУМСЬКІЙ, ЗАКАРПАТСЬКІЙ, ЧЕРНІГІВСЬКІЙ, ЖИТОМИРСЬКИХ ОБЛАСТЯХ ЗА ПЕРІОД 2013-2023РР.)

MEDICAL SCIENCES

7. ***Astanakulova M. M., Ismailova Sadoqat Solijon qizi*** 53
MODERN APPROACHES TO TOPICAL TREATMENT OF EXFOLIATIVE CHEILITIS
8. ***Kuranbaeva S. B., Adilbekova D. B.*** 57
MORPHOLOGICAL STATE OF THE OVARIES OF THE OFFSPRING OF FEMALES WITH EXPERIMENTAL DIABETES MELLITUS

9. ***Levandovska K., Naluzhna T., Tymochko N.*** 61
THE INFLUENCE OF L-ARGININE ON THE DYNAMICS OF BORG SCALE INDICATORS IN PATIENTS WITH DECOMPENSATED HEART FAILURE IN THE POST-INFARCTION PERIOD
10. ***Nedostup I. S., Pavlykivska B. M., Kocherha Z. R., Tkach B. N., Fedyshyn L. L.*** 65
INFLUENCE OF MARTIAL STATUS ON STRESS RESISTANCE AND THE CHOICE OF COPING STRATEGIES BY IFNMU STUDENTS
11. ***Ponomarova I., Lisyana T., Timofieeva A., Matiashova O.*** 68
STUDY OF CHANGES IN BACTERIOLOGICAL CONTAMINATION OF THE GENITAL TRACT IN WOMEN WITH HYPERPROLIFERATIVE DISEASES OF THE PELVIC ORGANS WHICH CAME DURING COMBAT ACTIONS IN UKRAINE
12. ***Rasbergenov A. A., Adilbekova D. B.*** 74
ASSESSMENT OF THE MORPHOLOGICAL STATE OF THE SMALL INTESTINE OF OFFSPRING BORN FROM MOTHERS WITH DIABETES
13. ***Zenkina L. M.*** 78
ASSESSMENT OF PAIN SYNDROME IN PATIENTS WITH DIABETES DURING ENDOPROSTHESIS OF HIP AND KNEE JOINTS
14. ***Ахраров Хабибулла Хамидуллаевич, Муродхожаева Мадинабону Шамсиддинхужа кизи, Календарова Шоира Отабек кизи, Мясникова Ю. Ю.*** 80
ДИНАМИКА ИЗУЧЕНИЯ ФИЗИОЛОГИИ УХО ЧЕЛОВЕКА
15. ***Жук С. В., Старішко О. М.*** 88
МЕТОДИ ВИЗНАЧЕННЯ УРОГЕНІТАЛЬНОГО ТРИХОМОНІАЗУ
16. ***Назарова Д. И., Чайкина К. В.*** 94
ПОРАЖЕНИЕ ЗРИТЕЛЬНОГО АНАЛИЗАТОРА ПРИ БОЛЕЗНИ ФАБРИ
17. ***Негода Ю. С., Серветник А. В.*** 98
ОСОБЛИВОСТІ КЛІНІЧНОЇ КАРТИНИ У ДІТЕЙ ПРИ СЕПТИЧНОМУ ШОЦІ
18. ***Слабкий Г., Василинець М.*** 101
ЕПІДЕМІОЛОГІЯ УРАЖЕНЬ ВЕЛИКИХ СУГЛОБІВ ЖИТЕЛІВ ЗАКАРПАТТЯ ЯК ЧИННИК ФОРМУВАННЯ РЕГІОНАЛЬНОЇ СИСТЕМИ РЕКОНСТРУКТИВНОЇ ОРТОПЕДО-ТРАВМАТОЛОГІЧНОЇ ДОПОМОГИ
19. ***Смирнова В. І., Таран О. С., Халілов Емін Парвіз огли, Гейдаров Гусейн*** 105
ВИКОРИСТАННЯ СИМУЛЯЦІЙНОГО НАВЧАННЯ ДЛЯ ЗДОБУВАЧІВ ВИЩОЇ МЕДИЧНОЇ ОСВІТИ У СЬОГОДЕННІ ТА ПЕРСПЕКТИВИ НА МАЙБУТНЄ

20. ***Смирнова В. І., Марчук А. В., Шнейдер О. А.*** 111
ВИКОРИСТАННЯ ВІРТУАЛЬНОЇ РЕАЛЬНОСТІ В НАВЧАННІ ЗДОБУВАЧІВ ВИЩОЇ МЕДИЧНОЇ ОСВІТИ СЬОГОДНІ ТА ПЕРСПЕКТИВИ ЇЇ РОЗВИТКУ В МАЙБУТНЬОМУ
21. ***Смирнова В. І., Рева К. О., Сіваш П. Ю.*** 116
СИМУЛЯЦІЙНЕ НАВЧАННЯ В ПРОПЕДЕВТИЦІ ВНУТРІШНІХ ХВОРОБ
22. ***Торяник І. І.*** 120
НЕВУС. КЛІНІЧНА СУТНІСТЬ, ТИПОЛОГІЯ ТА ДІАГНОСТИЧНА ЗНАЧИМІСТЬ. (РЕТРОСПЕКТИВА ТА СЬОГОДЕННЯ)
23. ***Фіщук С. М., Різниченко О. К.*** 127
ЗНАЧЕННЯ ЗАСТОСУВАННЯ МЕЗЕНХІМАЛЬНИХ СТОВБУРОВИХ КЛІТИН В ЛІКУВАННІ НЕЙРОДЕГЕНЕРАТИВНИХ ЗАХВОРЮВАНЬ

MORPHOLOGICAL STATE OF THE OVARIES OF THE OFFSPRING OF FEMALES WITH EXPERIMENTAL DIABETES MELLITUS

Kuranbaeva S. B.,
Adilbekova D. B.
Tashkent Medical Academy, Tashkent, Uzbekistan

Relevance. The problem of perinatal pathology caused by diabetes mellitus in mothers remains one of the most pressing problems in obstetrics, neontology and pediatrics. The influence of maternal diabetes mellitus on the condition and development of the intrauterine fetus and offspring remains poorly understood [2, 4, 5, 8, 9]. Children born to mothers with diabetes have their own characteristics compared to the offspring of healthy mothers. Rates of perinatal mortality and morbidity in newborns remain high in this group. In women with diabetes mellitus untreated during pregnancy, it reaches 70-80% [1, 3, 7]. Early neonatal mortality is 5-8 times higher than the corresponding rate in the general population [6]. Based on this, the relevance of studying this medical and social problem follows.

Purpose of the study. To study postnatal gonadal morphogenesis in the offspring of females with experimental diabetes mellitus.

Materials and methods of research. The object of our morphological study is materials from the ovary of intact and female rat pups with experimental diabetes mellitus on days 3, 7, 14 of the postnatal period of life. To create a model of diabetes, sexually mature female rats were intraperitoneally injected with alloxan in acetate-citrate buffer at a rate of 11 mg% per 100 g of weight. On the 3rd day of the experiment, males were added to the females. The subject of the study was materials from the ovaries of female rat pups. General morphological and electron microscopic research methods were used in the work.

Results. The ovaries are a paired organ that performs two important functions: reproductive, expressed in the formation of female germ cells, and endocrine, realized in the production of sex hormones. By birth, the surface of the ovary of 3-7 day old intact rat pups is thin, smooth, and covered with a thin connective

membrane. Histologically, most structures are formed; there are few gonocytes. The ovary consists of a cortical and medulla layer. The cortical layer is filled with primordal ones, and in the deep sections there are maturing and atretic follicles, with venules visible between them. The intima of venules consists of a single row of endothelial cells. In the ovary of 7-day-old rat pups, the cortex and medulla are clearly distinguishable. Intraorgan venules are detected in the periphery of the cortical and medullary zones. The number of primordal follicles is determined by the intensity of oogonia death through apoptosis. Depending on the degree of development of the follicles and connective tissue, euplastic, hyperplastic and hypoplastic types of ovarian structure are distinguished. Studies have shown the dependence of the morphological structure of the ovary on the pathology of the gestational period. There is a synchronicity in the processes of differentiation of ovo-somatic histions and the formation of the microvasculature. There was no active folliculogenesis; there was a tendency for the appearance of individual vesicular follicles. At the ultrastructural level of ovarian tissue, specific changes are observed in the follicular region, indicating differentiation and formation of cells of the interstitial glandular type. In rat pups born from females with experimental diabetes mellitus, the cortical and medulla layers of the ovary are well differentiated in the early periods of postnatal life. In the cortical layer of the ovary, reactive-inflammatory and dystrophic processes are observed; in the deep layers of the stroma of the cortical layer, a relatively small number of primordial, primary, secondary, tertiary - Graph follicles are revealed in comparison with the descendants of intact rats. On the 14th day of postnatal life in rat pups, follicle development lags behind. Dystrophic and atrophic changes are revealed in the perifollicular theca cells. Graph cells are in a state of dysfunction, atretic follicles are detected.

Conclusions.

1. In the early periods of postnatal ontogenesis, most structures are formed in the ovaries of intact rat pups, there are few gonocytes, there is no active folliculogenesis, specific changes are noted in the follicular region, indicating the differentiation and formation of cells of the interstitial glandular type.

2. In the early periods of postnatal ontogenesis, in the ovaries of rat pups born from mothers with diabetes mellitus, the cortical and medullary layers are differentiated, however, inflammatory-reactive and dystrophic changes are noted in the stroma, and a lag in the development of the structural components of the ovary.

LITERATURE

1. Bryukhin G. V., Antonov S. D. Morphofunctional characteristics of endocrine cells in the testes of mature rats from mothers with experimental type 1 diabetes mellitus // Problems of reproduction. - 2019. - T. 25. No. 6. - P. 29-32.

2. Taspaeva I. M. Analysis of the condition of newborns from mothers with diabetes // Bulletin of medical Internet conferences. - 2020. - T. 10. No. 2. - P. 58.

3. Samoshkina E. S., Mukhina L. Yu., Yaroslavtseva A. V., Shirokova A. A. The state of health of newborn children born to mothers with diabetes mellitus//Modern problems of science and education. - 2022. - No. 4. - P. 94.

4. Babichev V. N., Shishkina I. V. Formation of the reproductive system in the offspring of rats with streptozotocin diabetes // Problems of endocrinology. - 1994. - T. 40. No. 2. - P. 60-62.

5. Vasilievich B. G., Antonov S. D. The influence of maternal experimental diabetes mellitus type 1 on the morphofunctional characteristics of offspring spermatozoa // American Scientific Journal. -2020. - No. 37-1 (37). - pp. 24-28.

6. Bryukhin G. V., Antonov S. D. Spermatogenic cycle in the offspring of female rats with experimental type 1 diabetes mellitus in the early neonatal period // Morphological statements. - 2019. - T. 27. No. 4. - P. 16-20.

7. Wang A, Luo B, Chen Z, Xia Y, Chen C, Qi H, Baker PN, Saffery R, Han TL, Zhang H. Rodents on a high-fat diet born to mothers with gestational diabetes exhibit sex-specific lipidomic changes in reproductive organs. Acta Biochim Biophys Sin (Shanghai). 2022 May 25;54(5):736-747. doi: 10.3724/abbs.2022052. PMID: 35643955; PMCID: PMC9828243.

8. Tertti K, Toppari J, Virtanen HE, Sadov S, Rönnemaa T. Metformin Treatment Does Not Affect Testicular Size in Offspring Born to Mothers with

Gestational Diabetes. Rev Diabet Stud. 2016 Spring;13(1):59-65. doi: 10.1900/RDS.2016.13.59. Epub 2016 Jan 28. PMID: 26859658; PMCID: PMC5291182.

9. Arendt LH, Lindhard MS, Henriksen TB, Olsen J, Cnattingius S, Petersson G, Parner ET, Ramlau-Hansen CH. Maternal Diabetes Mellitus and Genital Anomalies in Male Offspring: A Nationwide Cohort Study in 2 Nordic Countries. Epidemiology. 2018 Mar;29(2):280-289. doi: 10.1097/EDE.0000000000000781. PMID: 29112520.

ASSESSMENT OF THE MORPHOLOGICAL STATE OF THE SMALL INTESTINE OF OFFSPRING BORN FROM MOTHERS WITH DIABETES

Rasbergenov A. A.,
Adilbekova D. B.
Tashkent Medical Academy, Tashkent, Uzbekistan

Maternal diabetes mellitus negatively affects the morphological state of the vascular-tissue structures of the small intestine of the offspring in the early stages of postnatal development, causing reactive and dystrophic changes in them. At the basis of these pathomorphological changes, the leading role is played by morphofunctional disorders of the intraorgan vascular bed of the small intestine. These dystrophic and trophic disorders in the vascular tissue structures subsequently lead to the persistence of postnatal growth, development and formation of the small intestine.

Key words: experimental diabetes mellitus, offspring, small intestine, vascular tissue structures.

Relevance. Diabetes mellitus is a significant medical and social problem of modern society, affecting all age groups, including women of fertile age [1, 3, 6]. The global prevalence of hyperglycemia in pregnant women averages 16.7%, with about 80.3% of cases associated with gestational diabetes mellitus [2, 4, 7, 8]. The presence of diabetes mellitus in the mother not only negatively affects the development of the child, but also worsens the course of pregnancy, increasing the risk of developing obstetric complications [5, 9]. Despite this, the influence of diabetes mellitus on the morphofunctional state of the internal organs of the fetus and subsequently on the offspring has not yet been sufficiently studied throughout the world. The available data are fragmentary and do not provide a complete picture of the morphological state of the vascular-tissue structures of the internal organs

Purpose of the study. To study the postnatal morphological state of the small intestine of the offspring of mothers with diabetes mellitus.

Materials and methods of research. The object of our morphological study is

materials from the ovary of intact and female rat pups with experimental diabetes mellitus on days 3, 7, 14 of the postnatal periods of life. To create a model of diabetes, sexually mature female rats were intraperitoneally injected with alloxan in acetate citrate buffer at a rate of 11 mg% per 100 g of animal weight. On the 3rd day of the experiment, males were added to the females. The subject of the study was materials from the small intestine of female rat pups born from females with experimental diabetes mellitus. General morphological and electron microscopic research methods were used in the work.

Results. A study of histological preparations of the small intestine of rat pups in the early 7th day of postnatal life showed that in the offspring of rats whose mothers suffer from diabetes mellitus, inflammatory-dystrophic processes are observed in all layers of the wall of the small intestine. The stroma of the mucous membrane is swollen and infiltrated with mononuclear cells. The epithelial cells are swollen, low-cylindrical in shape, and the intercellular boundaries are unclear. The cell nuclei are polymorphic, in the basal part the cells are located slightly unevenly. In the mucous membrane, many round-shaped goblet cells filled with secretions are visible. Serous layer of varying thickness, with a pronounced basophilic color. Interstitial edema is observed to varying degrees. An increase in proliferation processes in mesothelial cells is observed.

The vessels of the venous section are revealed to be full of blood, and in some places the capillaries are tortuous. Among the epithelial cells, intraepithelial lymphocytes are often detected, the cytoplasm of which is light, and the organelles are rare.

Epithelial cells are irregular in shape, pseudopodia are immersed in the crevices of epithelial cells. Electron microscopic studies revealed slight swelling and expansion of the intercellular spaces. In some epithelial cells, swelling, shrinkage, and destruction of microvilli were observed.

Conclusions. 1. Diabetes mellitus in the mother negatively affects the morphological state of the small intestine of the offspring, causing inflammatory-reactive and dystrophic changes in the vascular-tissue structures.

2. In the development of the identified pathomorphological processes in the vascular-tissue structures of the small intestine of the offspring, the leading role is played by morphological changes in the microvessels of the small intestine, which subsequently lead to trophic disorders in the tissue structures of the intestine.

LITERATURE

1. Bespalova O. N., Shengelia M. O., Shengelia N. D. The influence of diabetes mellitus of various origins in the mother on the formation of congenital malformations of the fetus: Pregnancy and diabetes mellitus. - Moscow, 2023.-pp. 63-73.

2. Gromova L. V., Polozov A. S., Kornyushin O. V., Grefner N. M., Dmitrieva Yu. V., Alekseeva A. S., Gruzdkov A. A. Glucose absorption in the small intestine of rats with experimental type 2 diabetes // Journal of Evolutionary Biochemistry and Physiology. - 2019. - No. 2. - P.145-147.

3. Miroshnik E. V., Ryumina I. I., Zubkov V. V. The influence of maternal diabetes on the health of the newborn // Obstetrics and Gynecology. - 2016. - No. 9. - P. 45-49.

4. Miroshnik E. V., Ryumina I. I., Orbu A. M., Narogan M. V., Alekseev A. A. Phenotype of a newborn with diabetic fetopathy // Neonatology: news, opinions, training. - 2020. - T. 8. No. 4 (30). - P. 28-32.

5. Panina O. S., Kroshkina D. V. Clinical and anamnestic characteristics of newborn children born to mothers with gestational diabetes mellitus // Russian Bulletin of Perinatology and Pediatrics. - 2021. - T. 66. No. 4. - P. 220-221.

6. Taspaeva I. M. Analysis of the condition of newborns from mothers with diabetes // Bulletin of medical Internet conferences. - 2020. - T. 10. No. 2. - P. 58.

7. Damm P, Houshmand-Oeregaard A, Kelstrup L, Lauenborg J, Mathiesen ER, Clausen TD. Gestational diabetes mellitus and long-term consequences for mother and offspring: a view from Denmark // Diabetologia. 2016 Jul;59(7):1396- 1399.

8. Li X, Luo SJ, Zhang K, Yang HX. Streptozotocin-induced maternal

intrauterine hyperglycemia environment and its influence on development and metabolic in adult offspring with high birth weight in rats // Zhonghua Fu Chan Ke Za Zhi. 2012 Oct;47(10):769-76.

9. Ozkan H, Topsakal S, Ozmen O. Investigation of the diabetic effects of maternal high-glucose diet on rats // Biomed Pharmacother. 2019 Feb;110:609-617.