ISSN 2181-3187

MORPHOLOGICAL CHANGES IN THE LIVER DURING EXPERIMENTAL HYPODYNAMIA

Sobirova Gozal Zafar kizi –

Master student, Tashkent State Medical University

Nortaev Azamat Begmatovich –

assistant, PhD, Tashkent State Medical University

Inatov Akhmad Azamkhon ogli –

assistant, Tashkent State Medical University

Yuldashev Khasan Dilshod ogli –

student, 2 - Faculty of Medicine,

Tashkent State Medical University

(Tashkent, Uzbekistan)

Abstract: Scientists who studied the effect of hypodynamia on the structure and function of the liver have conducted several studies. Hypodynamia (reduced activity, from the Greek hypos - "less" and dynamos - "movement") is a violation of body functions (musculoskeletal system, circulatory system, respiratory system, digestive system) with a decrease in motor activity, a decrease in the force of muscle contraction. Currently, due to urbanization, automation and mechanization of labor, and an increase in the role of communication media, the prevalence of physical inactivity is increasing. A sedentary lifestyle is the cause of many diseases. Physical inactivity is the result of a person's freedom from physical labor..

ISSN 2181-3187

Key words: liver, white laboratory rat, morphological indicator.

Scientists who studied the effect of hypodynamia on the structure and function of the liver have conducted several studies. Hypodynamia (reduced activity, from the Greek hypos - "less" and dynamos - "movement") is a violation of body functions (musculoskeletal system, circulatory system, respiratory system, digestive system) with a decrease in motor activity, a decrease in the force of muscle contraction. Currently, due to urbanization, automation and mechanization of labor, and an increase in the role of communication media, the prevalence of physical inactivity is increasing. A sedentary lifestyle is the cause of many diseases. Physical inactivity is the result of a person's freedom from physical labor.

Inactivity is often observed in the population after 35-40 years of age due to the development of fatty tissue in various areas of the body and other reasons. According to statistics from 2023, 5 million people died as a result of smoking, and 5.3 million people died as a result of physical inactivity. This result is a 1-year result. It is clear that low physical activity is even more dangerous than smoking.

The purpose of the study: Study of morphological changes in the liver during experimental hypodynamia.

Research materials and methods. To achieve the goal, 84 white laboratory rats are used. White laboratory rats are divided into 2 groups. Group 1 is a control group of healthy rats. Rats in the control group are given 1.0 ml of saline solution every morning into the stomach. A subclavian catheter is used as a probe. After normal feeding, the rats are anesthetized under ether anesthesia on days 3, 7, 14, 21 and 30 Group 2 is an experimental group, in which 50 white laboratory rats are given excess food to induce experimental hypodynamia. As a result, the rats gain excess weight and become inactive. Study of morphological changes in the liver during experimental hypodynamia. To achieve the goal, 84 white laboratory rats are used.

ISSN 2181-3187

White laboratory rats are divided into 2 groups. Group 1 is a control group of healthy rats. Rats in the control group are given 1.0 ml of saline solution every morning into the stomach. A subclavian catheter is used as a probe. After normal feeding, the rats are anesthetized under ether anesthesia on days 3, 7, 14, and 21. Group 2 is an experimental group, in which 50 white laboratory rats are given excess food to induce experimental hypodynamia. As a result, the rats gain excess weight and become inactive. The following methods are used: general histological, organometric, morphometric, methods are used.

After opening the abdominal cavity and separating the liver, the length, width, and thickness of the organ are measured. These dimensions of the liver are measured using a caliper. An electric scale is used to measure the weight of the liver of mice and rats. Paraffin histological sections prepared on a rotor microtome with a thickness of 8-10 μm are stained using the hematoxylin-eosin method.

Diagram 1

Organometric changes in the liver of rats are shown in the table below

During the study, morphological changes in liver tissue were found,in particular,inflammation, necrosis and changes in Cell structure.These results provide new information on the effects of stress on liver function and its features during pregnancy.

Conclusion. 1. At the same time, in most areas, lymphoid cells are distributed evenly.

2. The size of the segments was also reduced in length and diameter, and in some cases, necrosis was observed.

References

1. Akhmedova S.M., Nortaeva N.A., Nortaev A.B. Morphological changes in the teeth of adolescent children with hypotireosis // Collection of materials of the

scientific and practical conference with international participation, dedicated to the 100th anniversary of the Tashkent Medical Academy, "100 years of the Tashkent Medical Academy – the era of great achievements and discoveries". Tashkent, 2022 - P. 199-200

2. Nortaeva N.A., Akhmedova S.M., Nortaev A.B. Morphological changes in the teeth adolescent children with hypotireosis // Problems of biology and medicine. - Samarkhand, 2022. - P 270. ISSN 2182-5674, https://doi.org/10.38096/2181-5674.2022

3. Nortaeva N.A., Nortaev A.B. Morphological changes in teeth against the background of experimental hypothyroidism // Topical issues of modern scientific research.-Dushanbe 2022.-P 168.

4. Nortaeva N.A., NortaevA.B. Morphological changes in the tooth in experimental hypothyroidism // Issues of innovative development of science, education and technology. - Andijan, 2022.-P 273-275

5. Nortaeva N.A., Nortaev A.B., Akhmedova S.M. To study the morphological changes in the tooth against the background of experimental hypothyroidism // Current problems of microbiology. - Tashkent, 2022 -P. 148-152

6. Nortaeva N.A. Morphological changes in teeth as a result of malnutrition in preschool children // Proceedings of the conference dedicated to the 95th anniversary of academician, morphologist, scientist Komiljon Zufarov. - Tashkent, 2021 -P. 34-36

7. Nortaeva N.A., Akhmedova S.M. Morphological changes in the dental in experimental hypotireosis // Collection of materials of the scientific and practical conference of young scientists with international participation, dedicated to the 100 th anniversary of the Tashkent Medical Academy, «innovative approaches in medicine». Tashkent, 2022 -P. 51

8. Nortaeva N.A., Akhmedova S.M., Nortaev A.B. Anthropometric indicators of the maxillofacial system in school–aged children with hypothyroidism // Modern scientific research topical issues, achievements and innovations. Current scientific issues, current affairs, achievements and innovations. Penza, 2023 –P. 153. ISBN 978-5-00173-707-0

9. Nortaeva N.A., Akhmedova S. M., Nortaev A.B., Rajabov B.M. Changes in the face-jaw system of experimental hypothyroidism // Texas Journal of Medical Science https://zienjournals.com 2023 –P. 61-64 ISSN NO: 2770-2936

10. Nortaeva N., Akhmedova S., Berdiev O., Anthropometric dimensions of the maxillofacial system in children with hypothyroidism aged 8-16 year // Journal of Medicine and Innovations www.tsdi.uz 2023 –P. 230-235 ISSN 2181-1873

11. Nortaeva N.A.,Akhmedova S.M.,Nortaev A.B, Effects of hypothyroidism on the maxillofacial system // Uzbek journal of case reports 2023 –P.126, Том 3. https://doi.org/10.55620/ujcr.3.sp.2023

12. 1. Usmanov R.Dj., Gulmanov I.D., Nortaev A.B. Development and prevalence of periodontal diseases in workers working with chemical paints // 100 years of the Tashkent Medical Academy – the era of great achievements and discoveries – 2022. P-244.

13. 2. Saidov A.A. Periodontal disease and its prevention in workers of the textile industry // Monograph-2020. 134 p.

14. 3. Volozhin A.I., Filatova E.S., Petrovich Y.A. and others. Evaluation of the state of the periodontal by the chemical composition of the environment of the oral cavity // Dentistry. -2000. №1- P. 13-16.

15. 4. Nortaev A.B., Rajabov B.M., Berdiev O.V. Oral inflammation in light industry workers // Texas Journal of Medical Science ISSN NO: 2770-2936. - 2023. P-84-86. https://zienjournals.com

16. 5. Nortaev A.B.,Usmanov R.Dj.,Nortaeva N.A. Periodontal disease and its complications in 21-30-year-old chemical paint workers // Journal of medicine and innovations ISSN 2181-1873 2023.P-215-220 www.tsdi.uz

17. Nortaev A.B.,Usmanov R.Dj., Berdiev O.V. Use of cefixime in the treatment of periodontal disease in industrial employees // Farmaecutil journal №3, 2023 P. 77-80 UDK: 616.314.18-002.4-885:615.331:323.329

18. Nortaev A.B.,Usmanov R.Dj.,Ibragimova Sh.A. Severe Consequences of the Development of Periodontal Disease in the Example of Employees Working in Light Industrial Plants // Texas Journal of Medical Science ISSN NO: 2770-2936 https://zienjournals.com Date of Publication:06-05-2023 P- 110-113

19. Nortaev A.B., Usmanov R.Dj., Berdiev O.V. Periodontal disease and its complications in 21-30-year-old chemical paint workers // Journal of oral medicine and craniofacial research Samarkhand - 2023. P.-21

20. Nortaev A.B., Akhmedova S.M., Usmonov R.Dj. Periodontal disease and its development in the case of employees of chemical shops // Uzbek journal of case reports Part 3. Samarkhand - 2023. P.-130

21. Nortaev A.B., Usmanov R.Dj., Rajabov B.M. The level of periodontal disease in 20-28-year-old textile industry workers // 77th International Scientific and Practical Conference "Achievements of Fundamental, Applied Medicine and Pharmacy". Samarkhand - 2023. P.-525

22. Nortaev A.B.,Usmanov R.Dj.,Gulmanov I.Dj. Etiology of the development of periodontal disease in workers of the manufacturing industry // "Current aspects of the pathogenesis of diseases caused by environmental factors" Materials of international scientific and practical conference Tashkent – 2023. P-11-12