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SHIELD OF INTESTINAL MICROFLORA CHANGE EFFECT ON THE GLANDS

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Annotation.
According to WHO data, more than 2 billion people live in areas with iodine deficiency. Among them: 740 million people suffer from endemic goiter, 43 million are mentally retarded, and more than 6 million suffer from cretinism, a high level of mental retardation, and all these cases are caused by iodine deficiency.
Key words: morphology, small intestine, traumatic brain injury, white rats.

Relevance. Environmental conditions are of great importance for the development of goiter in many regions of the world. In some regions, this disease occurs in 90% of the population[2]. Dysfunction of the thyroid gland during pregnancy with iodine deficiency leads to toxicosis and gestosis in 54.5%, increased risk of abortion - 18.2%, fetal perinatal encephalopathy - 68.2%, it can cause hydrocephalus, microcephaly and Down's disease - 18-25%, congenital hypothyroidism, thyrotoxicosis - 18-25% and endanger the fetus [3]. Inadequate intake of iodine during pregnancy leads to impaired growth and development of the fetus, decreased growth rates in the abdominal cavity, decreased anthropometric indicators, the formation of congenital goiter, developmental defects, maladaptation, new causes an increase in the morbidity of children born, and an increase in the death rate [4].

At the beginning of the 21st century, for the medical community, the spread of diseases caused by iodine deficiency has become an increasingly urgent and widely discussed problem in the world. Recent studies have long reported high levels of unmet iodine demand not only in landlocked and high-altitude regions, but also in other regions [5].

Implications: Emerging research has provided initial insight into the thyroid-gut axis, which directly influences gut microbiota and its metabolites by influencing intestinal micronutrient absorption, iodothyronine conversion and storage, and immune regulation. showing that it can directly or indirectly affect the thyroid gland, providing new pathogenesis. thyroid diseases and clinical management strategies. However, studies on gut microbiota and thyroid gland have only shown the tip of the iceberg. More robust clinical data and baseline experiments are still required to elucidate specific relationships and mechanisms in the future. Several microorganisms colonize many areas of the human body, including the oral cavity, respiratory tract, skin, gastrointestinal tract, and genitourinary, forming a complex microecosystem in the human body, the most complex of which is the gut. is located in the tract. Previous studies have shown that the human gut microbiota is mainly composed of bacteria, and more than 90% of them are Firmicutes, Bacteroides,

Actinomycetes, and Proteobacteria. In addition, other microbes such as viruses, fungi, parasites, archaea, etc. are part of the gut microbiome.

The purpose of the work: to study the dependence of intestinal microflora on the absorption of iodine in the body.

Materials and methods: To achieve our goal, we kept 8-week-old mature rats under normal humidity and temperature under 12-hour light/dark conditions. After a 1-week adaptation period, we divided them into 3 groups. Each group consists of 10 rats. All groups have 3 meals a day and water is free.

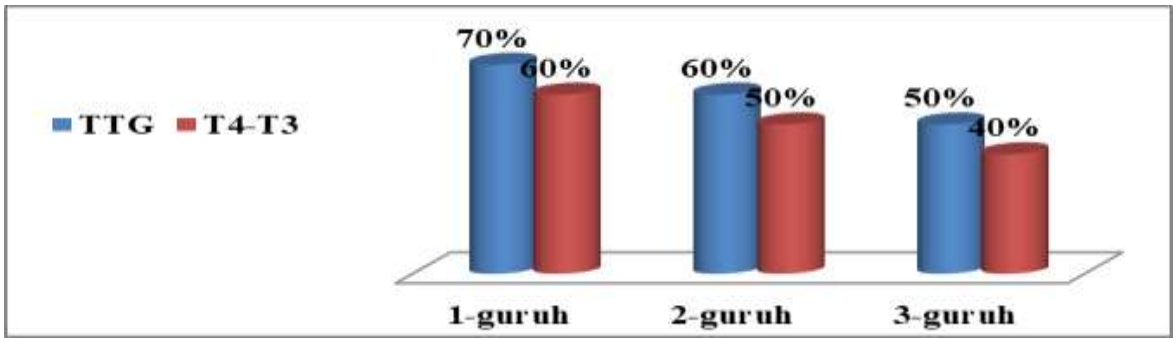
Group 1 was injected with 10 mg/kg kanamycin solution intramuscularly.

Group 2 was injected with 7.5 mg/kg kanamycin solution intramuscularly.

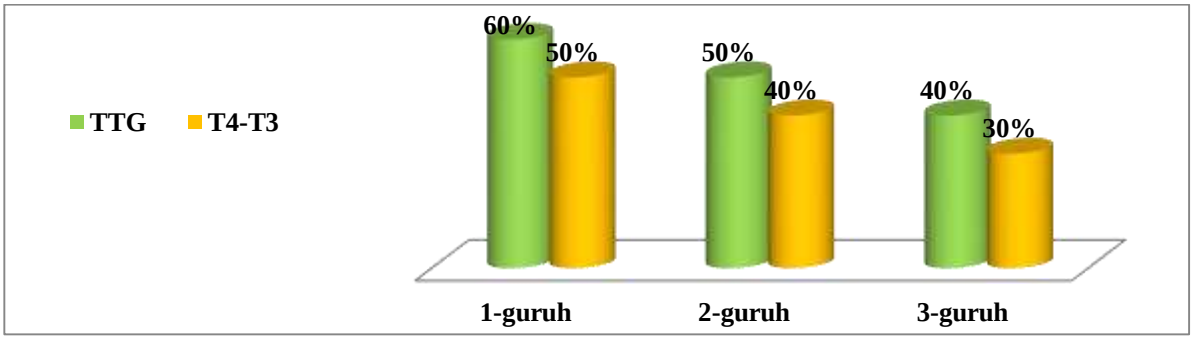
Group 3 was injected with 5 mg/kg kanamycin solution intramuscularly.

In all groups, we will analyze thyroid hormones TTG, T3, T4 on 5-10-15 days after injection of kanamycin solution.

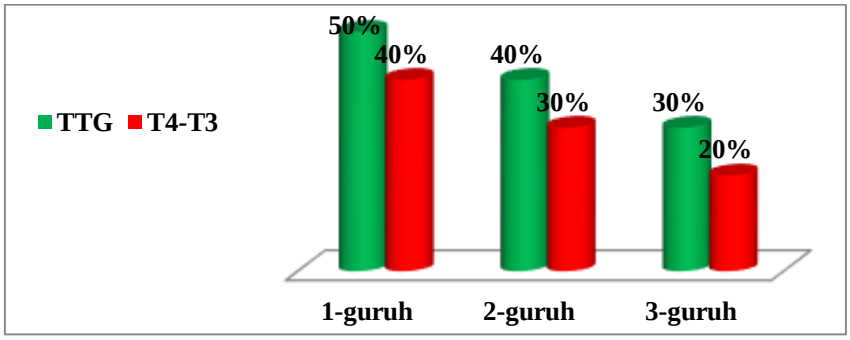
Results: on the 5th day, the thyroid hormones of group 1 rats TTG were found to be high in 70% T4-T3- low in 60%. Group 2 rats TTG was detected in 60% high indicators T4-T3- 50% low indicators. Group 3 rats TTG was detected in 50% high indicators T4-T3- 40% low indicators.



On the 10th day, the thyroid hormones of the 1st group of rats TTG were found to be high in 60% T4-T3- in 50% low. Group 2 rats TTG was detected in 50% high indicators T4-T3- 40% low indicators. Group 3 rats TTG was found to be high in 40% T4-T3- low in 30%.



On the 15th day, thyroid hormones were detected in group 1 rats, TTG was high in 50%, T4-T3 was low in 40%. Group 2 rats TTG was found to be high in 40% and T4-T3 in low in 300%. Group 3 rats TTG was found to be high in 30% of T4-T3- in 20% of low indicators.



Conclusions: As research on the intestinal microecology of thyroid diseases continues, there is increasing evidence that the gut microflora is an important environmental factor directly or indirectly influencing the development of thyroid diseases and that thyroid diseases can exacerbate disturbances in the microflora. Altering iodothyronine metabolism and affecting the absorption of thyroid-related micronutrients are pathways by which microflora and metabolites may participate in thyroid homeostasis. However, there is a causal relationship between intestinal microflora and thyroid diseases. As research continues, it is believed that future scientific advances in the study of the thyroid-gut axis will be advanced, leading to more defined relationships and mechanisms, as well as gut microenvironmental therapies.

List of references:

1. Krasnov, V.M. Sovremennoe sostoyanie problemy yoddefitsitnyx zabolevaniy // Pediatr. pharmacology. - 2020. - T. 7, No. 1. - S. 108-112.
2. Shilin D.E. Заболевания шчитовидной зеленый у детей и подростков в условиях йодной достаточности и радиационного загрязнения sredy: автореф. dis. ... Dr. Med. Nauk - M., 2011. - 47 p.
3. Delange F., Wolff P., Gnat D. et al. Iodine deficiency during infancy and early childhood in Belgium: does it pose a risk to brain development? //European J. of Pediatrics. - 2011. - Vol. 160, #4. - P. 251-254.
4. Gatseva P. Endemic goitre and iodine prophylaxis// Acta Medica Bulgarica. - 2016. - Vol. 33, No. 1. - P. 67-75.
5. Lin, N.F. Geochemical environment and health problems in Shina// Environmental Geochemistry and Health. - 2014. - Vol. 26, No. 1. - P. 81-88.