

Pathogenetic Aspects of the Properties of Water in the Human Body and the Effect of Solid Water

Nurov Sarboz Azimovich

Bukhara State Medical Institute

Abstract: The pathogenesis of groundwater with a high chemical composition is explained by the direct and indirect effects of chemicals on the body. Chemical compounds contained in water are associated with its accumulation on the walls of blood vessels and in the parenchyma of whole organs and direct and indirect effects on metabolism. This is accompanied by a violation of the physico-chemical processes in the affected cells. In this case, the permeability of the cell membrane increases or decreases.

Keywords: Radiolysis of water, atomic hydrogen, hydroperoxyl radicals, hydrogen peroxide, disulfide compounds, macrophytes.

Among the sources of water pollution, the most important place is occupied by industrial and household waste water. These wastewaters contain various acids, phenols, hydrogen sulfate, ammonia, copper, zinc, mercury, cyanide, arsenic, chromium and other toxic substances, oil, petroleum products, which are dangerous for living organisms, together with the wastewater used in industrial enterprises. joining rivers, lakes and reservoirs and polluting them. One of the factors of fulfilling these tasks, i.e. preventing the pollution of water resources and providing the population with clean drinking water, is the economical use of water resources, the reduction of used water and the improvement of water resources protection measures. Another of these issues is that it is allowed to discharge wastewater into the water body only on the condition that the pollutant content of the water body does not exceed the established standards and that the water user delivers and cleans such wastewater to the level determined by the nature protection and sanitary control authorities.

These wastewaters contain acids, phenols, hydrogen sulfate, ammonia, heavy metals, and other toxic substances that are harmful to humans and other living organisms. is polluting. In addition to high chemical substances, river waters are also polluted by sewage from livestock farms. Manure from livestock farms dissolves due to wastewater, which is added to the water of rivers, streams and lakes. As a result of the chemicalization of agriculture, a lot of mineral fertilizers are applied to the land and toxic chemicals are used against pests. As a result, when nitrogen and phosphorus compounds accumulate in water bodies, algae grow and develop very quickly. Due to the increase in biomass in the water, 10 oxygen is consumed a lot. This worsens the conditions for fish and other aquatic animals to live.

During human life, many harmful and unnecessary products of metabolism are formed. These products are not used by tissue cells and must be removed from the body. In addition, the body should be free from various harmful substances, foreign substances, medicinal substances, organic substances, excess water and salts. Kidneys, lungs, skin, digestive system, and liver are involved in human excretion processes. The main function of the organs of the digestive system is to ensure the stability of the body's internal environment. The organs of the digestive system are always connected with each other, and the malfunction of one of them causes the malfunction of another organ of the digestive system.

As a result of consumption of groundwater, various pathomorphological changes in the kidney of experimental animals are recorded in 66.7-86.7% of cases, and such negative changes, even if the level and intensity are low, are observed under the influence of consumption of groundwater, they are proven to indicate the development of diseases in the kidney. the importance of diagnosis and treatment in storage is indicated;

Pathological morphological changes of different intensities observed in the kidney of laboratory animals as a result of groundwater consumption are accompanied by pathophysiological signs such as fullness, edema, hemolysis, plasmatic coagulation. are recommended as morphological prognostic criteria for identification;

It was proved that the level and intensity of pathological morphological changes caused by negative effects in the kidneys of experimental animals as a result of consumption of underground water was relatively high. It was proved that it is important in the differential diagnosis of this pathology and it is recommended for practice;

The preparation of histological preparations consisted of 4 stages and was carried out in traditional ways. A YD-315 mechanical rotary microtome (China) was used to prepare the preparations, the prepared sections were stained with hematoxylin and eosin. For this, the sections were placed in a hematoxylin solution for 3-5 minutes, and then washed with water. After the nuclei became purple (observed under a microscope), they were stained in eosin solution for 0.5–1.5 min, washed in distilled water, and dehydrated with increasing degrees of alcohol (70° to 100°). To remove the alcohol from the incision and freeze, it was placed sequentially in three parts of O-xylene and embedded in Canada balsam. Тадқиқот давомида бажарилган гистологик препаратларни тайёрлашнинг барча 4 та босқичини келтириб ўтишни жоиз, деб топдик:

The first step is to obtain biological objects. Anesthesia was used to kill laboratory animals. Then the animal was quickly opened, the necessary organs and tissues were removed, small pieces (5-10 mm³) were cut from it with an instrument and placed in a fixative. The size of the fixer was 20-40 times larger than the size of the target object. Fixation prevents the development of post-mortem changes in tissues, stops biochemical processes in them. The effect of any fixative is based on complex physicochemical processes, primarily protein coagulation. We use a complex containing one (formalin, alcohol, acetone) and two or more components (Carnoy's liquid - absolute alcohol, chloroform, glacial acetic acid; Zenker's liquid - mercuric chloride, potassium dichromate, sodium sulfate, formalin, distilled water). we used jets.

The second stage is washing, dewatering and filling of biological objects. To obtain thin sections, fixed biological objects were prepared accordingly: to make it dense enough, after fixation, the sections were washed under running water for 12-24 hours to get rid of excess fixative. For particles in Carnoy fluid, this step is omitted. After washing, they were loosened and concentrated with alcohols of increasing strength, for which successively those of 50°, 60°, 70°, 90°, 96°, and 100° were used. The fragments were then clarified by first mixing absolute alcohol (100°) and O-xylene in a ratio of 1:1, then placing them in 2/3 of pure O-xylene. After clearing, it was melted in a thermostat (a mixture of equal parts of O-xylene and paraffin) at 37°C, then 2/3 of pure paraffin at 56°C. Paraffin-soaked sections were attached to wooden blocks. Biological objects prepared in this way can be stored in the open air for a long time. Учунчи босқич - гистологик блокларни тайёрлаш. Блокларни тайёрлаш учун микротомдан фойдаланилди. Олинган парафин бўлаклари оқсил ва глицерин аралашмаси (1:1 нисбатда) билан суртилган буюм ойначасига ёпиштирилиб, 37°C да термостатда қуритилди, шу тарика кейинги босқич учун тайёрлаб қўйилди.

Фойдаланилган адабиётлар рўйхати

1. Nurov.A.S. STRATEGIES AND APPROACHES TO REACH OUT-OF-SCHOOL CHILDREN AND ADOLESCENTS // EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE(2023/3/30).-P. 56-58
2. Nurov.A.S. Key Considerations for Assessing School Food Environments// AMALIY VA TIBBIYOT FANLARI ILMIIY JURNALI, (2023/3/30).-P. 85-87
3. Nurov.A.S. Disruption of Natural Systems Affects Health // AMALIY VA TIBBIYOT FANLARI ILMIIY JURNALI, (2022/11/15).-P. 258-260

4. Nurov.A.S. The Importance of Ecology for Children's Health and Well-Being // AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI, (2022/11/15).-P. 238-240
5. Nurov.A.S. CHANGES IN TASTE AND FOOD INTAKE DURING THE MENSTRUAL CYCLE // Science and innovation, (2022).-P. 251-253
6. Nurov.A.S. Causes of Rational Eating Disorders in Children and Adolescents // AMERICAN Journal of Pediatric Medicine and Health Sciences. AMERICAN Journal of Pediatric Medicine and Health Sciences, (2023).-P.236-239
7. Бахронов Ж. Ж, Тешаев Ш.Ж. Морфометрическая характеристика частей нефрона почек крыс в норме и при воздействии антисептика – стимулятора дорогова фракции 2 на фоне хронической лучевой болезни.// Проблемы биологии и медицины/ с.138-141
8. Каюмов У.К. Новые перспективы применения тиотриазолина в общей врачебной практике / У.К. Каюмов // Запорожский медицинский журнал. - 2016. - Том 12, № 5. - С. 34-36.
9. Тешаев Ш.Ж. Анатомия тонкой кишки крысят в онтогенезе и при отравлении цимбушем . /Патология. Ташкент. - 2018. - № 1. - С. 23-25.
10. Bakhronov Jur'at J, Teshaeв Shukhrat J, Shodieva Musharraf S. Morphometric characteristics of parts of rat kidney nephron in normal and under the influence of an antiseptician - facility 2 road stimulator on the background of chronic radiating disease.// international jurnal of pharmaceutical research // jan-mart 2021/ Vol.4, №1.- P.682-686.
11. Baxronov J.J, Teshaeв Sh.J. Morphofunctional features of the structure of the kidneys and their change under the influence of various external factors.// New day in medicine/ 2/1 (29/1) 2020/ С. 76-80.
12. Jain R. Laboratory approach for diagnosis of toluene-based inhalant abuse in a clinical setting. / R. Jain, A. Verma // J Pharm Bioallied Sci. - 2016. - Vol. 8(1). - P. 18-22.
13. Khasanova D.A., Teshaeв Sh.J. Topografic-anatomical features of lymphoid structures of the small intestine of rats in norm and against the background of chronic radiation diseases- European science review No. 9-10 2018, P. 197-198