LIVER DISEASES

Muxamedova Z. R
Bukhara Medical Institute named after Abu Ali ibn Sino

Annotation: *The article presents an analysis of the data of modern literature concerning the mechanisms of liver damage under various effects of ionizing radiation. The role of the liver in fat metabolism, coagulation and anticoagulation functions, and hormonal status are shown. There are difficulties in correcting liver function without affecting the metabolism of the body as a whole. Liver dysfunction can be of the most diverse nature. Proper correction of hepatic disorders is the task of the near future [1,3,14].*

Key words: *Function disorders, radiation, cirrhosis, chronic liver disease, pathology.*

Relevance:

Liver diseases occupy a significant place among the causes of early disability and mortality among people of working age. Every year, at least 1 million [2,4,10]inhabitants of the globe fall ill with them, and in recent years there has been a tendency towards an increase in morbidity and mortality in the population.

The widespread prevalence of liver diseases and the large economic losses that they entail cause close attention of doctors to the study of the etiology, methods of diagnosis and treatment of various liver lesions [5,6,11,10].

To date, it has been established that the main etiological factors in the development of chronic liver diseases are viral infections and alcohol [6,7,8,14]. In addition, literature data indicate the possibility of developing pathology as a result of exposure to ionizing radiation.

The most radiosensitive are the rapidly dividing cells of the body. Since healthy liver cells do not normally divide, they are quite resistant to the effects of ionizing radiation. However, chronic viral hepatitis and liver cirrhosis are characterized by high mitotic activity of hepatocytes [7,8,9,11], which leads to higher radiosensitivity.

Radiation-induced liver pathology can be conditionally divided into those arising after exposure to external radiation and incorporated radionuclides.

The invariance of the internal environment of the body, or homeostasis, is maintained due to the constant influx of substances and energy into the cell, balanced by their storage or removal of decay products. The flows of matter and energy can change. In some cases, they can exceed the needs of the cell, while in others they can be significantly less.

In accordance with this, the ratio of the rates of catabolism and anabolism also changes. In certain cases (for example, during intensive work or fasting), there may be consumption of one's own less important survival polymers (for example, lipids and muscle proteins) to build vital polymers, such as nucleic acids or brain-feeding molecules (glucose).

In a multicellular organism, a certain group of cells may have an urgent need for energy. In this case, energy and nutrients are "pumped" from one cell to another. A similar process is observed when performing heavy muscular work or when preparing the body to perform such work (for example, during stress). At the same time, neurohumoral mechanisms are activated that provide the brain and muscles with

energy, mainly due to the resources of the liver and adipose tissue. This is how adaptation to the changed conditions of existence is carried out, in this case to additional energy needs that have arisen in nerve and muscle cells. This review considers the molecular mechanisms that provide one of the aspects of such adaptation, namely, the control of glucose metabolism in the liver[8,9,13,].

Target; the purpose of which was to analyze the effect on the human body of low doses of ionizing radiation during prolonged exposure with data processing using an automated classifying system[4,5,10].

Materials and methods of research;

Significant experience in the study of liver diseases has been accumulated in monitoring the health of the population affected by radiation c. Examination of a large number of people showed that the frequency of detection of HBsAg in the population exposed to a dose of more than 1 Gy was significantly higher than in the control (3.4% versus 2%) [19]. More frequent detection of HBsAg may indicate a violation of immunity among a highly exposed population. In the domestic literature, the effect of ionizing radiation on the body is currently considered as a factor capable of inducing or modifying the key events of the immune process [15]. In addition to the higher prevalence of hepatitis B virus infection in atomic bomb victims, it has been noted that the probability of eliminating the virus from the body is much lower in those who become infected after exposure to radiation [2,7]. Foreign scientists speak of an undoubted connection between exposure to radiation and the development of chronic hepatitis C. However, its authors note that the mechanism for the more frequent development of chronic liver pathology remains unclear [1,9]. In 2008, scientists published data based on a survey of 124 people affected by radiation . The study included 83 cases of primary liver cancer that occurred during the period from 2008 to 2012. Analysis of these data made it possible to calculate the relative risk of developing primary liver cancer - 0.81 per 1 sievert, with a 95% probability. The maximum risk peak was found in the age group of 20-25 years at the time of exposure. Those irradiated as a result of the atomic bombing developed predominantly hepatocellular carcinoma. Significantly fewer patients with cholangiocarcinoma were identified [4,7].

As a result of long-term epidemiological studies conducted by the Radiation Effects Research Foundation, an association was found between exposure to ionizing radiation and the development of chronic hepatitis or cirrhosis of the liver [2,12]. A significant correlation has been found between primary hepatoma and radiation [21]. In particular, ultrasound screening of 60 people affected by radiation revealed 7 cases of hepatoma [20].

The question of the effects of exposure to low doses of radiation on the body is still open. The researchers carried out studies aimed at analyzing the effect of low doses of ionizing radiation on the human body during prolonged exposure with data processing using an automated classifying system. The paper analyzed information about the reaction of the organism to the action of small doses of radiation that do not reach the threshold for the manifestation of deterministic effects of radiation. As a result, the authors of the study came to the conclusion that any additional above-ground exposure causes a negative reaction [1,2]. of the human body. Small doses, the direct negative effect of which is very small or poorly detectable, have a significant effect on the occurrence of oncological and non-oncological diseases.

Research results;

In the formation of internal irradiation, the dominant role is assigned to a-particles, which, having an extremely low penetrating power, nevertheless, upon incorporation, have the highest destructive effect on living tissues. For this reason, incorporated radionuclides, lingering in the liver, can have a pronounced negative effect on hepatocytes. According to the degree of accumulation of radionuclides, the liver ranks second, second only to the thyroid gland. More significant changes were found in the structure of the incidence of liver cirrhosis [8]. The increase in the incidence was (per 100,000 population) - from 14.7 in 2008 to 39.4 - in 2012. At the same time, the highest growth rates of the incidence of liver cirrhosis (more than 6 times) were noted among those who received radiation, according to the data of targeted screening examination of patients. Also, the revealed increase in the incidence of chronic hepatitis and cirrhosis of the liver, as well as an increase in the frequency of chronic persistence of hepatitis B and C viruses in the population affected by radiation may be associated with increased medical activity, as well as with

immunosuppression, since in patients with damage to the hepatobiliary system there was a decrease in humoral and cellular immunity [4].

Conclusions;

Thus, the above data indicate the possibility of chronic liver pathology under the influence of ionizing radiation[9,12]. However, in these cases, the victims received a high dose of radiation, which was predominantly of a one-time nature. Much less studied is the pathology of the liver that occurs in the human body with prolonged exposure to low doses of radiation as a result of the incorporation of radionuclides. In general, an increase in the frequency of carriage of IBvLg and anti-ISV, an increase in the incidence of chronic hepatitis and cirrhosis of the liver, established after receiving radiation in the affected population, indicates the expediency of conducting research in this direction.

СПИСОК ИСПОЛЬЗОВАННОЙ ЛИТЕРАТУРЫ:

1. Muxamedova Z.R., THE COURSE OF CHRONIC LIVER DISEASE IN PATIENTS WITH COVID-2019// THE AMERICAN JOURNAL OF MEDICAL SCIENCES AND PHARMACEUTICAL RESEARCH . Volume 03 Issue 09, 2021 ISSN 2689-1026– P. 69-74
2. Ramazonovna M. Z. Functional State of the Liver and Pancreas in Covid-19 //EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION. – 2022. – Т. 2. – №. 2. – С. 333-338.
3. Mukhamedova Zarifa Ramazonovna. Etiopathogenetic aspects of liver damage in patients with covid-19. // European Journal Of Modern Medicine And Practice // 2022– P. 23-29.
4. Manasova I.S., KosimovKh.O. Hygienic aspects of the possibility of using the new insecticide Seller in agriculture // International Journal of Psychosocial Rehabilitation. - 2020.- R. 336-342.[4]
5. Manasova I.S., Academicia An International Multidisciplinary Research Journal. Features of labor of workers in agro-industrial labor 10.5958 \ 2249-7137.2020.01622.5 .c.958-962.[6]
6. Manasova I.S., Academicia An International Multidisciplinary Research Journal. Analysis of working conditions by parameters of the physiological state of workers cotton plant 10.5958 / 2249-7137.2020.01634.1[7]
7. Manasova I.S., Mansurova M.Kh., Youth's Look For A Healthy Lifestyle // Central asian journal of medical and natural sciences. Volume: 02 issue: 02 March –april2021 ISSN; 2660-4159.P.149-153.[10,11]
8. Manasova I. S., Doktor Axborotnomasi. Analysis of students opinions on the basic components of healthy lifestyle 2021, No. 1 (98) ISSN 2181-466X.[12]
9. Ibrohimov K. I. Features of Lobor in Agriculture //CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES. Voleme. – 2022. – Т. 2. – С. 87-91.
10. Ibrohimov KI. The Meal of Students //Indonesian Journal of Education Methods Development. - 2022. - Т. 20. - S. 10.21070 / ijemd. v20i. 629-10.21070/ijemd. v20i. 629.
11. Ibrohimov K. I. Health State of Workers of Cotton Enterprises, Structure of Diseases, Influence of Age and Work Experience //AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI. – 2022. – С. 55-59.
12. Иброҳимов К. И. Чорвачилик Комплекслари Ва Фермаларда Ишловчи Ишчиларнинг Саломатлик Ҳолати, Касалланишлар Структураси, Ёш Ҳамда Иш Стажининг Таъсири //AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI. – 2022. – Т. 1. – №. 7. – С. 334-338.
13. Иброҳимов К. И. Чорвачилик Комплекслари Ва Фермаларда Ишловчи Ишчиларнинг Саломатлик Ҳолати, Касалланишлар Структураси, Ёш Ҳамда Иш Стажининг Таъсири //AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI. – 2022. – Т. 1. – №. 7. – С. 334-338.
14. Ibrohimov K. I. Effect of Smoking on the Mineralizing Ability of Oral Fluid// INTERNATIONAL JOURNAL OF HEALTH SYSTEMS AND MEDICAL SCIENCES. - 2023/2/11. -Т. 2– №. 2.-С. 11-12