

THE SPREAD OF CIRRHOSIS OF THE LIVER BY ETIOLOGICAL FACTORS

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ABSTRACT

The work is based on the study of the prevalence of the disease in 390 patients hospitalized in the period 2020 to 2022. The etiological structure of CL was studied by retrospective analysis of medical histories, outpatient records and follow-up in the clinic of 390 patients. The main etiological factors of liver cirrhosis according to the specialized hematology department are hepatitis viruses (28%), alcohol (27%) and their combination (15%), less often autoimmune and cholestatic diseases (14%). Among patients with cirrhosis of the liver infected with hepatitis viruses, hepatitis C virus was most often detected (55%), hepatitis B virus (32%) and mixed infection with two or three viruses (13%) were less common.

Key words: *chronic diffuse liver diseases, cirrhosis of the liver, viral hepatitis.*

РАСПРОСТРАНЕНИЕ ЦИРРОЗА ПЕЧЕНИ ПО ЭТИОЛОГИЧЕСКОМ ФАКТОРАМ

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АННОТАЦИЯ

В основу работы положено изучение распространённости болезни у 390 больных, госпитализированных в период 2020 г. по 2022 г. Этиологическая структура ЦП была изучена при ретроспективном анализе историй болезней, амбулаторных карт и наблюдения в клинике 390 больных. Основными этиологическими факторами цирроза печени по данным специализированного гепатологического отделения являются вирусы гепатита (28%), алкоголь (27%) и их сочетание (15%), реже - аутоиммунные и холестатические заболевания (14%). Среди больных циррозом печени, инфицированных вирусами гепатита, наиболее часто выявлялся вирус гепатита С (55%), реже вирус гепатита В (32%) и микст-инфекция двумя или тремя вирусами (13%).

Ключевые слова: хронические диффузные заболевания печени, цирроз печени, вирусный гепатит.

INTRODUCTION

In recent decades, the world has seen an increase in morbidity and mortality due to chronic diffuse liver diseases (CHDLD) [1;6]. According to WHO, in 2004, chronic liver diseases caused 1.382 million deaths worldwide, including 772 thousand deaths from cirrhosis of the liver (CL) and 610 thousand from primary liver cancer [3;9]. The CL in Russia is responsible for 47.2 thousand . or 2% of all deaths per year and is on the 6th place among the causes of death, following after coronary heart disease, cerebrovascular disease, injuries and accidents, violent deaths, as well as the total number of cases of cancer of the trachea, bronchi and lungs [2;7]. A significant number of patients die from the disease in the fifth or sixth decade of life, i.e. at working age [4;5;7]. The main etiological factors of CL are hepatotropic viruses (HBV, HCV, HDV) and alcohol [8;10]. In Western Siberia, CL is often combined with opisthorchiasis, which can independently lead to the development of hepatitis and CL [5;10].

Cirrhosis of the liver (CL) and the whole complex of complications associated with it (portal hypertension, liver failure), including the development of hepatocellular carcinoma (HCC), remains one of the most complex and determining the relevance of the study of CHDLD in modern hepatology [4;8]. The introduction and widespread use of modern methods of molecular biology (primarily polymerase chain reaction) have led to a revision of traditional ideas about the etiological structure of liver cirrhosis; more than half of the observations of which, as well as more than 2/3 of cases of HCC in the world are caused by infections with hepatitis B and C viruses. Among the main causes of liver cirrhosis and HCC, alcohol abuse is also considered, less often non—alcoholic steatohepatitis, autoimmune (autoimmune hepatitis, primary biliary cirrhosis, primary sclerosing cholangitis) and hereditary (Wilson Konovalov's disease, hereditary hemochromatosis) liver diseases [6;9]. The variability of the clinical course of liver cirrhosis is primarily due to the etiology of liver damage, as well as the influence of external (alcohol abuse, drug hepatotoxicity) and internal (genetic predisposition) factors.

The aim of the study To study the prevalence of liver cirrhosis by etiological factors.

MATERIALS AND METHODS

The work is based on the study of the prevalence of the disease in 390 patients hospitalized in the period 2020 to 2022 in the Bukhara Regional Infectious Diseases Hospital. The etiological structure of CP was studied by retrospective analysis of medical histories, outpatient records and follow-up in the clinic of 390 patients. The diagnosis of CP was established on the basis of characteristic clinical, laboratory (hypoproteinemia, hypoalbuminemia, hypocholinesteremia, decreased prothrombin index) and instrumental signs (varicose veins of the esophagus on EGDS; increased diameter of the portal and splenic veins, portosystemic collaterals, ascites, hepato and/or splenomegaly, large and/or small nodular regeneration of the liver parenchyma, uneven contours on ultrasound). To verify the etiology of liver cirrhosis, markers (antigens, antibodies) were determined hbV, HCV by indirect enzyme immunoassay, determination of HCVRNA, HBVDNA, HDVRNA in blood serum by PCR, autoantibodies in blood serum by enzyme immunoassay, spiral computed tomography and magnetic resonance imaging with contrast enhancement. Extrahepatic systemic manifestations were diagnosed on the basis of the clinical picture, data from laboratory and instrumental research methods.

RESULTS AND THEIR DISCUSSION

We have identified 9 groups of etiological factors. The main etiological factors of liver cirrhosis (70%) were hepatitis viruses (109 patients; 28%) and alcohol (105 patients; 27%), as well as their combination (59; 15%). Other etiological factors, including unspecified ones, account for 16% of cases. Cirrhosis of the liver in the outcome of autoimmune hepatitis (20; 5.2%), primary sclerosing cholangitis (12; 3.2%), primary biliary cirrhosis (21; 5.4%) were conditionally grouped into the group of "autoimmune and cholestatic liver diseases" - (55; 14%). Cirrhosis of the liver of viral and alcoholic etiology was observed more often in men, while autoimmune and cholestatic liver diseases with the outcome of cirrhosis of the liver, as well as Budd-Chiari syndrome, were more common in women. The earliest age (on average, up to 40 years) of detection of liver cirrhosis in primary biliary cirrhosis, primary sclerosing cholangitis and a combination of several etiological factors (HBV+HDV, HBV+HCV+HDV, HBV +Alcohol). At a later age (on average older than 50 years), cirrhosis of the liver is detected during its development due to Budd-Chiari syndrome, as well as toxic and medicinal effects. The study of the etiology of viral CP revealed a significant prevalence of hepatitis C virus infection (214 patients; 55%). The variety of etiological factors of CP in 390 patients is presented in Table 1.

Table 1.

Etiology	N	%
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HCV	58	14,8
HBV	34	8,7
HBV+HDV	9	2,3
HBV+HCV	5	1,3
HBV+HCV+HDV	1	0,26
Alcohol	105	26,9
HCV+ Alcohol	27	6,9
HBV+ Alcohol	22	5,6
HBV+HDV+ Alcohol	6	1,5
HBV+HCV+ Alcohol	2	0,5
HBV+HCV+HDV+ Alcohol	1	0,3
AIH	20	5,2
PBC	20	5,1
PSC	13	3,3
VBC	1	0,3
Veno-occlusive disease	2	0,5
Budd-Chiari syndrome	12	3,1
Al -antitrypsin deficiency	1	0,3
Wilson-Konovalov disease	12	3,1
Hemochromatosis	1	0,3
Toxins, medicines	20	5,1
Unspecified	17	4,4
Total	390	100

The main role in the development of liver cirrhosis belongs to two etiological factors acting independently or combined with hepatitis virus infections and chronic alcohol consumption — the total share of which is 70% (n=273).

CONCLUSIONS

The main etiological factors of liver cirrhosis according to the specialized hematology department are hepatitis viruses (28%), alcohol (27%) and their combination (15%), less often autoimmune and cholestatic diseases (14%). Among patients with cirrhosis of the liver infected with hepatitis viruses, hepatitis C virus was most often detected (55%), hepatitis B virus (32%) and mixed infection with two or three viruses (13%) were less common.

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