

ESTIMATION OF THE PREVALENCE OF CHRONIC LIVER DISEASES AMONG URBAN ADULTS

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Introduction: The prevalence of hepatobiliary diseases and their burden on healthcare systems are increasing worldwide. There is no reliable epidemiological data on the prevalence of chronic liver diseases in Ukraine. According to most international clinical guidelines, ultrasound is the first-choice non-invasive method to examine the liver and biliary tract, and with certain limitations, it allows to identify main prerequisites for liver disorders. Fatty liver disease, alcoholic liver disease, and mildly symptomatic chronic viral hepatitis are the main causes of diffuse changes in the liver and can naturally progress to cirrhosis and hepatocellular carcinoma, the treatment technologies for which are expensive and insufficiently effective. The registered scopes of medical services partially reflect the prevalence of liver diseases, covering only cases with obvious clinical manifestations. We have not found any up-to-date publications on the assessment of the prevalence of diffuse liver changes among the Ukrainian population based on the results of large-scale radiological studies of the liver.

The aim: Estimation of prevalence of diffuse liver disorders based on the results of the ultrasound examinations and open data of health care statistics.

Materials and methods: We examined 3438 adult city residents aged 19-74 (uneven age distribution, the median is 51) in 2019-2021. Ultrasound examinations were performed after standard preparations. Patients who received chemotherapy for any oncological disease were not included in the study. Indications that we considered as signs of diffuse liver changes in the B-mode gray scale: increased echogenicity of the liver parenchyma compared to the kidney cortex, decreased visibility of the vascular system of the liver, decreased visualization of the diaphragm and deeper areas of the liver parenchyma (decreased sound conductivity). All patients were examined according to the standard protocol for the abdominal examination. Data from public statistical reporting of licensed medical service providers by form № 20 and data from the National Health Service under ICD-10 code D97 for 2021 were also studied.

Calculations were made using the MedStat software.

Results: According to the Ukrainian National Health Service, 76428 patient visits to primary care physicians for causes of different liver diseases grouped under ICD-10 code D97 in 2021. During the year, 8170 patients (10,6% of all requests) received specialized medical care. Over the same time, 25127 patients with liver cirrhosis (mortality rate of 22,5%) and 10799 patients with various chronic hepatitis completed inpatient treatment.

Among the patients examined by us with ultrasound, women predominated – 62,6%, which can be explained by the fact that women traditionally request medical services more frequently as well as by population gender imbalance, especially in older age subgroups. Among women (2155), the median age was 55, diffuse liver changes were found in 1222 (57,7%). Among men (1283), the median age was 51, diffuse changes were found in 1035 (80,6%). The prevalence of diffuse liver changes was significantly higher than the prevalence of chronic liver diseases according to the data of doctor visits and the frequency of hospitalizations, which requires further research for clinical certainty and the selection of patients with a risk of progression of fibrosis and the formation of liver cirrhosis.

Conclusions: Diffuse changes in the liver are much more common according to the results of the ultrasound, while the statistics of the diseases that cause them demonstrate a much lower prevalence of this pathology. It is necessary to improve the clinical patient's pathway with the wider implementation of non-invasive testing to identify patients at risk of progression of liver fibrosis and perform medical interventions timely.

KEY WORDS: liver disease, hepatitis, cirrhosis, ultrasound diagnostics.