

*Serikova E. N., Valutite D. E., Ivanova A. R., Zueva E. B.*

**MOLECULAR MARKERS OF HEPATITIS B AND C AMONG PATIENTS OF  
DENTAL CLINICS, ST. PETERSBURG**

*Supervisor Ph.D. Ostankova Yu. V.*

*Saint-Petersburg Pasteur Institute, Saint-Petersburg*

**Introduction.** Dental patients are at increased risk for blood-borne infections, including parenteral viral hepatitis, due to the invasiveness of some medical procedures. Hepatitis B and C can lead to the development of hepatocellular carcinoma and/or cirrhosis of the liver. Despite the widespread introduction of hepatitis B vaccination, chronic hepatitis B remains a major public health problem with high morbidity and mortality. A separate problem in QLD is the detection of HBV DNA at low viral load. Timely detection of cases of latent hepatitis B with low replicative activity of the virus plays a significant role in preventing the spread of HBV in medical institutions.

**Aim:** To assess the prevalence of molecular markers of parenteral hepatitis B and C in a group of patients in dental clinics in St. Petersburg.

**Materials and research.** The study analyzed 200 blood plasma samples from patients in dental clinics in St. Petersburg. To assess the prevalence of molecular markers of hepatitis B and C, commercial kits based on PCR with real-time hybridization-fluorescence detection were used. Additionally, all samples were analyzed using a previously developed method for detecting HBV DNA at low viral load based on amplification with nested primers and visualization by electrophoretic detection.

**Results and discussion.** The analyzed group is dominated by female patients - 73.5%. The age of patients varies from 18 to 94 years.

Using molecular diagnostic methods, HBV DNA was detected in 2.0% of patients. The method used, based on nested PCR with electrophoretic detection, makes it possible to detect HBV DNA in peripheral blood plasma at a low viral load (analytical sensitivity 5 IU/ml). The detected cases belong to the HBsAg-negative form of the course of chronic viral hepatitis B. HCV RNA was detected in 0.5% of cases.

**Conclusions.** The frequency of occurrence of molecular markers was: 2.0% DNA of HBV-positive patients and 0.5% RNA of HCV-positive patients. The prevalence of HBV and HCV among patients of dental clinics requires further analysis with an increase in the study group and further molecular genetic characteristics of the obtained isolates.