

## **ABSTRACT**

**Author:** Veronika Horáčková

**Title:** Molecular diagnosis of viral hepatitis C – personal experience from routine laboratory

Bachelor work

**Field of study:** Medical laboratory technician, combined study form

**The aim of the study:** Introduction to the issues concerning the viral Hepatitis C with an emphasis on the laboratory diagnostics thereof. Statistical processing of the Hepatitis C virus genotype analysis results.

**Material and methods:** In the period of 1 July 2005 – 30 June 2012, the Hepatitis C virus genotype analysis was performed in respect of 2 185 samples at the division of molecular biological diagnostics of the serology laboratory of the Institute of Clinical Biochemistry and Laboratory Diagnostics of the General Faculty Hospital and the First Faculty of Medicine of Charles University in Prague, using the reverse hybridization method. The testing results were statistically processed.

**Results:** Of the set of 2 185 samples, 1 372 (62,8 %) originated from males and 813 (37,2 %) from females, with the average age of patients included in the set being 36,7 years. The majority of requests for the HCV genotype analysis originated from specialists in Prague (91,0 %). The genotype analysis demonstrated the highest prevalence of the 1b genotype (51,6 %), followed by the 3a genotype (22,6 %). The prevalence of the 1b HCV genotype rises with increasing age of patients, with the opposite trend for the 3a genotype. The frequency of the 3a genotype detection is rising.

**Conclusions:** The viral Hepatitis C is a disease with potential severe consequences. The laboratory diagnostics takes part not only in diagnosing the infection, but the results of such diagnostics determine the treatment as well as the monitoring of the success rate thereof. Outcomes of the statistical processing of the Hepatitis C virus genotype analysis results correspond to the data and trends mentioned in both domestic and foreign studies.