Hepatitis in the course of EBV is usually characterised by a mild, self-limiting course. However, the possibility that severe hepatological complications may also occur indicates the need to determine the predictors of liver damage.

The aim of this study was to analyse hepatological complications among children infected with EBV, with particular emphasis on the concentrations of selected cytokines: TN F - α, IL - 6 and s - ICAM - 1, and expressions of miR - 21 - 3p, miR - 122 - 5p, miR - 26b - 5p, miR - 34a - 5p, miR - 199a - 5p, and EBV DNA viral load. In addition, genetic variations rs11568364 and rs2287622 of the ABCB11 gene were analysed for their risk of hepatological complications.

A total of 68 patients with serologically and molecularly confirmed EBV infections were studied. In this group, hepatological complications were found in 54 children, who were divided into two subgroups. In the first subgroup, consisting of 33 patients, increased ALT and GGTP activity was found. The second subgroup included 21 children with increased ALT activity without damage to the bile pole. The conducted analyses showed a statistically significantly higher concentration of IL - 6, TNF - α and s - ICAM - 1 in the group of children with hepatitis and bile pole damage compared to the group of patients without hepatological complications. Moreover, in the group of 54 children with hepatological complications, a statistically significant positive correlation was found between ALT activity and IL - 6 concentration, and between GGTP activity and TNF - α concentration. Based on the present author's study, a relationship was found between the expression of miR - 21 - 3p, miR - 122 - 5p, miR - 26b - 5p, miR - 34a - 5p and miR - 199a - 5p, and the presence of hepatological complications with bile-pole damage in the course of EBV infection. The advantage of the homozygous 1331TT genotype was demonstrated in the group of patients with hepatitis and cholangiocyte damage. It has been shown that the presence of the T allele for the rs2287622 marker increases the probability of hepatitis three times and the possibility of hepatitis with cholestasis almost four times in EBV - infected patients. In this study, it was established that in a group of children with hepatological complications during EBV infection, the level of EBV DNA viral load was associated with a statistically significant increase in the concentration of CRP, TNF - α and the number of leukocytes, lymphocytes and monocytes. There was no relationship between viral load and the risk of hepatological complications.