

# Prevalence of cytomegalovirus and causes of infection in Ardabil city

## *Abstract*

**Background and Objective:** Cytomegalovirus (Cytomegalovirus) is one of the herpes viruses in the beta subfamily of the herpesviridae family. The natural hosts are primates (such as monkeys and humans). The species that infects humans is usually called human HHV-5 or CMV. The Cytomegalovirus is the largest virus in size that infects humans and can be transmitted through blood transfusions and products, bone marrow transplants and solid tissues. Cytomegalovirus is one of the most important blood-borne viruses that can cause severe and even fatal complications in low birth weight infants, immunocompromised patients and transplant recipients.

**Methods:** In this study, 421 population of 1-69 years old in Ardabil were randomly selected and entered into the study. After obtaining consent, blood samples were taken and serum was isolated. ELISA test was used to detect IgG antibodies in human serum. A dedicated CMV kit was used for this purpose. Individual information was collected using a questionnaire provided by the IARC. Information collected from the subjects included age, gender, education level, history of blood preparation and sampling season. The aim of this study was to determine the total number of people infected with CMV (those who have been infected in the past and those who have recently been infected with the virus), which were evaluated to achieve this purpose in patients' serum IgG antibodies.

**Results:** In the present study, the prevalence of cytomegalovirus in the age group of 1 to 5 years was 77.7%, which increased with age, with 80% in the age group of 6 to 10 years, 92.3% in the age group of 11 to 15 years and in some age groups. 100% were infected. There was a significant relationship between age and test result. There was no significant difference between sexes and seroepidemiology of IgG cytomegalovirus antibody. In this study, 421 patients were studied, 96% of whom were positive for cytomegalovirus antibodies. Mean grade of antibody was  $114.36 \pm 79.03$ .

**Conclusion:** Based on the findings of the present study, it can be concluded that the prevalence of CMV positive in Ardabil is higher than other studies. The prevalence of cytomegalovirus was correlated with age and education level and was not correlated with factors such as gender, sampling season, and history of receiving blood products.

**Keywords:** Prevalence, Cytomegalovirus, Cytomegalovirus IgG Antibody