

## ABSTRACT

Dengue virus beings' arthropods disease is spreading day by day in Pakistan. There are many favourable conditions that facilitate transmission of the virus such as rainy season and accumulation of clean water in environment. Causative agent consists of single stranded RNA. It has four serotypes DENV1, DENV2, DENV3 and DENV4. Symptoms are rashes, fever, headache, vomiting, diarrhoea, and haemorrhage. Infection with one serotype confers life-long immunity but with other serotype may produce severe infection. The aim of the study is to find the Sero prevalence of dengue along with their haematological profile and compare the real time PCR and ELISA sensitivity as early diagnostic tools. A total of 1236 serum samples from patients in Lahore with an acute febrile illness were assessed for the presence of dengue virus (DENV) via RT-PCR and NS1 ELISA during August 2021 and February 2022. Platelets count was used as screener for dengue virus performing Complete blood count (CBC). DENV-2 was more prevalent in society compared to other serotypes. Sensitivity of ELISA is more than PCR and Specificity of ELISA and PCR is nearly close to each other. Thrombocytopenia is more common and used as predictor of DENV infections. 8.75% were suffering from dengue shock syndrome while 3.1% were observed with dengue haemorrhagic fever. Incidence of dengue infection was higher in monsoon and post monsoon period. There are no specific drug and vaccines for treatment of dengue so early diagnosis of virus is important to prevent severe condition, economic loss and mortality. ELISA N-1 Ag is better and cheap compared to PCR for diagnosis of dengue virus.