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Prevalence of torque teno virus in blood donors in Khartoum state, Sudan from 2012 to 2014

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Novel DNA virus named Torque Teno Virus (TTV) was isolated in 1997 from the sera of patients with post transfusion non A-G hepatitis (TTV) has been reported in world with high prevalence. This study investigates the frequency of TTV viremia in 83 blood donors in Khartoum state, Sudan. Serum samples were screened for TTV DNA using polymerase chain reaction (PCR) to detected two regions, untranslated region (UTR) and (N22) region. Fifty one (61%) out of 83 healthy blood donors and 68 (83%) out of 81 healthy blood donors were shown to be positive for TTV using nested PCR to detect N22 region and single step PCR to detect UTR region respectively. The results which are statistically analyzed show that there was no significant differences in DNA prevalence of (TTV) among blood donors ($P>0.05$) in their serum samples. This study is comparable with other healthy population in Africa and in developed countries around the world. The present study is one of first attempts to reports directly the prevalence rate of TTV in the studied group and focus on the molecular diagnosis of TTV. It revealed that TTV was circulating in Sudan among blood donors. The results of present study demonstrated a high prevalence of TTV in studied group. Further studies are required to determine prevalence of TTV in other groups.

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Screening of laboratory workers for latent TB using interferon gamma assay

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Background: Latent tuberculosis infection is asymptomatic and untransmissible diseases. According to the World Health Organization (WHO) Global Surveillance and Monitoring Project, in 2014 estimated incidence of TB is 181 per 100000 with 40% of the population infected with TB in Pakistan and approximately one-third of the population is infected worldwide. Laboratory workers dealing with tan samples or TB patients are always at risk to get TB. In this study we have investigated prevalence of latent TB in health care providers who are at risk to get TB to the cases of infectious tuberculosis using QuantiFERON assay.

Objective: To screen the lab workers at risk to occupational exposure for latent TB using QuantiFERON assay.

Methodology: 3 ml of whole blood were collected into three specific QFT tubes (NIL, TB and Mitogen) from 60 lab personals including phlebotomists, medical technologist, doctors and faculty members working closely with TB samples or patients. Samples were performed for detection interferon specifically released against TB according to the manufacturer QuantiFERON TB gold protocol.

Result: Out of 60 samples 12 samples were found positive, 1 sample showed indeterminate result and 47 were found negative. Out of 12 positive samples 10 were from medical technologists working closely since long time with TB samples or TB patients and 2 were from phlebotomists collecting samples from patients.

Conclusion: Health care providers usually work with TB infected samples with minimal infection control measures. This study shows the need for effective latent TB infection control measures and emphasizes on the importance to improve over all bio-safety precautions during dealing with the TB patients or samples. The study also provides recommendations for routine and regular screening and checkup of the lab workers working with TB to ensure their safety rather safety of all as no one is safe until everyone is safe.

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