

CD4⁺ T-Lymphocytes Count, HBe Ag Prevalence and Liver Transaminases Levels Among Apparently Healthy Individuals Tested Positive for Hepatitis B Viral Infection During 2015 World Hepatitis Day in Sokoto

B Hali,¹ A Yakubu,² H Yunusa Raji,³ U M Anjo⁴

¹Department of Medical Microbiology and Parasitology, Faculty of Basic Clinical Sciences, College of Health Sciences, Usmanu Danfodiyo University, Sokoto

²Department of Internal Medicine, Faculty of Clinical Sciences, College of Health Sciences, Usmanu Danfodiyo University, Sokoto

³Department of Microbiology and Parasitology, Usmanu Danfodiyo University Teaching Hospital, Sokoto

⁴Department of Community Health, Faculty of Clinical Sciences, College of Health Sciences, Danfodiyo University, Sokoto Usmanu

Presented at Science of HBV cure Hybrid Meeting 2022 in Singapore, 30th May-2nd June



SCIENCE OF HBV CURE

Presented by



OBJECTIVES

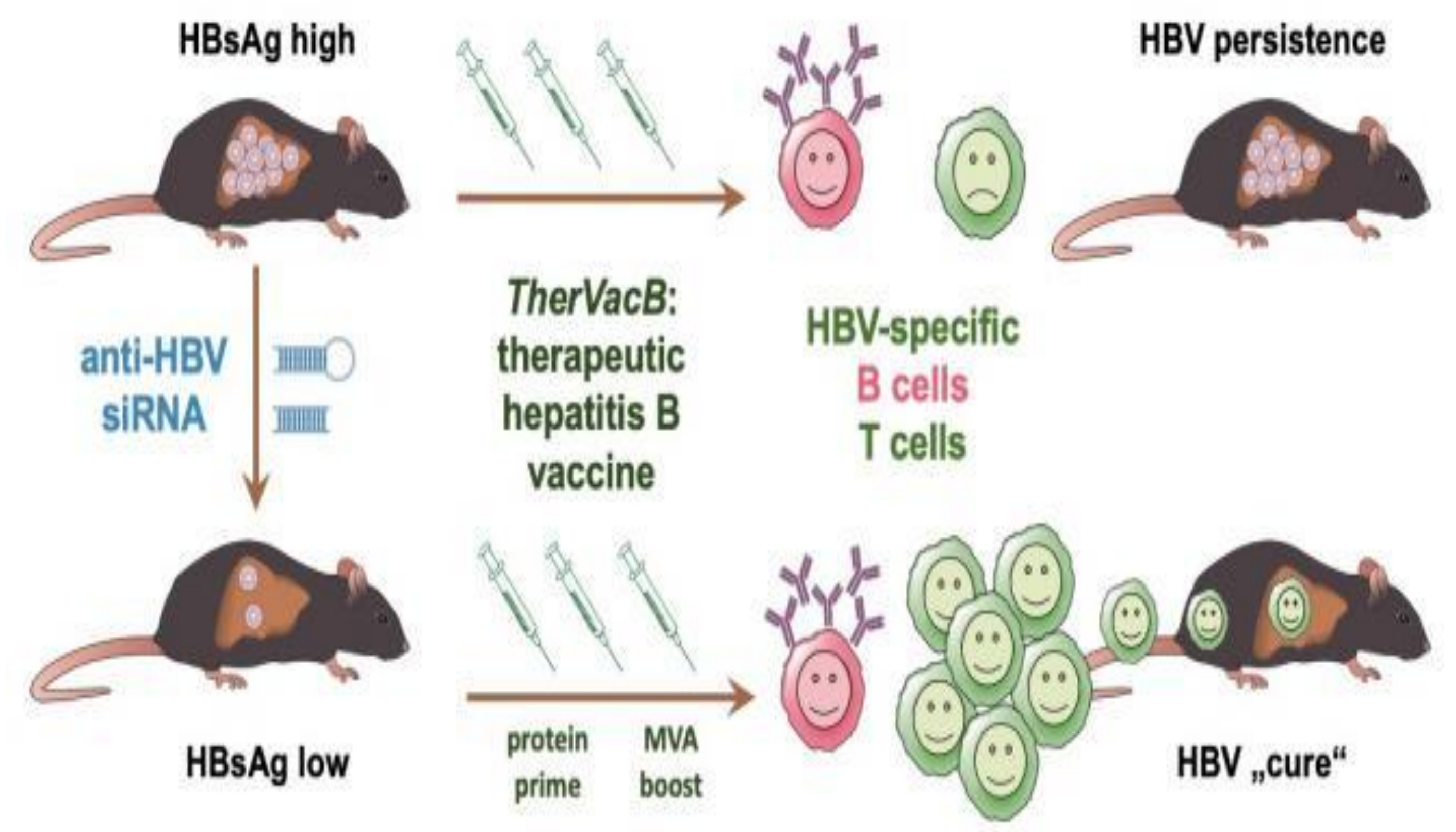
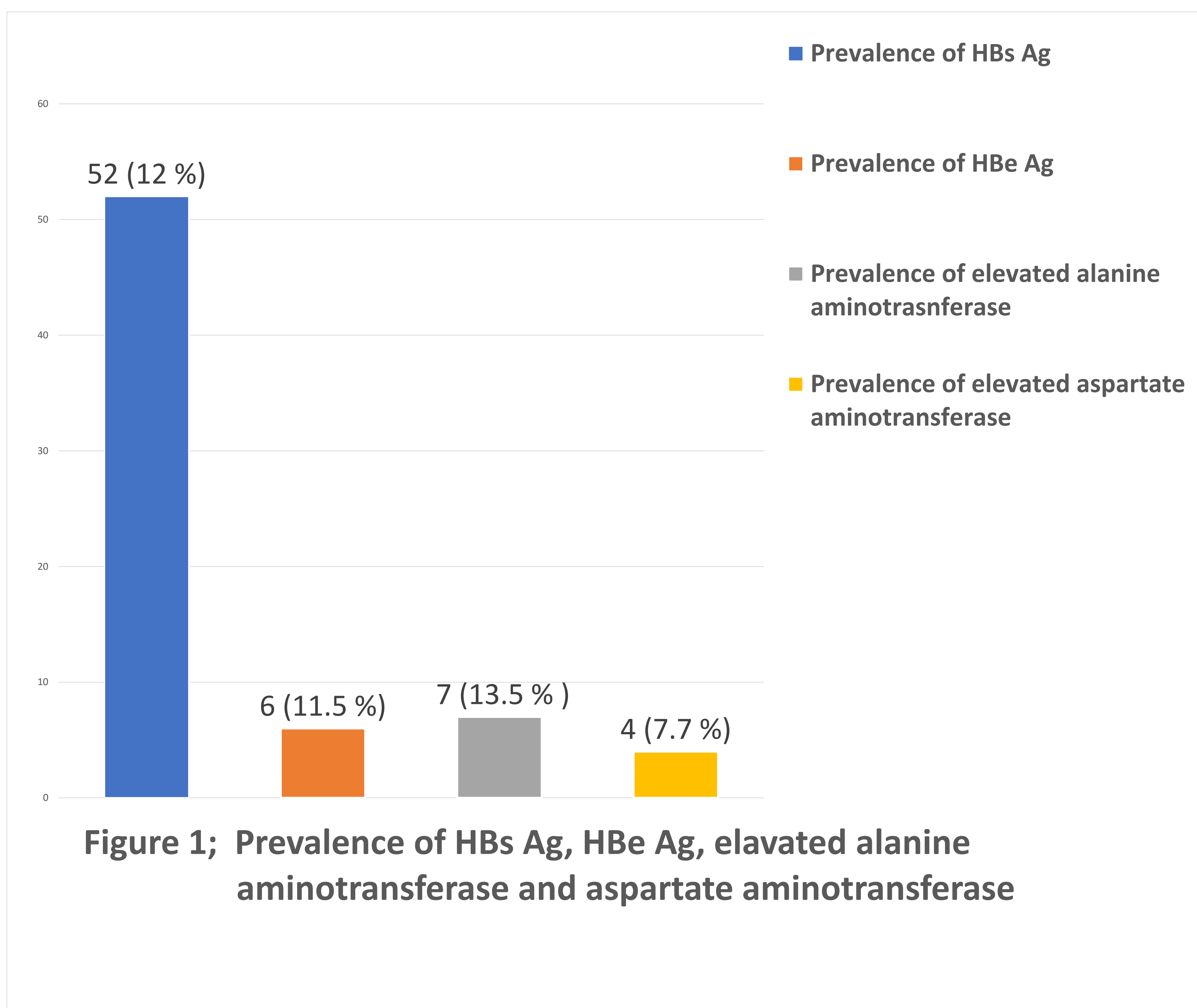
- The objectives of the study are to: assess for HBV infection and HBe Ag, as well as CD4⁺ T-lymphocytes count and liver transaminases levels among apparently healthy individuals attended 2015 World hepatitis day symposium.

METHODS

- This was cross-sectional study comprising 430 apparently healthy individuals who voluntarily came for HBV infection screening during 2015 World hepatitis Day at Usmanu Danfodiyo University Teaching Hospital, Sokoto.
- Those who tested positive for HBs Ag with rapid test strips were confirmed with ELISA and were further assessed for HBe Ag, alanine aminotransferase, aspartate aminotransferase and CD4⁺ T-lymphocytes count. SPSS version 20 was used for data analysis. Chi-square test and Student's t test were used for statistical tests. P < 0.05 was considered as statistically significant.

RESULTS

- Out of 430 who came for voluntarily HBV infection screening, 52 (12 %) were positive for HBs Ag and therefore had HBV infection, and their Mean age was 31 ± 7 (Mean ± SD). Of the HBV infected study participants: 6 (11.5 %) were positive for HBe Ag, 7 (13.5 %) and 4 (7.7 %) had elevated alanine aminotransferase and aspartate aminotransferase respectively, and their CD4⁺ T-lymphocytes was 677 ± 249 (Mean ± SD). All These markers were comparable among sex (P< 0.626; 0.767; 0.659; 0.842 respectively) and age group < 45 yrs and ≥ 45 yrs (P= 1.000; 0.828; 1.000; 0.157 respectively).
- 10 (19.2 %) of HBV infected study participants had CD4⁺ T-lymphocytes count bellow the lower limit of reference range and 3 (5.8 %) had advanced immunosuppression (CD4⁺ T-lymphocytes of 200-350 cells/mm.³). Observed risk factors for HBV infection were tattooing 22 (42.3 %), family history of HBV infection 19 (36.5 %), self-intravenous drugs usage 6 (11.5 %) and Blood transfusion 1 (1.9 %).



CONCLUSION

- Substantial number of the volunteers had HBV infection. Substantial percentage of HBV infected study participants might be at risk of liver damage as they had: HBV replication marker and/or elevated liver transaminases levels. Additionally, some proportion of HBV infected subjects might be at risk of developing persistent HBV infection due to having lower CD4⁺ T-lymphocytes count and/or advanced immunosuppression.
- Voluntary HBV infection screening should be encouraged. There is need to enlighten people on early detection of HBV infection, especially in babies born to HBV infected mothers. Risky behaviors that predispose individuals to contracting HBV infection should be discouraged. CD4⁺ T-lymphocytes count should be incorporated as a routine test among HBV infected individuals.

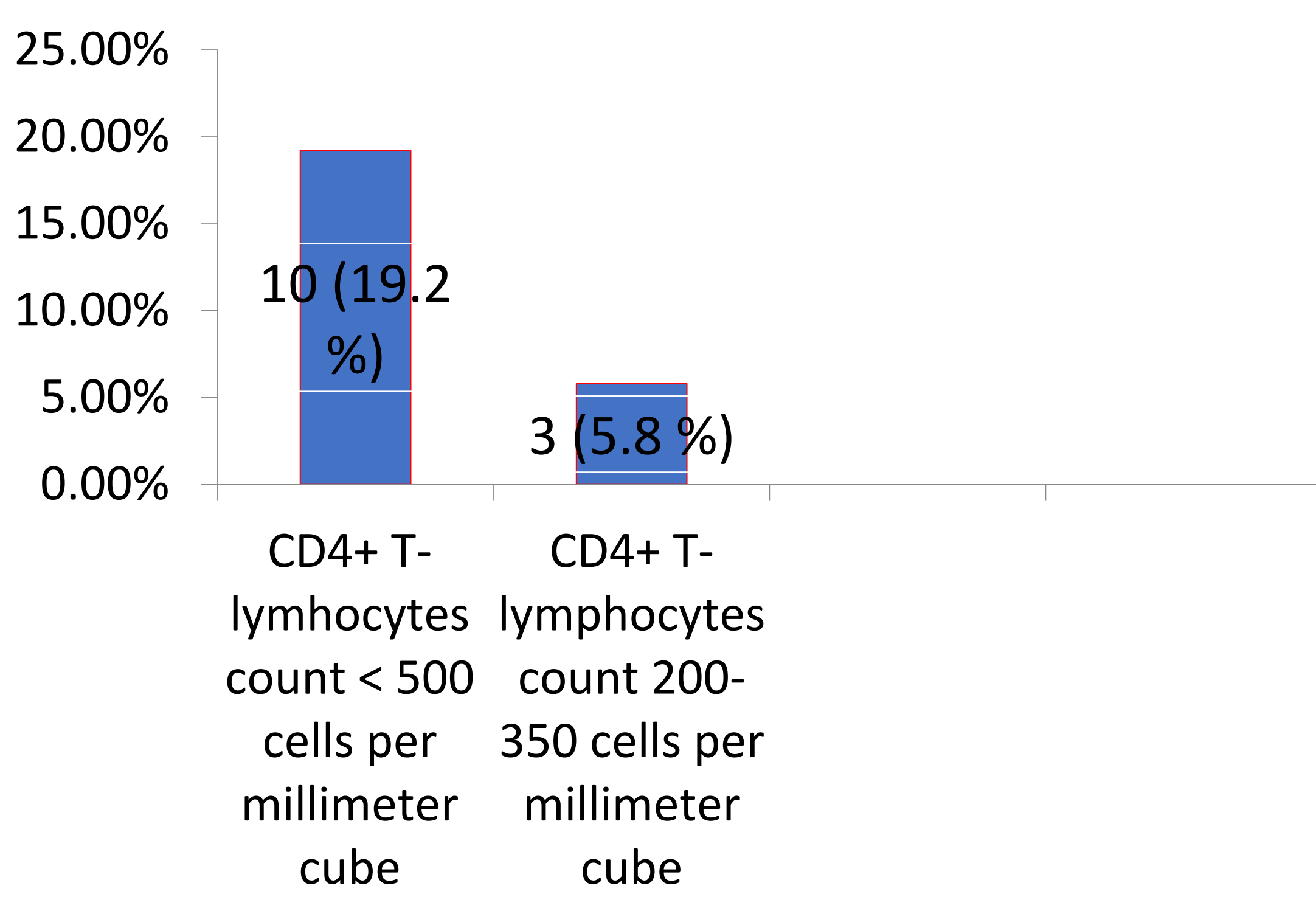


Figure 2; CD4⁺ T-lymphocytes levels of HBs Ag positive study participants

TABLE 1: Observed predisposing risk factors for acquiring HBV infection among the study participants tested positive for HBs Ag

Risk Factor	Frequency (%) N= 430
Tattooing	22 (42.3)
Family history of HBV infection	19 (36.5)
Self-intravenous drugs usage	6 (11.5)
Blood transfusion	1 (1.9)