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**SERO-PREVALENCE OF HEPATITIS B VIRUS ANTIGEN AMONG BLOOD BANK
DONORS ATTENDED TO BLOOD TRANSFUSION CENTER IN ATBARA, RIVER
NILE STATE, SUDAN, FROM APRIL TO JUNE 2017**

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ABSTRACT

Background: Hepatitis B is a viral infection that affects the liver and can cause both acute and chronic disease. Hepatitis B virus (HBV) disease is serious complication worldwide and it's the most common cause of liver cirrhosis and hepatocellular carcinoma. **Objectives:** To detect hepatitis B virus antigen among blood donors attended to Blood Transfusion Center in Atbara River Nile State, from April to June 2017. **Methodology:** Descriptive cross sectional study, a total of 91 donor samples were collected from various capillary bloods or 2ml of venous blood sample in plain container for ICT hepatitis B viral screening and then serum was separated for ELISA to conform the positive results. **Result:** Hepatitis B virus antigen is detected in 2.2% of screened blood donors. **Conclusion, discussion and recommendation:** Despite more than type of serological technique was used a molecular diagnostic method should be applied in further studies also sample size must be increased and period of screening should be prolonged.

KEYWORDS

Sero-prevalence, Hepatitis B virus and Blood donors.

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INTRODUCTION

Hepatitis B is a viral infection that attacks the liver and can cause both acute and chronic disease. Hepatitis B virus (HBV) disease is serious complication worldwide and it's the most common cause of chronic hepatitis or liver cirrhosis and hepatocellular cancer (HPC)¹.

Hepatitis is one of the transfusion transmissible infection (TTIs) that is still concerned in blood donation in Sudan and other parts of world so to

give patients safe blood it must be checked this disease and it's risk factors to prevent transmission of disease by blood to blood contact, during birth , sexual contact and by contaminated instruments(sharing needles)².

It's estimated that universally more than approximately two billion of people have been infected by hepatitis B virus and 350 million of them have chronic condition³. Three quarter of the world population lives in highly endemic areas of infection⁴.

Sudan is classified among countries of highly endemic hepatitis B infection (HBV).The overall prevalence of HBV in Sudan in 2012 was 4%. The prevalence varies between the 15 states included in the Surveillance, ranging between 0.1% in River Nile and the Northern state to 15.7% in South Kordofan. In 2013, 17 states were included in the survey and the overall prevalence of HBV was found to be 5%. The prevalence of HBV ranged between 0% the Northern state to 12.3% in White Nile state. In 2014 HBV prevalence was found to be 4.2%. The survey included eighteen states and HBV prevalence ranged between 0.5% in the Northern state and 0.9% in River Nile to 8.8% in Gadarif.)⁵.

In this study will be going to determine the seroprevalence of hepatitis B surface antigen and its risk factors associated with it for transmission HBV infection before to the introduction of blood screening and Vaccination River Nile sate.

Justification

Hepatitis B is a serious blood transmitted virus, so blood transfusion should be done after receiving the result of viral confirmatory test to ensure safe blood transfusion.

Objectives

To detect hepatitis B virus antigen among blood donors attended to Blood Transfusion Center in Atbara River Nile State, from April to June 2017.

MATERIAL AND METHODS

Study design

Descriptive cross sectional study

Study population

Blood donors attending in central bank of Atbara.

Study area

Atbara blood transfusion center

Study period

April to June 2017

Sample size

A total of 91 blood donors

Data collection

Primary data was collected by using questionnaire.

Study variables

blood transfusion, blood donation, surgical operation, smoking, alcoholic intake, injection drugs dose, dental carrier, tattooing, vaccination and illegal sexual intercourse are all study variables.

Data analysis

Data was analyzed by using statistical package for social science (SPSS).

Ethical consideration

Written consent was obtained from blood donors who was agree to participate in the study.

Diagnostic methods

Immunochromatographic test

Enzyme linked immunosorbent assay

RESULT

2.2% of blood donors were positive to hepatitis B antigen.

CONCLUSION, DISCUSSION AND RECOMMENDATION

Despite more than type of serological technique was used a molecular diagnostic method should be applied in further studies also sample size must be increased and period of screening should be prolonged.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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