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# Prevalence of HBsAg among the Patients of Sheikh Zayed Hospital Rahim Yar Khan Pakistan

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**Abstract:**

*Aim of the current study was to find out the prevalence of HBsAg in Sheikh Zayed Hospital, Rahim Yar Khan. HBsAg was determined by using the Biotech kit and ELISA was performed by using thermo scientific Multiskan(R) kit. Out of 100 patients 5% patients were HBsAg positive and rest of negative. Mean age of the patients was 40.92 years which have 74% married and 26 % were unmarried. We concluded that serology test is not enough for the diagnosis of HBV. PCR HBV should also be performed for HBsAg positive samples.*

**KEY WORDS:**

Prevalence, HBsAg, Biotech kit, ELISA, Thermo Scientific Multiskan(R) kit.

## INTRODUCTION

Hepatitis B Virus (HBV) infections is a serious global health problem with over two billion people infected worldwide and 350 million suffering from chronic infection. It is the 10th leading cause of death worldwide and results in 500,000 to 1.2 million deaths per year due to cirrhosis and hepatic cellular carcinoma.[1] Hepatitis B virus is endemic and widespread in many parts of the world.[2] More than 2 billion people have had contact with the virus and more than 350 million peoples are chronic carriers, in which 75% in Asia.[3] Ninety percent of HBV infection in healthy adults, the chronic carrier work as reservoirs, transmitting the virus to neonates. The increased frequency of chronic carrier of HBV infection amongst women of reproductive ages is considered the major factor in the high prevalence of HBV infection in some populations.[4] Prevalence of HBV in United States is an estimated 1.2 million,[5] in Australia HBV infection is 90,000 to 160,000,[6] in India it has been reported to be 5.1% population infected with HBV and in Pakistan 0.5% to 25% population infected but the exact prevalence rate of Hepatitis virus infection in Pakistan is unknown.[7]

## MATERIALS AND METHODS

This study is aimed to find out the prevalence rate of HBsAg in Sheikh Zayed Hospital, Rahim Yar Khan. The research work was carried out in the Pathology Department of the respective hospital. A total of 100 patients samples were collected of different age groups. For the demographic information a performa was used. 5ml whole blood was collected with sterile syringe and transferred in to EDTA vial. HBsAg is

determined by using Biotech kit and ELISA was performed by using thermo scientific Multiskan(R) kit. The entire test was performed as per the kit instruction.

## RESULTS AND DISCUSSION

The ethical authority of the hospital approved the present study. A total 100 patients were included in this study. Mean age of the patients was 40.92 while median and mode are 37 and 35 respectively (Table 1). Out of total the 5 (5%) patients was HBsAg positive and 95 (95%) were found negative as shown in figure 1. Females are 44 (44%) while male population is 56 (56%) (Figure 2). In figure 3, married patients are 74% which are relatively more than unmarried population 26%. A study was conducted by Nafees et al (2009) in Lahore and he reported 8.06% of prevalence of HBsAg in general population. [8] While the results of HBsAg positives of our study are 5% which are different from the study and most probably due to using different test procedures. Another study was carried out by Sheikh et al (2009) in Larkana and he showed 4.8% prevalence of HBsAg [9] and the results were similar to our study. The results in our study are greater and most probably the study has done in 2006 and we conducted in 2013, and prevalence of HBV is increasing day by day. Sarwar et al (2008) in Abbottabad showed 2.4% prevalence of HBsAg in Healthcare personals [10] and results in this study are lower than the results of our study because health care workers knows more about means of acquiring HBV infections as compared to our study.

**Table1: Statistical analysis of patient's age.**

| Statistics of patients age | |
|---|---|
| Mean | 40.92 |
| Median | 37 |
| Mode | 35 |
| Std. Deviation | 18.546 |
| Range | 78 |
| Minimum | 14 |
| Maximum | 92 |

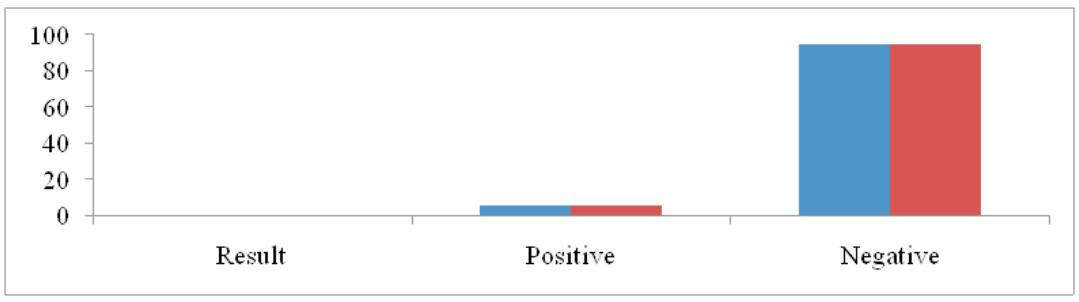


**Figure 1: Percentage distribution of HBsAg positive patients.**

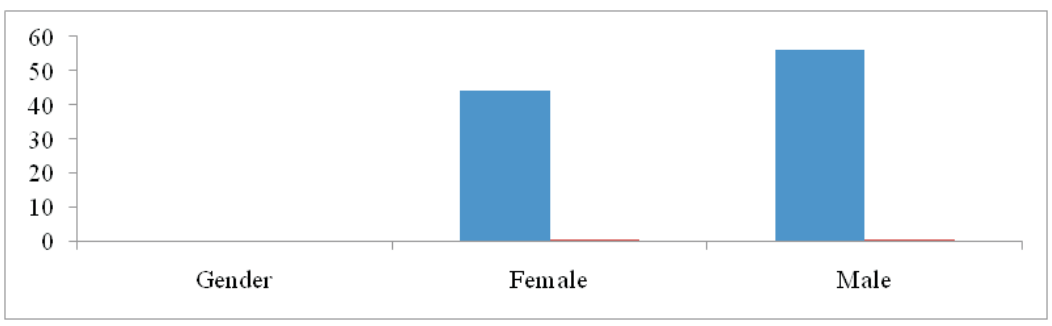


**Figure 2: Percentage distribution of male and female hepatitis patients**

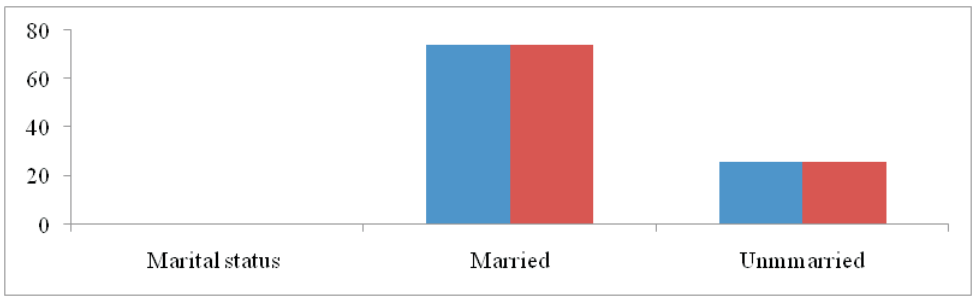


**Figure 3: Percentage distribution of married and unmarried patients.**

## CONCLUSIONS

From this study it was concluded that the prevalence of HBV increase day by day. We also concluded that serology test is not enough for the diagnosis of HBV. PCR HBV should also be performed of HBsAg positive samples.

## ACKNOWLEDGEMENTS

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