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Prevalence of Hepatitis B Virus Infection among Pregnant Women in a Rural Hospital of Tripura

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Abstract:
Aim *This study was designed to determine the prevalence of hepatitis B virus (HBV) infection among pregnant women in a rural hospital of tripura.*
Material and Methods: *A cross-sectional hospital-based study was done from at Kulai District Hospital,Tripura. Blood samples of 87 pregnant women were collected. A case sheet proforma was prepared and data (demographic profile,clinical feature, investigation) from all patients were collected and analyzed.*
Result: *Out of 87 patients 2(2.29%) samples were found positive for Hepatitis B Virus Infection.*
Anemia was present in 16 (18.4%) patients, out of which 3(3.4%) patients had severe anemia.
Conclusions: *These results underscore the need for prenatal screening for HBV infection in pregnant women and treatment of newborns from HBsAg-positive mothers.*
Keywords: *Prevalence, Pregnant women, HBV infection.*

I. Introduction

Hepatitis B is one of the most highly transmitted forms of hepatitis from mother to child around the world, especially in developing countries. In the United States, 15,000 women a year who are positive for the hepatitis B surface antigen (meaning they have the disease) deliver. Although the mother will usually become jaundiced during the acute stage, some women have no symptoms of hepatitis, which is one reason way CDC guidelines include mandatory screening of all women for hepatitis B during the first prenatal visit.As this virus is highly contagious, and the risk that the newborn infant will develop hepatitis B is 10 to 20% if the mother is positive for the hepatitis B surface antigen, and as high as 90 percent if she is also positive for the HBsAg. Usually, the disease is passed on during delivery with exposure to the blood and fluids during the birth process [1-4]Therefore this study is design to know Prevalence of Hepatitis B Virus Infection among Pregnant Women in a rural hospital in Tripura.

II. Material and Method:

This study was conducted in Kulai District hospital, Tripura. Case input is primarily from this region and also from bordering districts and states.This was hospital based cross sectional study done among pregnant women attending hospital from July to Decembar 2015.Total sample size is 87. All patients were informed about the study and informed consent was obtained. A case sheet proforma was prepared and data (demographic profile, clinical features, investigations) were filled and analyzed.

Statistical analysis Statistical analyses were performed using the Statistical Package for the Social Science (SPSS). The categorical variables were shown as numbers of cases with percentage, and the continuous variables were shown as mean ± standard deviation (SD). A *P* value of ≤0.05 was considered statistically significant.

III. Result

Demographic and clinical characteristics of the patients are shown in Table 1. Mean age was (22 ± 3.3) years and 16 (18.4%) of the patients were anemic(Hb<11mg/dl).

Table.1 Demographic and clinical characteristics of patients (n: 87).

Age (year)	22 ± 3.3 years
Hemoglobin (g/dL)	10.9 ± 1.4
Presence of anemia(Hb<11gm/dl)	16 (18.4%)
Presence of severe anemia(Hb<7gm/dl)	3(3.4%)

A total of 87 blood samples were tested, in Kulai District hospital, Tripura . Out of which 2(2.29%) samples were found positive for Hepatitis B Virus Infection.

Table 2. Age Seroprevalence of Hepatitis B Surface Antigen among Pregnant Women

Age group (yrs)	Number tested	HBsAg positivity
10 – 19	31	1(3.28%)
20 – 29	42	1(2.38%)
30 – 39	14	0

The Prevalence of HBsAg was highest among the teenagers (10 – 19 years).

IV. Discussion:

This cross sectional study shows the prevalence of hepatitis B virus (HBV) infection among pregnant women attending Kulai district hospital was 2.29%.The prevalence rates reported by Gill et al.[5] was 5%.Mittal et al [6] showed the prevalence of of hepatitis B virus (HBV) infection among pregnant women was 6.3%.The results of our study are comparable to Shegal [7] (2.6%), Gupta [8] (2.5%), Panda [9] (2.6%) studies.

V. Conclusion

These results underscore the need for prenatal screening for HBV infection in pregnant women and treatment of newborns from HBsAg-positive mothers

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