

# Prevalance of Hepatitis-B in Pregnant Kashmiri Women Attending Tertiary Care

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**Abstract:** The most common mode of transmission of Hepatitis-B is from infected mother to baby i.e., vertical transmission and it accounts for 50-60% of those that are chronically infected. Among these 50-60%, 25% die from complications of HBV related diseases. It was a retrospective study carried at our hospital of SKIMS, Soura. Antenatal record over a period of one year (March 2017-May 2018) was analyzed. Total number of patients' chosen for study was 400. Out of 400, number of patients who tested positive for HbsAg by ELISA was 32%. Thus prevalence of HBV infected patients in otherwise healthy pregnant patients was 8%.

## 1. Introduction

Hepatitis-B is considered as a global epidemic. It is considered that 2 billion people are infected worldwide and among the 2 billion, 350 million are those that are chronic carriers and about 1.5 million deaths occur from HBV related liver diseases<sup>1</sup>.

According to WHO, HBV prevalence areas are classified as under:-

- 1) High prevalence areas-with prevalence of HBV >8%
- 2) Intermediate prevalence areas-with prevalence of HBV >2-7%
- 3) Low endemic areas-with prevalence of HBV <2%.

India, however, belongs to zone 2. In India HBV related diseases account for 1 lakh deaths annually<sup>2</sup>.

The most common mode of transmission of Hepatitis-B is from infected mother to baby i.e., vertical transmission and it accounts for 50-60% of those that are chronically infected. Among these 50-60%, 25% die from complications of HBV related diseases<sup>3,4</sup>.

Before integration of HBV vaccine into routine immunization programme vertical transmission of infection from mother to baby was 10-30% in those mothers that were only HSAg positive, however toll number was as high as 70-90% when mother was simultaneously HbsAg positive and HbeAg<sup>5,6</sup>. However with the introduction of active and passive immunoprophylaxis of babies vertical transmission is reduced to 5-10%<sup>7,8,9</sup>.

Since our Kashmir belt is heavily infected with Hepatitis-B because of use of unsterilized instruments by dentists and for other surgical procedures mostly in rural areas, I preferred to choose this study.

It is said that there are three modes of perinatal transmission:-

- 1) Transplacental (Antenatal period)
- 2) Natal (At the time of delivery)
- 3) Perinatal (After birth)

In order to reduce this perinatal transmission antenatal screening of mothers for HBV infection has been made mandatory and for all those infants that are born to HBV

infected mothers immunoprophylaxis is to be given, this includes HBV vaccination at birth and complete a four-dose course.

## Aims

- Prevalence of Hepatitis-B infection in otherwise healthy pregnant women
- Is universal screening of Hepatitis-B infection needed or not?

## 2. Materials and Methods

It was a retrospective study carried at our hospital of SKIMS, Soura. Antenatal record over a period of one year (March 2017-May 2018) was analyzed. Details of about 400 patients who were subjected to screening of Hepatitis-B by ELISA were obtained. Our results were tabulated as under:-

Frequency and Prevalence of HBV Based On Age Distribution			
Age Group	Total	Frequency	Prevalence
18-23 years	100	8	8%
25-30 years	100	8	8%
30-35 years	200	16	8%

Frequency and Prevalence of HBV based on Residence			
Rural	300	24	8%
Urban	100	8	8%

Frequency and Prevalence According To Literacy			
	Total	Frequency	Prevalence
Illiterate	200	16	8%
1° School	100	8	8%
2° School	50	4	8%
Graduation	50	4	8%

Frequency and Prevalence According To Occupation			
Housewife	300	24	8%
Labourer	50	4	8%
In-Service	50	4	8%

## 3. Results

- 1) Total number of patients' chosen for study was 400. Out of 400, number of patients who tested positive for HbsAg by ELISA was 32%. Thus prevalence of HBV infected patients in otherwise healthy pregnant patients was 8%.

- 2) Mean age for HbsAg positive pregnant women was 30-35 years with six subjects indicating previous of 8. 24 patients hailed from rural areas and 8 were from urban areas.
- 3) Illiterate subjects predominated in the study and were 16 in number again giving a prevalence of 8%.

#### 4. Discussion

Prevalence of HbsAg in pregnant women in our study was 8%. This matches with the various Indian studies that reflect a prevalence of 0.9-7.8%.

Study	Year	Location	Sample Size	Prevalence
Bakthavatchalu et al <sup>11</sup>	2012	Bangalore	500	7.8%
Khakhkhar <sup>12</sup>	2012	Jamnagar	2050	3.07%
Paranjothi et al <sup>13</sup>	2009	Krishnagiri	762	5.1%
Dwivedi et al <sup>14</sup>	2011	Allahabad	4000	0.9%
Oladimeji et al <sup>15</sup>	2013	Nigeria	1627	3.9%
Murad et al <sup>16</sup>	2013	Yemen	400	10.8%
Zenebe et al <sup>17</sup>	2014	Ethiopia	318	3.8%
Magrahe et al <sup>18</sup>	2010	Libya	1500	1.5%

#### 5. Conclusion

There is high sero-prevalence of HbsAg among antenatal females in our Kashmir belt (Results in our study being 8%). This calls for universal screening of antenatal females for HbsAg by ELISA. Not only this, all babies born to HBV infected mothers should have immunoprophylaxis to reduce the rate of perinatal transmission. It is said that 90% of babies who are born to HbsAg positive mothers and are unimmunized develop chronic liver disease at a very young age and represent important reservoir of infection in the community.

Thus Universal Screening for HBV infection should be a mandatory OPD procedure for all antenatal females.

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