



## Prevalence of Viral infections in pregnant females in Northern India

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### ABSTRACT

This study was done to recognize the prevalence of known viral infections of Hepatitis B and C and HIV in obstetric patients presenting for delivery. All pregnant cases presenting for delivery between January 2010 and December 2013 were investigated for Hepatitis B and C, and HIV infections through blood tests. All positive cases were documented. There were 2576 pregnant patients who presented for delivery to the department. Fifty one of these patients were Hepatitis B positive, which was 2 % of the total cases managed. Twenty five cases (1%) were Hepatitis C positive, and twelve patients (0.5%) were HIV positive.

### KEYWORDS

viral infections, prevalence, pregnancy

### Introduction:

Viral infections are rising in all sections of society. Increasingly, surgeons encounter patients infected with Hepatitis B or C and Human Immunodeficiency Virus (HIV) in their surgical practice. Universal precautions are recommended if a patient is seropositive<sup>1</sup>. Any prick or spillage of infected blood can be dangerous for a surgeon.

Despite this knowledge, many surgeons in India still neglect getting these tests done. Reasons can vary from financial problems to lack of adequate laboratory services to even lack of awareness.

This study was done to recognize the prevalence of known viral infections of Hepatitis B and C and HIV in obstetric patients presenting for delivery.

### Material and Methods:

This study was undertaken in the Department of Obstetrics and Gynecology of a medical college serving suburban and rural population of Uttar Pradesh. All pregnant cases presenting for delivery between January 2010 and December 2013 were investigated for Hepatitis B and C, and HIV infections through blood tests. All positive cases were documented.

Protocol followed in our institute was to do a cesarean section in HIV positive patients when diagnosis was made before the rupture of bag of membranes<sup>2</sup>. Normal vaginal delivery was attempted when the diagnosis was made after the rupture of bag of membranes and for all HBsAg and HCV positive patients<sup>3</sup>. This was done to minimize maternal to fetal transmission of viral infections. In all these cases, universal precautions were used by the surgical team, especially when recourses are limited.

### Results:

There were 2576 pregnant patients who presented for delivery to the department. Out of these, 1569 were normal deliveries (61%). Remaining 39 % (1007) were cesarean sections.

Fifty one of these patients were Hepatitis B positive, which was 2 % of the total cases managed. Twenty five cases (1%) were Hepatitis C positive, and twelve patients (0.5%) were HIV positive.

Out of these 88 patients, Cesarean section was done in twelve patients (13.6%). Normal delivery was done in all other 76 patients (86.3%). Higher incidence of normal delivery was because most of these patients were unbooked patients presenting for the first time in the emergency. They were mostly uneducated, working in construction sites, and had not been investigated before. They arrived in emergency with rupture of membranes, with labor already started.

All booked patients who were diagnosed from before were administered prophylactic immunoglobulin or retroviral therapy as per accepted protocol.

### Discussion:

Viral infections are increasing in India due to migrating population, changing sexual practices and drug abuse<sup>4</sup>. They pose a significant health risk to health care practitioners, when exposed to body fluids. One such event is pregnancy. Majority of institutes in Northern India do not test for these infections due to costly nature of tests<sup>5</sup>. Many deliveries are managed by private sector in India as adequate government facilities are not available in smaller cities, towns and villages. Such tests are costly when done privately, and add to expense on labour, surgery and medicines. So surgeons prefer to turn a blind eye to possibility of infections in pregnant females. Also, many places do not have rapid diagnosis kits, further reducing the possibility of diagnosis. Still huge number of deliveries are managed by unregistered dais, or delivered at home. Most of such personnel are not even aware of the existence of these diseases or the risks involved<sup>6</sup>.

This creates a dangerous situation, since prevalence of these deadly diseases is 0.5 % in HIV to almost 2% in HBsAg in our representative population. Not having the diagnosis puts the person helping in delivery at a risk of infection. It also puts the new born child at risk, as child misses out on the prophylaxis that should have been given at time of birth<sup>7</sup>.

Having an early diagnosis helps in starting early prophylaxis in pregnant female which can prevent fetal transmission. It also helps in arranging for resources to take universal precautions by the surgical team, and in giving early prophylaxis to new born.

Government should try to expand its national programs on these diseases to smaller cities and towns. It should try to incorporate all these tests in its Reproductive and Child Health (RCH) programs which are relatively successful in reaching out to pregnant women in giving them iron supplementations. Efforts should be made to manufacture these rapid test kits in mass scale, distribution to all its health centers, awareness of health care workers of lowest levels about existence of these diseases for their benefit and benefit of new born.

There is still a long way to go, and similar studies in other centers of India will surely improve awareness and results.

### Conclusion:

There is 0.5 % incidence of HIV, 1% incidence of HCV and 2 % incidence of HBsAg in suburban and rural northern India. We should be aware about these diseases, and take universal precautions, when coming across such patients.

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