

RISK FACTORS FOR HEPATITIS C VIRUS; OBSTETRICS PATIENTS

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ABSTRACT... **Objective:** To find out risk factors for hepatitis C infection in obstetric patients in a teaching hospital. **Study Design** – Observational study. **Place and Duration** At Sir Ganga Ram Hospital, Lahore during a period of one year. **Subjects and Methods** – Cases of hepatitis C infection, diagnosed on the basis of screening for antibodies for Hepatitis C were included in the study. A proforma was designed and details of each case including maternal demographics and associated risk factors were entered. **Result** Fifty three obstetric patients were positive for Hepatitis C virus antibodies in one year of study period. Majority of women were among 25-29 years of age, belong to low socioeconomic status, illiterate and among parity range of 2-5. Previous history of surgical procedures was in 66% of subjects while 62% had history of injections. Ear piercing in unsterilized conditions by non skilled person was also present in significant number (43%) while 17% had history of blood transfusions. **Conclusion:** Hepatitis C infection is linked to surgical procedures, injections and ear piercing in this study. However, to identify all associated maternal risk factors, larger studies at multiple centres will be required and strategies should be made to prevent its' transmission.

Key words: Hepatitis C, Pregnancy, Risk factors,

INTRODUCTION

Hepatitis C is emerging as a major health burden worldwide. About 160 million people are infected with Hepatitis C¹ with the prevalence rate of 4-6% in Pakistan². Based on this average prevalence in Pakistan it could be estimated that approximately 10 million people are infected with HCV in the country³ which will be a source of infection for others.

Long standing infection can lead to cirrhosis, liver failure and hepatocellular carcinoma.

Nearly 60-70% of patients with chronic liver disease are positive for antiHCV⁴. Hepatitis C virus in young women of reproductive age group can be disaster for both

mother and infant. Chronic liver disease can be associated with coagulopathy with its associated adverse obstetric complications. There is about 5% risk of vertical transmission⁵ which can lead to chronic carrier state and its, consequences in the baby.

The objective of present study was to identify risk factors associated with seropositivity of hepatitis C. As the cost of treatment is high and there is no available vaccine for

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the disease so the main focus should be on the primary prevention. By identifying the risk factors in our community we can formulate policies for control and sensitize our people about preventive aspects of this disease.

PATIENTS AND METHODS

This observational study was carried out at Obstetrics and Gynecology Unit I of Sir Ganga Ram Hospital Lahore, over a period of one year from July 2005-to June 2006 Sir Ganga Ram Hospital is a tertiary care hospital affiliated with Fatima Jinnah Medical College Lahore, Pakistan.

All cases of hepatitis C, diagnosed on the basis of analysis of serum for Hepatitis C antibodies were included in the study. The screening test was by chromatographic immunoassay for the qualitative detection of antiHCV antibodies in serum followed by confirmation by enzyme linked immunosorbant assay. A Proforma was designed and details of each case including maternal demographics and possible identifiable risk factors were entered. Subsequently data was analyzed.

RESULT

During the study period, 53 cases of Hepatitis C were diagnosed. The total number of deliveries during the same period was 5551 Therefore; the frequency of Hepatitis C positive patients was 0.95% in our study.

Regarding maternal demographics data, maximum cases were noted in the age group of 25-29 years and parity of 2-5 .About 66% women belonged to low socioeconomic status and 52% were illiterate (Table I).

Regarding maternal risk factors 66% had previous history of major or minor surgical procedures, 62% had injections and 43% had ear piercing by unskilled persons. About 17% of subjects had blood transfusions (Table II) in the past.

Table-I. Demographic features of study population (n=53)

Age	No. of pts	%age
20-24	11	20.75
25-29	21	39.62
30-34	14	26.41
35-39	5	9.43
≥40	2	2.77
Social class		
Low	35	66.03
Middle	18	33.96
Education		
Illiterate	28	52.83
Primary	5	9.43
Middle	6	11.32
Matric	7	13.2
FA	6	11.32
BA	1	1.88
Parity		
Para 1	13	24.52
Para 2-5	35	66.03
Para ≥6	5	9.43

Table-II. Maternal Risk Factors for Hepatitis C

Factors	No of Pts	%age
Surgical procedure	35	66.03
Major	14	26.41
Minor	21	39.62
Injections	33	62.26
Ear piercing	23	43.39
Blood transfusions	9	16.98
Single	4	7.54
Multiple	5	9.43
Chewing pan/tobacco	4	7.54
Tattooing	2	3.77
Family History	3	5.66

DISCUSSION

Hepatitis C is emerging a major health issue in our country. The frequency of this in present study is 0.95% in contrast to 4.8⁵ to 6%⁶ in other studies.

The commonest risk factors in the study population were past surgical procedures, injections and ear piercing by unskilled persons in unsterile conditions.

In the present study majority was between 25-29 years of age, this was comparable to study urban pregnant women in Zimbabwe⁷.

Relative frequency of seropositive status was high in illiterate women of low socioeconomic status and Para 2-5 in this study while A.Kumar reported increased seropositive rate with increasing literacy status and high in third and fourth pregnancy⁸.

Previous history of surgery was 66% of cases in our subjects while a study conducted in Islamabad revealed it in 39% of cases⁹. In a report by N.Khokhar⁵ previous surgery was in 17% of cases while previous history of injections was in 12% of cases in contrast to 62% in present report. Blood or blood product transfusion was main reason of transmission of hepatitis C before initiation of screening of blood for hepatitis C¹⁰. Past history of transfusion was in 17% of cases in present study in contrast to 42% of case quoted by Khokhar⁵. History of transfusion was in about 10% of cases reported by Jaffery T⁹. Frequency of Anti HCV with single blood transfusion in present study was 7.5% and 9.4% with multiple transfusion while it was 13.2% versus 15.4% with multiple blood transfusions in an other study¹¹.

In Brazilian pregnant women blood transfusion, black race, alcohol abuse, a history of STD and anti HBc was independent risk factors¹². While in an inner London C positive Obstetrics patients were more likely to have drug abuse¹³.

In rural pregnant women of Egyptian risk factors was increasing age, low social status history of blood transfusion and injection for schistosomiasis¹⁴.

None of the known risk factors was found to be significantly associated with HCV infection in a study by Kumar A in India¹⁵.

Limitations of our study are that sample size is small and it is not case controlled study. Epidemiological studies in various tertiary care centers can help in formulation of preventive strategies by identifying risk factors in local population. In the absence of any Vaccine for Hepatitis C, emphasis should be on health education at community level for primary prevention by eliminating risk factors. Health care providers should be committed in formulation and strict adherence to safe practices; strict laws should be made against reuse of syringes, sharing needle, equipments and screening of blood only than we will be successful in reducing the burden of this disease.

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