

Short Report

Seroprevalence of Hepatitis C Virus Infection and its Risk Factors in Pregnant Women

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Introduction

Hepatitis C virus infection has been reported in approximately 1- 4% pregnant women¹ and perinatal and vertical transmission from mother to infant has also been well documented.² It has been estimated that there is an approximately 5 % risk of vertical transmission to the new born and in addition to high maternal viral load and HIV co-infection, maternal drug abuse also has played important role.² Babies born to HCV positive mothers have shown biochemical features of liver damage in first 12 months of life and progression to chronicity seems to have occurred in majority of these children although the disease has been mild.³ Aim of this study was to determine the seroprevalence of hepatitis C virus infection in pregnant women attending ante natal clinic and to determine their risk factors for acquisition of hepatitis C virus infection.

Patients, Methods and Results

All pregnant women presenting in the ante natal clinic of Shifa International Hospital Islamabad, from July 2001 to December 2002, were enrolled and checked for anti HCV and alanine aminotransferase (ALT) level. The upper limit of normal ALT in females was 30 IU. Those found positive for anti HCV were encouraged to have HCV RNA done. Patients were questioned for any possible risk factors which may have lead to hepatitis C virus infection. ALT was performed by standard biochemical method, anti HCV by ELISA method (Abbot Laboratories, North Chicago, USA) and HCV RNA by PCR was performed by method (amplicor ver. 2; Roche Diagnostic, Basel, Switzerland). Frequencies and 95 % confidence intervals (CI) were calculated. Mean age \pm standard deviations are given. All calculations were made by statistical software package SPSS 10 (SPSS Chicago, IL, USA).

A total of 503 patients were enrolled. Twenty four (4.8 %) were anti HCV positive. Mean age was 27.9 ± 4.97 years (95 % CI 27.47 - 28.35). Number of pregnancies in these patients were 2.58 ± 1.77 (95% CI 2.42 - 2.73). The month of pregnancy during which they presented was 4.58 ± 2.49 (95% CI 4.37 - 4.80). ALT levels were normal in 12 out of 24 (50%). ALT level in patients with abnormal values was 51.53 ± 46.28 (95 % CI 31.11 - 72.15). HCV RNA was done in 18 women and 13 (72%) were positive. Risk factors noted were blood transfusion in 10 (42%) patients, surgery in 4 (17%) and injections in 3 (12%) patients. No known risk

factors could be found in 7 (29%) patients.

Comments

Prevalence of HCV infection in pregnant women in Pakistan is 6.7%⁴ which is higher than 0.19% to 4.41% reported in Caucasians.^{5,6}

Seroprevalence in this study and another from Lahore⁷ varied from 4.8 to 6%. Half of the patients who had positive anti HCV had shown their ALT to be normal. This can happen as the ALT either fluctuates or is lower in female patients.⁸ Risk factors in our patients were similar as seen in non-pregnant patient.

There are no universal antenatal screening programs even in many of the European Centers⁹, however, recently, several professional organizations have recommended that all children born to the women infected with hepatitis C virus or have risk factors for infection should be screened for hepatitis C.¹⁰ Screening all pregnant women has been an expensive proposition even in affluent countries like United States, and selective screening of pregnant patients with possible risk factors has been recommended.⁶

In conclusion, the seroprevalence in pregnant women is close to the rate in general population in Pakistan. Most frequent risk factor was history of blood transfusion. As vertical transmission is possible, antenatal screening of selected pregnant women with known risk factors may be helpful.

References

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