ORIGINAL ARTICLE

Proportion of patients presented with Hepatitis C in term Antenatal in Gyneae and Obs Department at NSSSH

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ABSTRACT

Aim: To find out frequency of HCV infection in term antenatal subjects and to determine the associated risk factors and vertical transmission
Study design: Descriptive study
Setting: Department of Obs. and Gynae, Nawaz Sharif Social Security Hospital Multan Road Lahore.
Duration: From July 2012 to Dec 2012.
Methods: Patients admitted in labor ward were screened for hepatitis C. Those found positive for hepatitis C underwent detailed history .The information was collected on specially designed Performa that includes history of injection, blood transfusion and past surgical history.
Results: The frequency of hepatitis C was 2.3%. 100% patients gave history of injection, 24 patients (68.5%)were between 20-29 years of age, 25(72%) patients were multigravida, 9 patients (25.7%) give history of hepatitis C positivity in their husbands, 28(80%) had history of blood transfusion, 30(85.7%) had past surgical history, 34(97%) had normal liver function, 1(28%) had vertical transmission. Frequency of hepatitis C was 2.3%. Injections, history of blood transfusion and past surgical history were the most important associated risk factors among pregnant women.
Keywords: Hepatitis C, Frequency, Associated factors, Pregnant women.

INTRODUCTION

Hepatitis C is a global health problem and is a leading cause of chronic liver disease especially in third world countries[1]. World health organization has estimated that about 3% of world population is infected with hepatitis C virus[2,3]. It accounts for about 14.5% of acute viral hepatitis, 60-70% of chronic hepatitis and upto 60% of cirrhosis and hepatocellular carcinoma[4]. Prevalence of HCV virus infection varies throughout the world with highest number of infections reported in Egypt and Asia[5].The prevalence of HCV positivity in pregnant women ranges from 1.2% to 4.5% in developed countries[6,7]. The prevalence of hepatitis c virus in a population can be predicted by risk factors associated with transmission of infection like injections, blood transfusion, sexual transmission, and vertical transmission. Sero-prevalence of hepatitis C in Pakistan is still unclear and it's epidemiology particularly in women and children has yet to be established. However different studies carried out uptil now revealed that prevalence of hepatitis C virus in pregnant women is 6.7% while in general population it is 3-25.7%[8,9]. Pregnancy is a stressful state. Normal pregnancy is associated with series of dramatic hemodynamic changes but liver function tests are normal during entire course except alkaline phosphatase which increases near term. Also there is no alteration in structure or histology of liver. If the liver is effected by cirrhosis or have altered liver function tests, it may cause problems during labor and delivery[10]. Hepatitis c virus is a small sized single stranded RNA virus. Anti HCV antibodies are detected by ELISA method. Patients with chronic hepatitis whose therapy can be delayed should not be treated with interferone. In patients with acute hepatitis C in pregnancy, the use of interferone therapy should be considered with close monitoring[17].

The infection by hepatitis C virus when appearing during pregnancy could result in damage to infant, however risk differ according to implicated virus. However 50% of infected women have no risk of infection. There is no evidence that natural history of HCV interfere with normal pregnancy unless the patient has cirrhosis with associated complications. However HCV may be transmitted vertically (with a wide variation of 0-30%), the average is around 5%.It becomes very high in case of co-infection with HIV-1 and HCV viral load[18].

MATERIALS AND METHODS

This cross section survey was conducted in Department of Obstetrics and Gynaecology, Nawaz Sharif Social Security Teaching Hospital, Lahore

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during six months period from July 2012 to december 2012. 1500 term antenatal subjects were admitted in labour room in this period. 35 patients were found positive for hepatitis C. They were further studied in depth. Sampling technique was convenient non probability. All women at term gestation who were admitted to labour ward were included. Subjects positive for hepatitis other than hepatitis C were excluded. The term antenatal women were admitted in labour room. An informed consent was taken. Subjects were screened for hepatitis C by enzyme linked immunosorbent assay (ELISA).It has sensitivity of 97%. Data was computer based. The variables including demographic characteristics (age, parity) were presented as simple descriptive statistics. The variables in the past history included the presence or absence of associated factors.

RESULTS

During the study period 1500 subjects (pregnant women) at term were admitted in labour ward. They were between 17-39 years of age. The demographic profile of positive subjects showed that majority 24 (68.5%) were between 20-29 years of age (Table 1). Among 1500 pregnant women 35 were positive for hepatitis C .The frequency of hepatitis C was 2.3% (Table 2). 25 women were multigravida (72%) and 10 were primigravida(28%) (Table 3). Blood transfusion was received in past by 28(80%) of the subjects.7 (20%) did not received any blood transfusion in the past. This difference was found to be highly significant (Table 4). All admitted positive subjects had history of injection prior to the diagnosis of hepatitis. The result was 100 % and highly significant (Table 5). Out of 35 subjects, 30 (85.7%) had history of minor and major surgeries. 5(14.3%) had no history of surgery (Table 6). Out of 35 subjects, 9 (25.7%) had history of hepatitis C positivity in husbands .No such history was found in rest of 26 (74.2%) (Table 7). Out of 35 subjects only one had vertical transmission of hepatitis C to the baby (Table 8).

Table 1: Demographic profile of admitted HCV +ve patients

Age Group	=n	%age
<20	1	2.8
20-29	24	68.5
30-39	10	28.5
<39	0	0
Total	35	100

Table 2: Frequency of Hepatitis C

Hepatitis C	=n	%age
Positive	35	2.3
Negative	1465	97.6
Total	1500	100

Table 3: Distribution of subjects by parity

Parity	=n	%age
Primigravida	10	28
Multigravida	25	72
Total	35	100

Table 4: Distributions of subjects for blood transfusion.

History of blood transfusion	=n	%age
Yes	28	80
No	7	20
Total	35	100

Table 5: History of injection in Hepatitis C positive patients)

History of injection	=n	%age
Yes	35	100
No	0	0
Total	35	100

Table 6: History of surgical procedures)

History of operation	=n	%age
Yes	30	85.7
No	5	14.3
Total	35	100

Table 7: History of hepatitis c positive husbands

Hepatitis C positive husband	=n	%age
Yes	9	25.7
No	26	74.3
Total	35	100

Table 8. Vertical transmission of Hepatitis C to baby

Vertical transmission in baby	=n	%age
Yes	1	2.9
No	34	97.1
Total	35	100

DISCUSSION

Pakistan is highly endemic for Hepatitis C[1,2]. Few studies have been carried out on hepatitis C positive obstetrical population of Pakistan. The prevalence of hepatitis C antibodies among 947 pregnant women in Shifa International Hospital, Islamabad was 3.2%[3]. Also in another study which was carried out at Lady Atchison Hospital, Lahore, frequency of hepatitis C was found to be 6%. Seroprevalence of hepatitis C in pregnant patients differ at different places. In my study it is 2.3%.

Hepatitis C is more common in younger age group in Pakistan as supported by Masood et al at Civil Hospital Karachi[10,11]. This is different from developed countries like United States where 65% of persons with HCV were between 30-49 years[5]. In my study also most of the patients were between 20-29 years of age 68.5%. Hepatitis C virus is transmitted mainly by blood products. Different studies carried out in Pakistani blood donors have shown prevalence

of hepatitis C to be 3.4-4%[12]. In my study also 80% of patients have history of blood transfusion. Contaminated needles and equipment can transmit infection[6]. Risk of HCV transmission after needle prick is 1.8%[7]. In present study 100% subjects give history of injection.

Past surgical history is also important factor. A study from Istanbul revealed high frequency of hepatitis C in surgical patients while study by Masood et al from Civil Hospital, Karachi also showed increase frequency of hepatitis C positive cases in hospitalized surgical patients[7].

Similar study by Sherazi et al from Ziauddin Medical University, Karachi revealed increased frequency of hepatitis C in surgical patients. In my study there was history of surgery in 30 patients 85.7% including minor and major surgeries.

In this study only one baby was found positive for HCV after delivery (2.9%). In other studies there is wide variation in vertical transmission from 0-30[9,13]. This is supported by finding of identical hepatitis C virus subtype in the mother and their infants[8,13].

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