Screening for Hepatitis C in Gynaecological Population

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A prospective study, conducted in department of Obstetrics and Gynaecology at Services Hospital. One hundred consecutive patients admitted for major gynaecological procedures were screened for hepatitis C during routine investigations. HBC infection was confirmed by anti HCV antibodies; Liver function tests and PCR was offered to those with deranged liver function tests. Seven out of a hundred patients were hepatitis C positive, all with normal liver function tests. One out of seven partners (15%) were HCV positive.
Key Words: Hepatitis C, Screening.

Hepatitis C is a RNA virus that causes chronic hepatitis. Acute infection often passes asymptomatic but more than 50% of infected individuals have active hepatitis, which will progress to cirrhosis and possibly hepatocellular carcinoma.

The prevalence varies widely with highest incidence in Egypt possibly with the use of contaminated needles[1] for mass treatment of schistosomiasis. It may be transmitted sexually[2] but only 1 to 2 percent of long term partners become infected. Vertical transmission occurs infrequently, though the risk is increased in those co-infected with HIV. There is no vaccine to protect against hepatitis C virus. Prevalence in Pakistan was 2.4% in 1997 and present prevalence is 1.1-4%.

Between one-quarter and one-third of all people with HIV are infected with HCV and liver failure is now a leading cause of death in them. Injection drug users are at risk for HCV and 50% and 90% of these have concomitant HIV and HCV. This is because both viruses can be transmitted easily through blood-to-blood contact. HCV can pass from the blood[3] of an infected person into the blood of another person through means such as sharing paraphernalia used to inject drugs, needle stick injuries, open wounds or mucous membranes exposed to infected blood and history of transfusion of unscreened blood and its products.

With no hepatitis C vaccine, the best way to prevent infection is to reduce the risk of coming into contact with another person's blood[4]. Unlike the antibodies to hepatitis A and hepatitis B, HCV antibodies *do not* protect from future HCV infection.

The transmission of HCV in doctors and paramedical staff depends on the number of patients with that infection in the health care facility and the precautions taken by health care workers dealing with those patients. Sero prevalence studies done in Saudi Arabia on doctors and paramedical staff showed prevalence of HCV infection of 3.5 to 5%[5]. The HCV Sero conversion averages 1.8%[1] per injury in Saudia. In US 800,000 of approximately 5.6[6] million health care workers suffer needle stick injury each year. About 80%[4] of HCV positive surgical operation room personal in a hospital in a Pakistan had more than four needle stick injuries per year in 5 years. These injuries are undocumented in many developing countries[3].

The transmission of HCV among doctors and paramedical staff can be prevented by save handling of blood products, avoidance of needle pricks, by adequate gowning, gloving and sterilization during surgical procedures

Although HCV is not transmitted efficiently through sexual activity[7], it is best to use barrier protection (condoms, latex gloves, etc.) to reduce the risk of transmitting HIV, HCV, and other sexually transmitted diseases.

Objectives:

- To detect the prevalence of hepatitis C in gynaecological population
- To detect risk factors responsible for transmission of hepatitis C

Material and Methods:

It was a prospective study conducted in the department of Obstetrics and Gynaecology at Services Hospital, Lahore. One hundred consecutive patients admitted for major gynaecological surgery were screened for Hepatitis C by anti HCV antibodies[5] and the patient was further evaluated by liver function test and PCR for HCV-RNA that include both qualitative and quantities assessment.

Results

Table 1: hepatitis c positive women in the screened population

Total patients	Anti HCV Positive	Anti HCV Positive	Anti HCV Negative
	LFTs Normal	LFTs Deranged	
100	7 (7%)	0	93 (93%)

Table 2: association of risk factors and hepatitis C

Risk factors	=n
H/o blood transfusion with history previous surgery	2
H/o jaundice and sexual transmission	1
H/o multiple needle pricks and blood transfusion	3
H/o of surgery with jaundice	1

Table 3: Screening of partners for hepatitis C

Hepatitis C +ve patients	Screening of partner	
	Anti HCV +ve	Anti HCV –Ve
7 (100%)	1(14.3%)	6 (85.7%)

Table 4: Age of patients with hepatitis C

Age in years	n=
30-35	1
35-40	3
40-45	2
45-50	1

Table 6: Planned surgical procedures

Surgical procedures	HCV positive
Total abdominal hysterectomy	3
Vaginal hysterectomy	2
Exploratory laparotomy	2

Discussion:

Proper screening and preventive measures can decrease the prevalence of Hepatitis C. As there is no hepatitis C vaccine, the best way is to prevent infection. This can be done by reducing the risk of coming into contact with another person's blood[8]. Stopping injection drug use would eliminate the most common route of HCV transmission. Although HCV is not transmitted efficiently through sexual activity[9], it is best to use barrier protection (condoms, latex gloves, etc.) to reduce the risk of transmitting HIV, HCV, and other sexually transmitted diseases.

Prevalence of hepatitis C in this study was 7%. Out of these 3% had infection due to IV drug abuse and blood transfusion; 2% had infection blood transfusion with history of previous surgery this is comparable with the study in the University of California, San Francisco that shows the IV drug abuser and blood transfusion is the primary route of transmission for infection[8].

Out of 7%, one percent had infection due to sexual transmission and jaundice; this was also comparable to a study conducted in the State University of New York Health Science Center at Brooklyn, USA in which the prevalence of infection due to sexual transmission was 1.6%. Therefore there was no significant difference in the two study populations[1].

All patients exposed to the hepatitis C infection and with family history of infection in the first & second degree relatives should be screened.

Seropositive patients should be managed more vigilantly in collaboration with physicians and steps should be taken to avoid transmission to the surgeon and assisting staff. The husband should be offered screening and seropositive should be referred for further evaluation. During surgical procedures of these patients transmission among doctors and paramedical staff can be prevented by proper sterilization, gowning, gloving, careful handling of needles and blades, adequate cleansing of operation theatre and proper disposal of used gowns gloves and stuff by bleaching or chlorination methods[10].

Conclusion

- Screening for HCV can help reduction of transmission of infection to medical/paramedical staff.

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