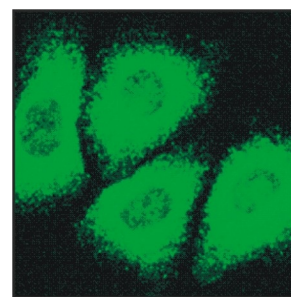


ORIGINAL

PROF-932

HEPATITIS - C



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ABSTRACT..... chaudry@cyber.net.pk **Objectives:** 1) To evaluate the overall prevalence rate of viral hepatitis carrier state among a group of voluntary blood donors. 2) To find the proportion of anti HCV in the study group. 3) To find the probable mode of transmission of HCV infection in the study group. **Setting:** Pathology lab, Jinnah Hospital, Iqra Medical Complex & Hi Tech Lab, Lahore. **Period:** November 2000 to April 2001. **Patients & Methods:** A total of 890 apparently healthy blood donors (797 males, 93 females) were studied. Clinical details were recorded. The blood samples were collected using packed sterile disposable syringes. Sera were analysed by a qualitative enzyme immunoassay sera diagnostic test using second generation ELISA Kits. **Results:** Among 890 subjects screened, carrier state for hepatitis-C was 6.06%. The prevalence of hepatitis-C amongst total cases positive for hepatitis was 33.5%. A higher prevalence rate in males (6~8%) was observed as compared to females (2.22%). The difference was statistically significant ($p < 0.05$). The most important mode of transmission was through injections; (males 32.075%, females 100%) followed by blood transfusion. Only 5.88% of the cases had an episode of jaundice in the past. **Conclusion:** A remarkable positive cases of hepatitis C in this study underline the dire need of comprehensive plan for multi-disciplinary approach for HCV prevention and control.

INTRODUCTION

Hepatitis is the bigger killer disease than AIDS, which need to be fought on a war footing. It is a deadly disease with an increasing toll over the years in Pakistan¹. Hepatitis infects four times as many people as AIDS worldwide. The World Health Organization estimates that about 3% of the world population is infected with hepatitis-C virus (HCV)². Hepatitis-C infection is caused by HCV that belongs to the Flaviviridae family of viruses,

which was identified in 1989³. Hepatitis-C disease is an inflammation of the liver. The acute hepatitis is mild, HCV has a higher propensity for transition to chronicity causing chronic hepatitis, cirrhosis of liver and causing hepato-cellular carcinoma^{4,5}.

HCV is the most common cause of hepatitis after blood transfusion⁶. Children having multiple transfusions due to chronic anaemia, cancer or haemophilia as well as

patients on haemodialysis are at a high risk for HCV infection. The reported prevalence range is from 10 to 85%^{7,8}.

Contaminated blood, blood products and body fluids are common mode of transmission of HCV. The other risk factors are intravenous drug abuse, use of barber razor, dental procedures, tattooing, ear piercing, acupuncture and high-risk sexual behaviour⁹.

This study was undertaken on the cases suspected of having hepatitis among voluntary blood donors. These cases had been analyzed during the period from November 2000 to April 2001, in the Pathology Lab of Jinnah Hospital, Iqra Medical Complex and Hi Tech Lab, Lahore.

AIMS & OBJECTIVES

Present study was planned to;
Evaluate the overall prevalence rate of viral hepatitis carrier state among a group of voluntary blood donors.

1. Find the proportion of anti HCV in the study group.
2. Find the probable modes of transmission of HCV infection in the study group.

SUBJECTS & METHODS

In this study a total of 890 voluntary blood donors of either sex were included. The subjects suspected of having hepatitis were tested. The clinical details were recorded. The blood samples were collected by vein puncture using packed, sterile disposable syringes. For sera-diagnosis of type of viral hepatitis, sera were analysed by qualitative enzyme immunoassay sera diagnostic test using second generation ELISA Kits (Abbott).

Statistical analysis was performed on personal computer using software EpiInfo 6. Percentages were calculated & Fischer's Exact test was used for data analysis. A p-value less than 0.05 ($p < 0.05$) was considered statistically significant.

RESULTS

A total of 890 apparently healthy blood donors, comprising of 797 males and 93 females were studied.

The carrier state for hepatitis was detected in 18.04% of the subjects. The percentage for hepatitis-A, hepatitis-B and hepatitis-C was 4.15%, 7.86% and 6.06% respectively as shown in (Table-1).

Table I. The carrier state for different types of hepatitis

PFTs	Voluntary Blood Donors (n)	+ ve Cases of Hepatitis (n)	Hepatitis A (n)	Hepatitis B (n)	Hepatitis C (n)
Nov. 2000	163	29	08	11	10
Dec. 2000	204	31	02	17	12
Jan. 2001	146	21	04	08	09
Feb. 2001	158	22	11	06	05
Mar. 2001	154	26	05	14	07
Apr. 2001	173	32	07	14	11
Total	998	161	37	70	54
% Age	-	18.04	4.15	7.86	6.06

The proportion of hepatitis-C amongst the total cases of hepatitis was 33.54% as given in (Table-2).

Table-III shows that a higher percentage of male subjects (6.8%) showed positive results for anti HCV antigen as compared to females (1.07%). The difference was significant ($p < 0.05$).

The most important mode of transmission was through injections; (males 32.075%, females 100%) followed by blood transfusion as shown in table-4. Only 5.88% of the cases had an episode of jaundice in the past.

Types of hepatitis	No. of +ve cases	% age
A	37	22.98
B	70	43.47
C	54	*33.54
Total	161	

*CI by Exact Binomial method = 26.303% to 41.397%

Subjects	Anti Hcv +ve	Anti HCV -ve
Males n = 797	53	744
Females n = 93	01	92

Significance Level = $P < 0.05$ (Statistically Significant)

Mode of Transmission	Male n = 53	Female n = 1
Drug Intake	04(7.54%)	Nil
Injections	17(32.075%)	01(100%)
Transfusion	06(11.32%)	Nil
Past Episode of Jaundice	03(5.88%)	Nil

DISCUSSION

HCV infection is the most common blood borne infection and leading cause of chronic liver disease in United States. More than 10,000 deaths annually are caused by HCV infection in USA¹⁰.

The prevalence rates of anti HCV among blood donors have been reportedly low in most European countries; 0.24% to 0.79% in Germany¹¹, 0.87% in Italy¹² and 0.5% to 1.0% in U.K¹³. But the prevalence rate from Spain has been reported as 7.3%, which is consistent to the result of the present study¹⁴. The prevalence rate in Far East and China is up to 4.6%¹⁵.

A study conducted in United States showed that high rate of HCV infection was associated with a history of cocaine or marijuana use¹⁰. The females in our study showed a low rate of infection probably because they are less exposed to the risk factors. The results of our study are comparable with the results of other studies carried on blood donors in Pakistan¹⁶.

More attention should be paid to the preventive measures as patients with chronic HCV infection and advance Liver disease usually have a poor response to treatment. More so the best current medical therapy is expensive, complex, relatively ineffective and fraught with side effects¹⁷.

We suggest that;

The awareness in the people should be created about the severity of the disease through projection on electronic media so that the spread of this disease can be checked.

Use of conventional glass syringes must be stopped. People should insist on using packed disposable syringes while getting an injection and the used syringe must be properly destroyed.

1. The government should include the vaccination for hepatitis in its expanded immunization programme to save millions of lives.
2. All the blood from the donors should be

screened for anti HCV.

CONCLUSION

The results of high prevalence of hepatitis C in the present study underline the dire need of a national comprehensive plan for multi-disciplinary approach for HCV prevention and control. The people engaged in high-risk activities should be provided with risk-reduction counseling services.

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