Positive Viral Markers of Hepatitis B+C in patients admitted in Medical Ward for different diseases

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Background:-A retrospective observational study held in Medical Ward of Sheikh Zayed Hospital Rahim Yar Khan. **Object:** To look for positive viral markers of Hepatitis B+C as a coincidental finding in patients admitted in Medical Ward for diseases other than the acute or chronic liver problem. **Methods:** The investigation record of patients admitted from 1st January to 30th April 2006 was thoroughly analyzed and picked up those cases which were incidentally discovered as HBs Ag and anti HCV positive. **Results:** Patients were categorized as HCV +ve, HBs Ag +ve both +ve and both negative and their significance was determined by SPSS. **Conclusion:** Coincidence of Hepatitis B and C in admitted cases indicates that the problem is widespread in the community and the screening facilities must be provided at lower levels to start timely management.

Key words: Viral markers, positive, hepatitis, B+C, medical ward

Viral Hepatitis is an infection of the liver caused by any of half dozen viruses. In addition to HAV hepatitis viruses C, D, E and G have also been identified and are recognized as aetiological agents of viral hepatitis.

Viral hepatitis and resultant chronic liver disease is a major health problem with challenging management strategies especially in developing countries. It is a bigger killer than AIDS and a deadly disease with an increasing toll over the years in Pakistan.

Hepatitis B is an acute systemic infection of liver transmitted usually by the parenteral routes. Approximately 5-15% of adults and up to 80% of infants infected will become persistent carriers of virus. HBV infection is a global problem and 2 billion people world wide have infection and 350 millions are chronic carriers of the virus that causes up to 80% of all primary liver cancers.

Hepatitis C infection is caused by HCV which is a major cause of parenterally transmitted non-A, non-B hepatitis. Acute infection of HCV is mild but it has propensity for transition to chronicity causing chronic hepatitis, cirrhosis and cancer of liver.

WHO estimates that 3% of world population is infected with HCV and 170 million individuals are chronic carries at risk of developing liver cancers and hepatocellular carcinoma.

There are distinct antigen antibody systems that relate to HBV & HCV infection and a variety of circulating markers are useful to diagnose these infections serologically. The study was conducted in Sheikh Zayed Hospital, Rahim Yar Khan to know the prevalence of hepatitis B & C infections in admitted cases other than acute and chronic liver diseases.

The chances of acquiring viral hepatitis are more in patients suffering from other chronic illnesses i.e. Diabetes Mellitus, Chronic obstructive pulmonary disease and chronic renal failure due to multiple injections as a part of treatment of primary illness.

Shekih Zayed Hospital is receiving patients from rural and urban areas of Rahim Yar Khan, Khan Pur, Sadiq Abad, Balochistan and interior Sindh. A study regarding the hepatitis B and C in this part of Punjab is badly needed. We have taken the initial step by screening the already hospitalized patients in Medical Wards.

Aims and objectives:

- To know the prevalence of Hepatitis B carrier state among the study group.
- To know the prevalence of Hepatitis C carrier state among the study group.
- To know the proportion of HBV and HCV carriers state among the two
- To know the prevalence of HCV in rural/ urban area.

Subject and methods:

The present study was conducted in the medical ward II SZH, Rahim Yar Khan during the period 1st January to 30th April 2006. A total 1462 patients of either sex were admitted. The patients included in the study:-

- PUO.
- Gastro intestinal bleed.
- Psychiatric symptoms.
- Before dialysis, diabetic foot surgery or endoscopy.
- Body aches and pains, anorexia and weight loss.
- Easy fatiguability and general weakness.

Patients excluded from study: Patients suffering from diagnosed liver disease (n=352) were excluded from this study. After taking a detailed history about general personal information (name, age, sex, residence and occupation) general physical and systemic examination were conducted. Specific interrogation was done about addiction, drug abuse, sharing of common razors in the barbar shops repeated visits to health centers, quacks and Hakeems for treatment or history of repeated injections. The blood samples were collected by venepuncture using sterilized packed disposable syringes. Blood was

centrifuged and serum of each patient was analyzed by a medical technician in the ward and screening test (Acon stick) for hepatitis B& C was done separately.

Statistical analysis was on computer based programme using SPSS. Percentages were calculated. P-value of less than 0.05 was considered statistically significant.

Results and observations:

Total patients were 1462 admitted during 1st January to 31st March 2006. Out of them there were 746 male patients and 716 female patients. The results of our study were quite alarming. The age group between 45 to 59 years was among the most affected 43.6% both in males and females

Table 1: Sex wise age distribution and prevalence of positive viral markers for hepatitis B & C.

Age Years	Males screened	+ve	Female screened	+ve	Total. Screened	+ve
15-29	20	07	16	6	36	13
30-44	105	33	96	31	201	64
45-59	56	16	38	23	94	41
60 above	05	01	14	6	19	7
Total	186	57	164	66	350	123

The same table shows that females are more affected (41%) by Hepatitis than males (30%) in this region with the significant difference (P<0.05) in the prevalence. The rural areas have significantly (P<0.01) higher +ve results (69%) for viral markers as compared to urban territory that has 19% +ve results

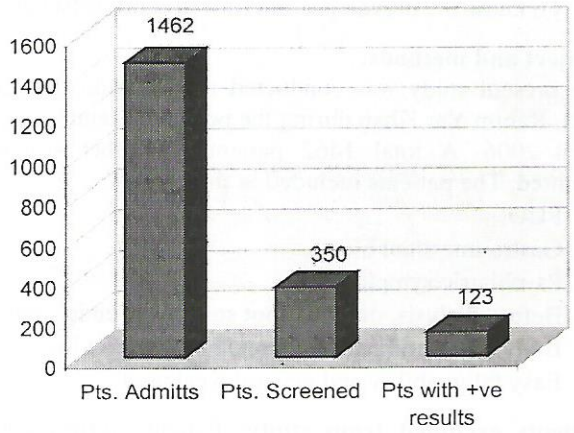


Table II: Residential area wise distribution of HBV or HCV Markers.

Area	Total	Positive	%age
Rural	112	77	69
Urban	238	45	19
Total	350	123	35

Housewives are the most endangered population in this area (42% +ve results) followed by health field workers who show a high rate of infection (33%)

Table III: Occupation wise distribution of positive cases for HBsAg and Anti HCV.

Occupation	Total Cases Screened	Positive Cases	%age
House wives	152	64	42
Labourers	138	34	25
Health care worker	64	21	33
Shopkeepers	11	01	9
Total	350	123	35

There is a highly significant (P < 0.01) prevalence of HCV in the population as compared to HBV with the male to female ratio of 1:2

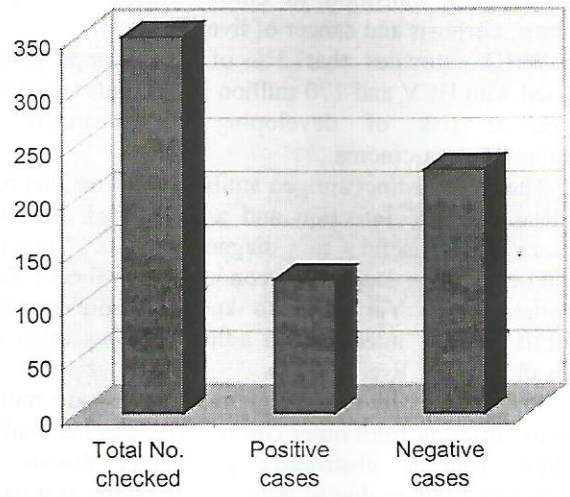
Table IV: Sex wise distribution of infection

Sex	=n	HBs. Ag +Ve	HBs Ag+ve Anti HCV +ve	Anti HCV +ve	-ve
Male	186	14	11	32	129
Female	164	3	7	56	98
Total	350	17	18	88	227

The table V shows that there is frequency of +ve results in cases of vague complaints, renal failure and diabetes than in other problems. It was also seen that rural community had an over all 22% positive result as compared to urban people where the result was positive in 13% patients. Among these 13 patients 5 were female nurses.

Table V: Diseases wise distribution of subject involved in the study.

Health Problem	Total No. Checked	+ve Cases	-ve Cases
Body aches & Pains	55	35	20
Anorexia & weight loss	50	25	25
General weakness & easy fatiguability	98	17	81
Chronic renal failure	53	21	32
PUO	45	10	35
Gastrointestinal bleed	25	07	18
Diabetic foot	10	04	06
Psychiatric symptoms	14	04	10
Total	350	123	227



Discussion:

Viral Hepatitis is a worldwide problem. Different international studies have looked for prevalence of hepatitis B and C in different sets of population i.e. professional or voluntary blood donors, medical or Paramedical staff, Thalasemia or hemophilia patients.

In Pakistan such studies have been conducted in Karachi, Lahore, Islamabad Abbottabad, Peshawar, Bahawalpur and D.G. Khan in different categories of population. A study in Southern Punjab determined the incidence of Hepatitis B and C in hepatoma cases. Such studies help in undermining the degree of danger faced by a set of population in an area. Only then the health department can plan for prevention/eradication of this slowly progressive fatal illness.

In this study we were able to detect 123 cases with positive viral markers among the 350 cases screened for hepatitis B and C

The vulnerable age group is among 45 to 59 years. The females have to bear the burden of heavy rate of infection as they are frequently dai handled. The prevalence of hepatitis C was also higher in females (34%). Remote areas, where health care and education facilities are in primitive form, show 69% +ve results on screening. It was also noticed that 33% of urban victims of hepatitis are the health care workers. Regarding the frequency of presenting complaints, most of the patients (42%) suffered from non specific complaints i.e. body aches and pains preceded by renal failure and diabetes. All these facts discovered during our study are indicating that the hepatitis C is highly prevalent and is acting like silent killer for the population. The improper use of syringes and razor blades is the most dangerous tool of spreading the disease.

Conclusion:

Sheikh Zayed Hospital is receiving patients from urban and rural areas of Rahim Yar Khan, Khan Pur, Sadiq Abad, Bahawalpur, Sibi, Ghotki and Interior Sindh. The patients belong to different religion and have different life style. The medical facilities are inadequate and substandard. In this study we tried to find out the presence of viral markers in cases who are suffering from different medical problems. The positive results indicate that major and more methodical studies are needed to evaluate the exact situation to make early diagnosis and timely management possible.

Routine vaccination of Medical and Paramedical staff should be more energetically implemented. Health Education and training programmes should be more vigorously arranged in remote areas. Special care should be taken in use of syringes and people should be trained to use fresh blades on their visit to Barbers.

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