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PREVALENCE OF HEPATITIS B & C IN PATIENTS FOR EMERGENCY SURGERY: AN INSTITUTIONAL EXPERIENCE.

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ABSTRACT

Objective: To determine the prevalence of hepatitis B & C in emergency surgical patients an institutional experience.
Design: A Descriptive case study.
Place and Duration: the study was conducted in Liaquat University Hospital Hyderabad.
Patients and Method: A total of 1716 patients admitted through causality for emergency surgical procedure in the department of surgery Liaquat University Hospital Hyderabad, from January 2009 to March 2010 all the patients were screened for hepatitis B and C by ICT kit method. All the data was collected on a preformed Performa.
Results: Hepatitis B was positive in 82 (4.78%) from them 37 (2.15%) were Male &45 (2.62%) were female, 205 (11.94%) were HCV positive from them 117 (6.81%) were male & 88 (5.12%) were female and 43 (2.5%) were hepatitis B&C positive from them 17(1%) were male & 26(1.51%) were female. More Hepatitis B &C seen in patients who had got injections 23%, second most common in those patients who had received blood transfusion 17.77% and in patients who had previously under gone surgery 12.52%. All the patients were screened through ICT KIT method.
Conclusion: Seroprevalence of Hepatitis B & C is high in emergency surgical patients who presented for emergency surgery; most common risk factor was identified who had got I/V injections, blood transfusion & previous surgery.
There fore all the patients who need emergency surgery should be screened for Hepatitis B & C. There should be a separate operation theatre & proper precautions during surgery for protection of medical staff should be taken.

Key words: Hepatitis B, Hepatitis C, Emergency surgery, Screening

INTRODUCTION:

Hepatitis B & C is among the leading causes of morbidity, mortality and serious public health problem, world wide as well as in Pakistan. Viral hepatitis is a serious health problem affecting approximately two billion people world wide. Through the whole world hepatitis B infected people are about two billion; among them 350 million has chronic liver disease[1]. Hepatitis C virus infection appears to be endemic in most parts of the world, with prevalence of around 3% world wide[2]. More than one third of population of south East Asian region has been infected with HBV with about 80 million carriers and approximately 0.2 million deaths annually.[3] Pakistan is also facing a huge burden of these diseases. The prevalence among general public of HBV and HCV infection in Pakistan is also is 10%[4,5] & 4-10% respectively.[6, 7] prevalence of HBS Ag, Anti HCV in hospitalized patients is very high. There is no routine practice to perform serological screening prior to surgery which is one of the factors responsible for increased disease transmission. The major risk factor includes re- use of contaminated syringes, improper sterilization of surgical instruments and screening of blood products. Transmission of both these viruses can occur through blood,[8] so persons who receiving injection or dental treatment through unsterilized syringes or instruments or unchecked blood products

transfusion in patients of thalassaemia or patients on haemodialysis, and patients who have their shave by street barbers or involved in sexual abuse are at increased risk of developing these infection[9,10] The treatment of these diseases is expensive and will result in a huge burden on the economy of the country Hepatitis C was first identified in1988[11] and 0.5% - 29% has been found in population sample around the world. [11,12,13] Its prevalence is 5.1% in blood donors in India, 1.5% in Saudi Arabia and 0.5 – 25.7% in Pakistan.[14,15] Both these infections present with malaise, anorexia, abdominal pain and jaundice but some time there are no symptoms till the developments of cirrhosis, portal hypertension, esophageal varieces, ascities, encephalopathy or liver malignancy.[16,17] the objective of this study was to see the prevalence of HBV, HCV and their causative factors in those patients who presented for emergency surgery in LUH, Hyderabad.

MATERIAL & METHOD:

This descriptive case study was conducted in the department of General Surgery at LUH, Hyderabad from January 2009 to March 2010 for the period of fifteen month. Total 1716 patients were admitted during the study period for emergency surgery. The patients included into the study were those who came for emergency surgery, regardless of age, sex and nature of operation. Liaquat University Hospital is tertiary care hospital & referral centre for patients from all over Sindh. The patients excluded who were those did not need the surgery. All the data was collected on preformed Performa. In the positive patients of HBV, HCV & other relevant investigations done like LFTs, PT, APTT, INR, complete blood count and chest x-ray. Patient prepared for emergency surgery.

RESULTS:

During Fifteen Months of study total no of 1716 were operated with the male & female ratio 1:1.32 from the 01-01-2009 to 31-03-2010 for the period of fifteen month. Out of these 738 patients (43%) were Male & 978 (57%) were female. Out of 1716 patients 82 (4.78%) were HBV positive, from them 37 (2.15%) were Male & 45 (2.62%) were female patients, 205 (11.94%) were HCV positive, from them 117 (6.81%) were male &88 (5.12%) were Female and 43(2.5%) were hepatitis B&C positive from them 17(1%) were male & 26(1.51%) were female. More Hepatitis B &C seen in patients using the syringes by local doctors 23%, second most common in patients who get a blood transfusion 17.77% and in patients who were previously operated 12.52%. All the patients were screened through ICT KIT method. See Table No: 1& 2

TABLE NO: 1
PREVALENCE OF HEPATITIS B & C SCREENED PATIENTS FROM 1716 MALE = n (738, 43%) FEMALE = n (978, 57%).

Type of hepatitis	Male n=	Female = n	Total = n
Hepatitis B	37 (2.15%)	45 (2.62%)	82 (4.78%)
Hepatitis C	117 (6.81%)	88 (5.12%)	205 (11.94%)
Hepatitis B&C	17 (1%)	26 (1.51%)	43 (2.5%)
Total	171(23.17%)	159(16.25%)	330(19.23%)

TABLE NO: 2
RISK FACTORS IN HEPATITIS B&C POSATIVE PATIENTS.

Factors	N	%
Previous surgery	215	12.52
Blood transfusion	305	17.77
Positive family history	190	11
Shave by barber	175	10.2
Use of syringes	396	23
Drug addiction	24	1.39

DISCUSSION:

Hepatitis B and C common health problem all over the world most in the third world counties. In different areas of Pakistan the carrier rate of HBsAg is around 10%.[4, 6] Seroprevalence of HCV antibodies varies from 4% to 7% [5, 7]. Our study shows hepatitis B was 4.78%, hepatitis C in 11.94% & hepatitis B & C in 2.5% over all hepatitis in 19.23%. Our results show high prevalence of hepatitis. A study conducted by Shirazi and his colleagues' shows prevalence of hepatitis B 8.75% and hepatitis C 9.24% and over all hepatitis virus a 18%[18], in elective surgical patients. Another study done by Zubia & her colleagues shows prevalence of hepatitis B 6.5%, hepatitis C 11.3% & both hepatitis B & C 1.5%[19]. One study done by Chaudhary and his colleagues at Rawalpindi shows the prevalence of hepatitis C 11.26% and hepatitis B 2.11%[20] in elective surgical patients. There is no study done till now on emergency surgical patients. A study carried at Military hospital in elective gynae & obst procedures prevalence of hepatitis C was 10.39%, hepatitis B 1.33% and both hepatitis B & C were 0.33%.[21]. A study done in Japan shows the prevalence of Hepatitis B & C 1.8% & 7.1% respectively.[22]In our study the hepatitis B was present in 4.78%, hepatitis C was present in 11.94% & hepatitis B & C in 2.5%. A study shows the prevalence of hepatitis B 8.66% & hepatitis C 11.66%.[23]A study from Japan shows the prevalence of hepatitis C 16.9%. [24] A study from Turkey shows the prevalence of hepatitis B 6.6% and hepatitis C 2.4%.[24]In another study done in Karachi by Bader faiyaz [26] & colleague in surgical patient's prevalence of hepatitis B in 5% & hepatitis C in 12% patients those results are higher than our study. In our study the predisposing factors of hepatitis B & C were history of I/V injections by the local doctors,(23%), blood transfusions (17.77%), previous surgery (12.52%), positive family history (11%), shave by barber (10.2%), drug addiction (1.39%). In another study the predisposing factor of hepatitis B & C was previous surgery (21.3%), blood transfusion (15.47%), dental procedure (8.33%) & positive family history (8.33%). In another study risk factor of hepatitis B & C previous blood transfusion in (25%) and previous hospitalization in (3.2%).[27]In other study [26] the risk factor for hepatitis B & C was injection 94% & 92.5% respectively, blood transfusion in 74% & 40% respectively that was quite high than our study. The prevalence of hepatitis B & C is high in patients presenting for surgery.[19] since there is a general lack of community based epidemiological work and also there was lack of representation from across the country.[28] The

commonest mode of hepatitis B & C transmission is use of contaminated syringe, blood transfusion and its product, previous surgery, use of sharp instrument, needle and shave by barber.

CONCLUSION:

Seroprevalence of Hepatitis B & C is high in emergency surgical patients who presented for emergency surgery; most common risk factor was identified who got I/V injections, blood transfusion & previous surgery.

There fore all the patients who need emergency surgery should be screened for Hepatitis B & C. There should be separate operation theatre & proper precautions during surgery for protection of medical staff.

There is a need to make more consolidated efforts for public awareness about hepatitis virus infection and its hazardous effects on the health.

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