Original Articles

ACUTE VIRAL HEPATITIS

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Abstract

Three hundred and twenty-five patients with acute viral hepatitis seen during the years 1973 to 1978 were studied. There were 224 males and 101 females. The disease was more frequent in younger individuals.

The main presenting symptoms were anorexia, jaundice abdominal pain and fever and the signs were jaundice and tender hepatomegaly.

Of 254 cases screened 37.8% had HBs antigenemia.

The follow up showed that SGPT became normal earlier than SGOT.

To ascertain the pattern of disease a regular follow up of cases and the availability of more sensitive methods for detection of HBsAg are necessary (JPMA 29:107, 1979).

Introduction

Acute viral hepatitis is a widely prevalent infectious disease for which no effective control measures have yet been developed. Over the last decade there has been a tremendous explosion of new information about the etiology and the clinical and preventive aspects of this disease.

This report presents the clinical and biochemical features and the clinical course of cases of acute viral hepatitis seen at this Centre.

Material and Method

Three hundred and twenty-five subjects included in this study were referred from the Department of Medicine, Jinnah Postgraduate Medical Centre during the years 1973 to 1978.

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Clinical examination was done and investigations were recorded on a proforma in each case. Liver biopsy was done by Menghini technique for histological confirmation of the diagnosis.

Blood was drawn for haematological and biochemical investigation. Screening for HBsAg was done by crossover immunoelectrophoresis.

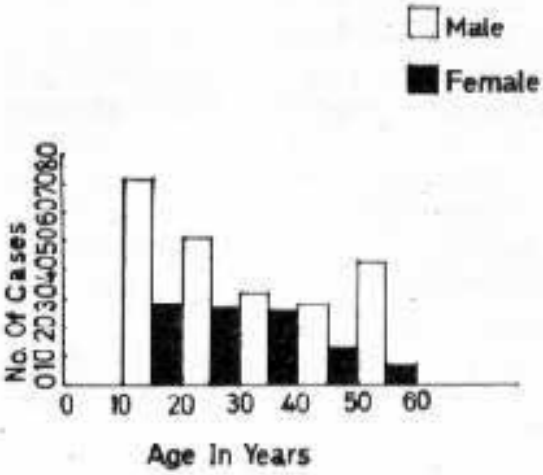
Weekly clinical and biochemical evaluation of cases was done upto the time of recovery.

Results

Age and Sex:

A total of 325 patients were studied. There were 224 males and 101 females. The age distribution is shown in Fig. I. One hundred and seventy-seven cases were in the age group of 10-30 years and only 49 above the age of 50 years.

Fig.I. Age & Sex Distribution In Acute Hepatitis



Clinical Features:

The clinical features are shown in Table I. The main presenting symptoms were anorexia, jaundice, dark urine, abdominal pain and fever and the signs were jaundice and tender hepatomegaly.

The past history is shown in Table II. History of contact with hepatitis within 1 to 6 months prior to the onset of illness was obtained in 75 (23.08%) of patients, a past history of jaundice in 34 (10.5%) and blood transfusion in 33 (10.2%) of patients.

Table I: Clinical Features of Acute Viral Hepatitis

Clinical Features	*No. of Cases*	*Percentage*
Jaundice	297	91.38
Anorexia	240	73.85
Abdominal pain	217	66.77
Dark urine	187	57.54
Hepatomegaly	185	56.92
Fever	177	54.46
Nausea and Vomiting	146	44.92
Fatigue	84	25.85
General Malaise	75	23.08
Arthralgia	53	16.31
Splenomegaly	36	11.08
Bleeding Manifesttions	25	7.6
Lymphadenopathy	21	6.46
Oedema	14	4.31
Clubbing	9	2.77
Ascites	7	2.15
Coma	2	0.62

Table II: Past History

Past History of:	*No. Present*	*Percentage*
Contact with hepatitis	75	23.08
Jaundice	34	10.46
Dental Extraction	3	0.92
Blood Transfusion	32	9.85
Injections	33	10.15
Operations	5	1.54

Laboratory Investigations:

The mean ± SE of haematological findings are shown in Table III.

Thirty-seven patients had anaemia (Hb < 11G%). 35 cases had leucopenia (WBC < 5000/cm) and 31 leucocytosis (WBC > 10,000/cm). Platelet count was below 100,000/cmm in 7 patients and prothrombin time more than one and a half times normal in 38 cases.

Table III: Haematological Investigation in Acute Viral Hepatitis

Investigations	*Total No.*	*Acute Viral Hepatitis Mean ± S.E.*
Hemoglobins G%	307	13.03 ± 0.12
Total WBC/Cumm	305	7949 ± 5629
Platelets/Cumm	306	192030 ± 4070
Prothrombin Time (Seconds)	314	19.78 ± 0.96

Table IV shows the biochemical findings. Total bilirubin below 1.0 mg% was observed in 18 cases, alkaline phosphatase less than 3.1 sigma units in 7 cases, SGOT was normal in 11 and SGPT in 8 cases. These biochemical findings show that patients were seen at all stages of the disease i.e., from acute to subsiding hepatitis.

Table IV: Biochemical Investigations in Acute Viral Hepatitis

Investigations	*Total No.*	*Acute Viral Hepatitis Mean ± S.E.*
Bilirubin total (mg%)	319	10.63 ± 0.46
Bilirubin Conj., (mg%)	319	7.66 ± 0.35
Bilirubin Unconj. (mg%)	319	3.00 ± 0.15
S.G.O.T. (mu/ml)	319	67.95 ± 2.35
S.G.P.T. (mu/ml)	319	69.93 ± 2.18
Alkaline Phos. (Sigma units)	294	7.02 ± 0.23
Thymol Turbidity (mu)	137	7.81 ± 0.42
Total Proteins (G%)	274	7.30 ± 0.06
Albumin (G%)	272	3.96 ± 0.04
Globulins (G%)	272	3.46 ± 0.11

Hepatitis Bs Antigen:

HBsAg was determined in 254 cases and was found positive in 37.8% of cases (27.17% males and 10.63% females).

Liver Biopsy:

Liver biopsies were performed in all the cases. The main histological findings are shown in Fig. 2 and 3. Fig. 2 shows areas of collapse and disturbed lobular architecture and Fig. 3 balooning of liver cells, portal and sinusoidal inflammation and liver cell necrosis.

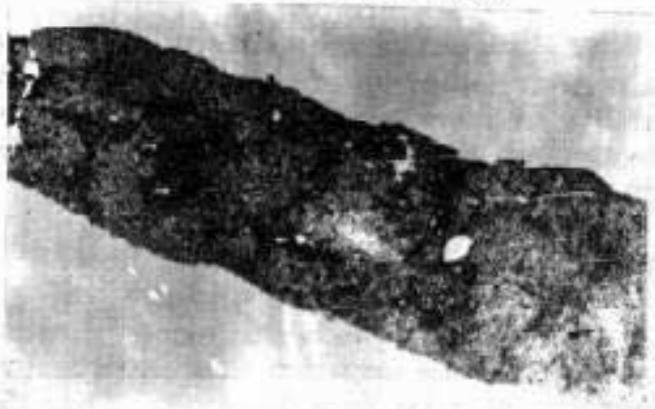


Fig. 2: Acute hepatitis: The photomicrograph shows areas of collapse and disturbed normal lobular architecture (H & E × 20).

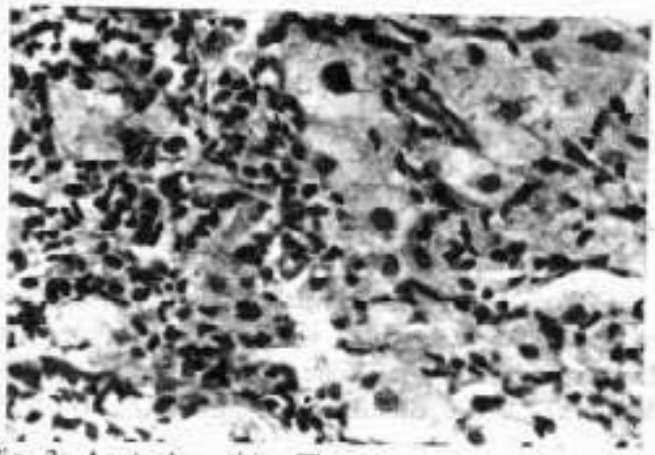


Fig. 3: Acute hepatitis: The photomicrograph shows balooning of liver cells, Portal and Sinusoidal inflammation and liver cell necrosis.

Follow up:

A follow up was obtained in 141 (43.4%) of cases. The follow up period varied from 1 to 164 weeks (Mean 10.43 weeks).

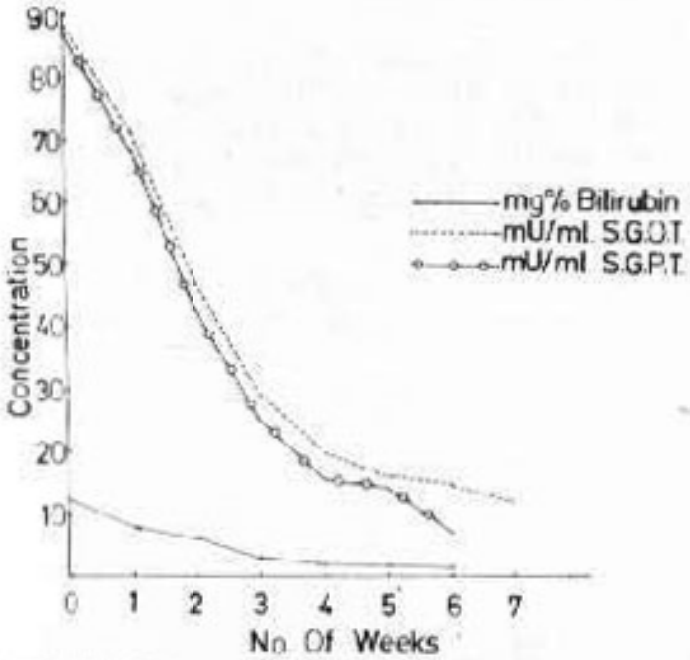
Table V shows the period during which the various clinical and biochemical parameter returned to normal and the number of cases in which this information was available. The disparities in this table are due to the failure of cases to return to follow up clinical regular intervals until the clinical and biochemical improvement.

Table V: Time Taken for Symptoms and Biochemical Findings to Return to Normal.

Symptoms and Investigation	*No. of Patients*	*No. of Weeks Taken*
Size of Liver	33	7.15
Jaundice to subside	70	7.77
Bilirubin	67	3.37
S.G.O.T.	64	6.94
S.G.P.T.	92	4.04

Fig. 4 shows the time taken for bilirubin, SGOT and SGPT to return to normal in 33 cases who returned for follow up regularly at weekly intervals. Both table V and Fig. 4 show that SGPT returned to normal earlier than SGOT.

Figiv Followup In Acute Viral Hepatitis



Discussion

Liver disease is widely prevalent in Pakistan. Of all the hepatic disorders, viral hepatitis is most commonly encountered. Its clinical presentation varies from anicteric hepatitis (Ahmad et al., 1978) to the icteric and fulminant disease (Haider et al., 1975). It is more prevalent in young males and the frequency of disease decreases with the advancing age. The main clinical features are jaundice, anorexia, fever, nausea, abdominal pain and physical signs, jaundice and hepatomegaly.

One fourth of the patient in this study gave a history of exposure to hepatitis within 1 to 6 months of onset of symptoms and over 10% had previous history of jaundice or blood transfusion.

In this study both HBsAg positive and negative groups have been studied together. Lack of knowledge about the time of exposure and the difficulty of ascertaining the time of onset of initial symptoms makes it difficult to differentiate one group from the other.

Hepatitis B antigen was detected in 37.8% of cases using crossover immunoelectrophoresis. This being a comparatively less sensitive method it is likely that cases classified as antigen negative may in fact be of type B hepatitis.

The clinical and biochemical recovery was ascertained from the time of onset of symptoms and first clinical examination to the clinical and biochemical recovery during the follow up period. As most of the patients either come irregularly or do not return for follow up at all the study of the clinical and biochemical course of disease becomes very difficult. In this study it took 42 days for bilirubin and SGPT and 49 days for SGOT to return to normal. The time is more than what has been reported for antigen negative hepatitis and less that for antigen positive hepatitis (Krugman and Giles, 1972). This may be due to combined analysis of antigen positive and negative disease.

To ascertain the true pattern of disease in this country a regular follow up and the availability of more sensitive methods for detection of antigen is absolutely essential. For prevention and improvement in hygienic standards at home and in the hospital, health education and regular screening of blood donors in blood banks all over the country is necessary.

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