LIVER DISEASES AND HEPATITIS–B MARKERS IN IRAQI HEMOPHILIC PATIENTS[+]

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Abstract

Forty patients, 38 males and two females suffering from hemophilia-A 72.5%, hemophilia B 15% and Von- Willebrand's disease 12.5% were studied for evidence of liver disease and exposure to hepatitis - B virus.

There was a history of an attack of hepatitis in 32.5% of them, speenomegally in 12.5% and hepatomegally in 10%.

None of them showed stigmata of chronic liver disease.
Liver function studies showed an abnormality of one or another test in 72.5%.

Hepatitis- B markers were positive in 87.5% of them. There was no death attributed to liver disease in one year period.

We conclude from this study that our hemophiliacs are exposed to liver disease but it seems that serious liver disease is not common in them.

المستخلص

في هذه الدراسة تم اختيار اربعين مريضاً ٣٨ منهم ذكور و ٢ من الاناث الذين يعانون من مرض الهيموفيليا . ٧٢,٥% هيموفيليا (أ) و ١٥% هيموفيليا (ب) و ١٢,٥ مرض فون وليبراند وضعوا تحت الدراسة لاكتشاف أي علامة تدل على وجود أي من امراض الكبد او أي دليل على الاصابة بالتهاب الكبد الفيروسي نوع (ب) ٣٢,٥% من هؤلاء كان عندهم سابقاً اصابة بالتهاب الكبد الفايروسي الحاد و ١٢,٥% منهم كان لديهم عند الفحص السريري تضخم الطحال ١٠% منهم تضخم الكبد .

الفحوصات المختبرية التي تخص امراض الكبد غير طبيعية في احد اجزائها في ٧٢,٥% من المرضى ، فايروس التهاب الكبد نوع (ب) كان موجباً في ٨٧,٥% . ولم يكن هناك أي حالة وفاة خلال السنة الاولى من الاصابة.

نستنتج من هذه الدراسة ان مرضى الهيموفيليا معرضين لامراض الكبد لكن هذه الامراض ليست عامة .

Introduction

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Patients with hemophilia who are regularly treated with blood products including factor VIII or IX concentrates are at varying risks of developing liver disease.

Early studies demonstrated the presence of splenomegally, abnormal liver function test and positive hepatitis B markers in high proportion of cases[L2] . Subsequently liver biopsy studies showed chronic active hepatitis (CAH) and, or cirrohosis in a significant number of them, although the majority had trivial, mild or moderate changes[3-6]. We have studied 40 Iraqi hemophilics looking for evidence of hepatitis B infection and, or evidence of liver disease.

Patients and Methods

This study was done in Al-Karama Hospital and Al-Mansour Hospital, (40) consequetive Iraqi patients with hemophilia and Von-Willebrand's disease were studied. Twenty nine had hemophilia A, six had hemophilia B and 5 had Von-Willebrand's disease. They were observed over a period of one year (1/ 12/2000 - 30/ 11/ 2001) They were 38 males and 2 females with ages ranging between 5-53 years and with a mean of 22.8 years.

Six of the hemophilia patients were classified as sever (factor VIII or IX level 1%). 16 as moderate (factor VIII of IX level 1-5%) and 13 as mild (factor VIII or IX level 5%)[4].

All five patients with Von- Willebrand's disease had clinically moderate disease with factor VIII level of less than (25%) and a prolonged bleeding time of more than 15 minutes.

They used factor VIII concentrate kabi, Immuno and Institute. Menus factor IX concentra kabi and Immuno frequently.

Each patient was clinically evaluated regarding past history of acute hepatitis and evidence of chronic liver disease on clinical examination, and abdominal ultrasound exam., looking for Jaundice, splenomegally, hepatomegaly, spider naevi, palmer erythema, clubbing of fingers, ascitis and signs of encephalopathy.

Serum alanine and aspartate aminotransferase (ALT and AST), Lactic dehydrogenase (LDH), Alkaline phosphatase (AP) and gamma glutamyi transferase (GGT) were estimated by automatic enzyme assay, serum bilirubin was measured by using the method of Malloy and Evelyn and serum albumin by using protein electrophoresis. The hepatitis B markers (HBSAg, anti HBs, anti HBC) were done by enzyme linked immunosorbant assay.

Results and Discussion

Table (1): Clinical features indicative of liver disease in 40 hemophilic patients:

Clinical feature	No. of patients affected	%
History of hepatitis	13	32.5
Splenomegaly	5	12.5
Hepatomegaly	4	10
Other signs of chronic liver disease	0	0

Table (2): Results of the liver function studies in the 40 hemophilic patients

Blood Parameter	Range detected	Patients	%	Level
Alanine transferase	25-300 iu/L	12	30	50 >
Aspartate transferase	28-400 iu/L	15	37.5	50 >
Lactate dehydrogenase	61-328 iu/L	15	37.5	220 >
Alkaline phosphatase	55-235 iu/L	16	40	100 >
Gamma Glutamyi transferase	12-152 iu/L	4	10	60 >
Total bilirubin	5.1-35.9 mmol	3	7.5	20.5 >
Albumin	21.3-55g/L	12	30	20.5 >
Gamma glubulin	10.6-41.4 g/L	29	7205	18>

Table (3): Number and percentage of positive (reactive) HbsAg, Anti HBs and Anti HBc in 40 hemophilic patients

HbsAg	Number	%
HbsA	11	27.5
Anti HB	18	45
Anti HB	31	77.5

Table (1) illustrated the clinical features. There were no stigmata indicative of chronic liver disease.

Table (2) illustrates the abnormal liver function studies. (72.5%) showed one or another abnormal liver function test with no table high incidence of hypergammg lobulinemia.

Table (3) illustrates the presence of hepatitis B - markers, most of those with +ve markers (77.5%) have Abs to HBc Ag , 45% . have Abs to HBS Ag & (27.5%) have HBS Ag .

The high incidence of acute hepatitis episode (32.5%), the presence of speenomegaly in (12.5%) hepatomegaly in (10%) and abnormal liver function tests in (72.5%) of the cases, all point to some form of liver pathology going on in these patients. This is consistent with previous reports which had shown similar clinical and

biochemical abnormalities[11] and which suggests the presence of liver disease in their patients, this was later proved by liver biopsy studies[2-4].

Spro et al., in a multicenter study in which 155 biopsies were collected, report CAH in (7%), cirrhosis in (15%) and non- specific changes or mild to moderate changes in 64% of the cases. The same investigators report significant hemorrhage in (12.5%) and alluded to death in two cases^. We did not feel justified to attempt liver biopsy in our patients because of its high risk in spite of full precautions to keep the factor VIII and IX levels at optimum values. However the presence of hypoalbuminemia in (30%) of the patients and hypergamma- globulinemia in (72.5%) of patient with the clinical findings of speenomegaly and hepatomegaly suggest that a significant number must have CAH and, or cirrhosis in spite of the absence of symptoms referable to the liver of stigmata of chronic liver disease.

There were (87.5%) of our patients who had one of the hepatitis B markers , this high percentage is most likely due to the fact that those patients had repeated transfusions of impacted factor VIII or IX and sometimes blood transfusion which may be contaminated with hepatitis B virus or may be due to contaminated needles or transfusion sets or syringes . The presence of HbsAg in (27.5%) of cases, anti HBc in (77.5%) point to hepatitis B as a significant factor in the pathogenesis of liver disease, of interest is that 6 HbsAd positive patients were also positive to anti HBs, this finding has previously been reported(and seems to indicate exposure to more than one type of hepatitis B virus. The course of liver disease was non progressive and there was no mortality attributed to liver disease during the one year follow up of our patients.

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