Summary& Conclusion

To study the clinical significance of serum hepatocyte growth factor (h.HGF) in Egyptian liver patients , it was measured in 68 patients with chronic liver disease and 20 healthy controls , using a newly developed enzyme linked immunosorbant assay kit . This assay is specific for HGF and is sensitive enough to detect 0.04 ng/ml of h.HGF .

- Every patient was subjected ***to the following:***

I- Thorough history taking and clinical examination with stress on the following: History of hepatitis infection, History of bilharzial infection, History of blood transfusion and History of surgery.

II- Laboratory investigations: Serumalanine aminotransferase (SGPT), aspartate aminotransferase (SGOT) , total billirubin, direct billirubin, total protein , albumin, alkaline phosphatase , prothrombin Activity,bloodurea, creatinine, HCV(ELISA), HBsAg (ELISA) and I.H.A test for schistosomiasis.

III- The patients were classified clinically according to child's classifications into: - Child's A, Child's B and Child's C.

IV- And they were classified aetiologically cording to the liver biopsy and hepatitis markers into four groups :- pure schistosomatic, chronic active hepatitis, Cirrhotic,and hepatocellular carcinoma.

V- The sera of all patients were examined for human hepatocyte growth factor (hHGF) using a newly developed enzyme-linked immunosorbent assay kit.

In this study ***chronic active hepatitis group*** showed significantly higher s

erum levels of : SGOT (table 3 and fig 1), SGPT (table 4 and fig 2), direct bilirubin (table 6 and fig 4) and creatinine (table 12 and fig 10).

The ***cirrhotic group*** showed significantly lowest serum levels of total proteins (table 7 and fig 5), albumin (table 8 and fig 6) and prothrombin concentrations (table 10 and fig 8) .

The patients in ***hepatocellular carcinoma group*** showed significantly higher serum levels of total bilirubin (table 5 and fig 3), and alkaline phosphatase (table 9 and fig 7) .

The ***patients with pure schistosomatic infection*** (table 19 and fig 63) showed that serum HGF significantly increased than control

group but still the levels are lower compared to patients of other groups due to hepatic parenchyma is usually preserved in chronic schistosomiasis.

The ***patients with chronic hepatitis*** (table 19 and fig 63) showed that the serum HGF levels were significantly higher than control but lower than the cirrhotics and patients with HCC.

HGF were found to be significantly higher in patients with cirrhosis than all groups (table 19 and fig 63) due to increase the hepatocellular necrosis, hepatic fibrosis and increase in the destruction of hepatic parenchymal cells .

As regards ***patients with HCC***, HGF levels were significantly higher than controls, bilharzial and chronic hepatitis groups but lower than cirrhotic group.

Table 13 and fig 11 showed significant difference between the studied groups regarding history of surgery with or without blood transfusions.

As regards the correlation between the levels of HGF and clinical severity (tables 14 and 15), significant higher levels were found in those patients who showed encephalopathy with Child's class C in the

same time. This was most obvious in the cirrhotic group, HCC group and CAH group respectively .

Table 16 and 17 showed that measures of HGF don't correlate well with that of serum creatinine and blood urea. Also , (table 18) showed that insignificant difference was found in the measures of HGF between cases with and without renal impairment.

In this study, HGF levels are correlated well with derangements in the liver functions as documented by significant positive correlation with total bilirubin, direct bilirubin , SGOT, SGPT and alkaline phosphatase , and significant negative correlation with total proteins, albumin and prothrombin concentrations (figs 54 – 61).

From this study it was concluded that :-

1- serum HGF tended to be higher in Egyptian patients with liver cirrhosis and HCC than those with chronic hepatitis .

2- HGF levels in patients with cirrhosis were found to be the highest among all groups of chronic liver disease including HCC group.

3- HGF levels correlate well with the derangements in the liver functions. So serum level of HGF could be used as an index of

the severity of liver dysfunction in various chronic liver diseases.

4- As regard, the correlation between the level of HGF and the clinical severity, highest levels were found in those patients who showed encephalopathy (they were Child class C in the same time).

5- Serial measurements of HGF level can reflect the progress of the liver disease and predict the occurrence of hepatic encephalopathy.

6- There are insignificant higher levels of HGF in hepatic patients with renal impairment when compared with those without renal impairment.