
Study of enzymatic activity in chronic liver disease in Egyptian children

Bahaa Eldin Mohamed Hassanein

Chronic liver disease in Egyptian children is one of the leading causes of morbidity and mortality in Egypt. This study was carried out on 45 children aged between 2 years and 14 years including 30 males, 15 females and 15 normal control children of the same age group (11 males and 4 females). They were selected from patients admitted to El-Mounira children Hospital Cairo University in the year 1982 end 1983. The main presenting features was hepatomegaly of some months duration. Their history, physical examination and investigations were carried out with much attention to the enzymatic activity in the serum and its correlation with both clinical and histopathological studies of the patients. According to histopathological findings the cases were classified into the following 5 subgroups:

1. Chronic active hepatitis 9 cases (20%)
2. Post-hepatitic cirrhosis 11 cases (24.4%)
3. Veno-occlusive disease 6 cases (13.3%)
4. Pure-bilharzial hepatic fibrosis 12 cases (26.7%)
5. Mixed (Schistosomiasis and other lesions) 7 cases (15.6%)

Each group was studied separately for its clinical picture and its correlation to both histopathological & biochemical investigations with laying an stress on the statistical analysis of biochemical results.

I. Chronic active group (20%). The biochemical profile suggesting the diagnosis of C.A.H. according to our findings were:- Serum transaminases SGOT and SGPT increased by 4.5 - 5 folds the normal. Total serum protein was elevated. Marked hypergammaglobulinaemia by 4 folds of normal mean. Serum bilirubin was increased by 2 folds of normal range with the mean of 1.2 mg %.

2. Alkaline phosphatase was increased only by 1.2 fold of normal level. Serum L.D.H. was increased by about 3 folds of normal level. Serum GGT was found about 2.75 folds of normal level.

II. Post-hepatitic cirrhosis (22.4%) The biochemical profile suggesting the diagnosis of P.H.C. according to our findings were:- Mean serum albumin was 50% lower than the normal mean level. - 2 globulin of protein electrophoresis was increased above normal range. B globulin levels were found either slightly increased or within the normal range. Gammaglobulin level in protein electrophoresis was elevated by more than 2 folds of the normal level. Serum bilirubin was increased by about 2.75 folds of normal level.

2.74-- Serum alkaline phosphatase was either within the normal level or very slightly increased. Serum transaminases were found to be increased by 2 folds of normal. Serum GGT was increased by about 3 folds of normal level.

III. Veno-occlusive disease (13.3%) The biochemical profile suggesting the diagnosis of V.O.D.

according to our findings were I- MeanSGPTlevel was almost normal.- MeanSGOTlevel was mildly elevated. Meantotal serum protein levels were decreased by 25% below the normal level.- Mean serum albumin was below normal by about 25% of normal level.- Mean gamma globulin was markedly diminished by about 90% of the normal level.- Serum gammaglobulin was normal. Serum bilirubin was moderately increased by 2 folds of normal level.- Serum L.D.H. was very slightly increased or about normal.- Serum GGT was high by about 5 folds of normal level. IY. Pure hepatic schistosomiasis (26.7%)-----The biochemical profile suggesting the diagnosis is: [pure hepatic schistosomiasis according to our findings]- Total serum protein decreased. d serum albumin were Serum c