SUMMARY AND CONCLUSION
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The present study was carried out on 50 patients of chronic liver diseases. The study group consisted of 30 cases of cirrhosis liver, 9 of chronic persistent hepatitis and 3 cases of chronic active hepatitis. Thirty individuals served as controls. The total serum proteins and its electrophoretic fractions were estimated in healthy controls and study group. The immunoglobulins IgG, IgM and IgA were also estimated in both the groups. Similarly total ascitic fluid protein, its electrophoretic fractions and immunoglobulins were estimated in 26 cases of cirrhosis liver who had ascites. Following conclusion could be drawn from the study.

1. Mean total serum proteins level in healthy controls was 6.89±0.62 g%. The mean levels of various electrophoretic fractions were as follows, albumin, 2.86±0.56 g%, alpha-1, 0.60±0.47 g%, alpha-2, 0.66±0.26 g%, beta, 1.05±0.55 g% and gamma globulins 1.71±0.50 g%.

2. Mean levels of immunoglobulins, IgG, IgM and IgA in control group were 1062 ± 243.41 mg%, 227 ± 60.73 mg% and 98.03 ± 43.53 mg% respectively.

3. Statistically significant decrease of total serum proteins (P < 0.001) and albumin (P < 0.001) levels
were found in patients of cirrhosis liver. The gammaglobulin level was significantly higher ($P \leq 0.01$).

4. The immunoglobulins IgG and IgA levels were raised significantly in cirrhosis group ($P \leq 0.05$) and $\leq 0.001$ respectively). The IgM level was low but insignificant statistically ($P \geq 0.1$).

5. The mean level of ascitic fluid protein was $1.78 \pm 0.31$ g%. After electrophoresis, the resultant fractions were compared with serum of patients of cirrhosis liver. Here all the protein fractions were present in ascitic fluid although in low concentrations. The lower proportion of gammaglobulin in ascitic fluid (23.8%) was noted as compared to serum (34.50%). The albumin and alpha globulin were present in almost similar ratio as in serum (Table IX).

6. All the three immunoglobulins IgG, IgA and IgM were present in ascitic fluid. The IgG was predominant immunoglobulin in ascitic fluid (47.3%). The IgA was next immunoglobulin in abundance (35.5%). The ratio of IgG and IgA in serum and ascitic fluid was 3.8 : 1 and 1.4 : 1 respectively. Thus raised level of IgA was recorded in ascitic fluid in this study.

7. In chronic persistent hepatitis group the significantly low levels of total serum proteins ($P \leq 0.01$) and albumin ($P \leq 0.001$) were recorded. The mean level of
gamma globulin was raised above normal but statistically insignificant ($P > 0.5$).

8. The raised levels of immunoglobulins IgG and IgA were recorded in cases of chronic persistent hepatitis but the difference was significant ($P < 0.05$) in IgG class only. The IgA level was low as compared to control group but difference was insignificant statistically ($P > 0.5$).

9. The significantly low levels of total serum proteins ($P < 0.001$) and albumin ($P < 0.01$) were noted in cases of chronic active hepatitis. The gamma globulin level was above normal but difference was not significant ($P > 0.5$).

10. The raised levels of all the three immunoglobulins were found in chronic active hepatitis group. The difference was significant in IgG class only ($P < 0.01$).

The chronic liver diseases can be characterised by low levels of total serum proteins and serum albumin. The gammaglobulin levels were found elevated in all the three groups studied. However, no distinct pattern of electrophoresis of serum proteins were found. The immunoglobulins IgG and IgA levels were found to be elevated in chronic liver diseases. The electrophoretic pattern
of ascitic fluid showed similar pattern as that found in serum proteins in cirrhosis of liver. The immunoglobulin IgA was found in higher proportion in ascitic fluid as compared to serum.