The concentration of α-fetoprotein in serum of patients with various types of liver disease was examined by the method of radioimmunoassay. The concentration of this protein in serum of normal adults was below 10 μg/ml.

In 17 of 19 patients with hepatoma, the concentration of this protein markedly elevated and in 15 of them it reached 9500 to 342000 μg/ml, but in only two of them the concentration of this protein was below 10 μg/ml.

In about 45 per cent of patients with liver cirrhosis or chronic hepatitis, elevation of the concentration of α-fetoprotein in serum was observed. In about 50 per cent of acute hepatitis, the concentration of this protein elevated at the 1st to 4th week.

In all of three patients with subacute hepatitis, the concentration of this protein elevated and reached 240 to 1360 μg/ml.

In many cases of acute hepatitis which the concentration of this protein in serum markedly elevated, the clinical courses were prolonged.

The Relationship with Australia Antigen and α-Fetoprotein in Diffuse Liver Diseases

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We investigated the relationship with Australia antigen (Au-Ag) and α-fetoprotein (AFP) in 350 cases of diffuse liver diseases, including 20 cases of acute hepatitis, 221 cases of chronic hepatitis and 99 cases of liver cirrhosis.

Au-Ag was measured by solid phase radioimmunoassay (Austria125-Kit) produced by Dainabott laboratories. AFP was measured by two antibodies method (α-Feto-125-Kit) produced by Dainabott laboratories, and the values above 20 ng/ml were evaluated as positive.

A summary of results was shown below.

1) Among 350 cases with diffuse liver diseases, 242 did not have the Au-ag and 98 had the Au-ag.

In the groups of Au-ag-positive, 39 cases (40%) were AFP-positive, whereas in the