

not successful. There will be some agent, removed by charcoal, working to recombine with transferrin and iron, and denaturation may occur in the course of acidification and neutralisation with ascorbic acid and buffer.

Radioimmunoassay was more sensitive than immunoassay, and anti-transferrin serum was

not needed, if transferrin was labelled to react with antihuman serum.

Ninety eight % pure transferrin supplied by Hoechst Co. was used to obtain anti-sera and I would like to acknowledge Dr. Izumi Nakashima for his assistance in immunoassay.

LIBC in Liver Diseases Measured by ^{59}Fe Irosorb

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Irosorb-59 was applied for the measurement of LIBC in liver diseases.

Fundamental studies of this method revealed the following characteristics of the method. 1) plasma showed 153% values of the serum. 2) freeze-dried serum could be used for long period however cooled serum (3-5°C) showed the increase in LIBC. 3) iron absorbing capacity of the sponge (25°C, 1 hr incubation) was 95.1 % \pm 1.36 and 1 sponge could absorb 91 γ of iron. 4) Effect of incubation temperature on resin sponge uptake showed calibration between 5°C~30°C room temperature unnecessary. 5) By diluting serum with veronal buffer (PH 7.3) linearity of this method was proved. 6) Reproducibility of this method was confirmed by repeated measurements of the same samples.

Clinical application of this method was per-

formed on 25 cases of control, 15 cases of hepatitis, 11 cases of liver cirrhosis, 18 cases of schistosomiasis japonicum with liver damage, 19 cases of schistosomiasis japonicum without liver damage 2 cases of iron deficient anemia and 2 cases of aplastic anemia.

LIBC values were found to be 279.3 ± 38.5 $\mu\text{gr/dl}$ in control cases, 271.1 ± 81.8 $\mu\text{gr/dl}$ in hepatitis, 147.0 ± 41.0 $\mu\text{g/dl}$ in liver cirrhosis, 236.9 ± 74.9 $\mu\text{gr/dl}$ in schistosomiasis japonicum with liver damage, 294.7 ± 58.5 $\mu\text{gr/dl}$ in schistosomiasis japonicum without liver damage, 386 and 336 in iron deficient anemia & 93.7 & 195 in aplastic anemia. Negative correlation ($r = -0.528$) was found between LIBC & Kunkel values in liver disease.

LIBC measured by simplified Irosorb-59 method was found to be a useful index to follow up the progress of liver cirrhosis.

UIBC and TIBC Values in Liver Diseases Measured by Isotopic Method

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Serum iron $\text{U}_{1/1}\text{BI}$ and T/BC values in patients with liver disease of diverse etiology were measured. They were 10 cases of constitutional hyperbilirubinemia, 19 cases of obstructive jaundice, 29 cases of infectious hepatitis, and 14 cases of liver cirrhosis with 20 cases of normal control.

Serum Iron values were as follows; normal 96.4 ± 18.3 $\mu\text{g/dl}$ constitutional hyperbilirubinemia 89.9 ± 28.8 , obstructive jaundice 91.1 ± 30.4 , infectious hepatitis 212.2 ± 50.2 and liver cirrhosis 137.0 ± 36.0 , $\text{U}_{1/1}\text{BI}$ values were as follows; normal 214.2 ± 39.8 $\mu\text{g/dl}$ constitutional hyperbilirubinemia 192.3 ± 61.7 obstructive jaundice