

J. Blood and Bone Marrow

Determination of UIBC in Various Diseases

M. HASEGAWA, H. YOSHIOKA, M. TATEISHI, and I. IWASAKI

*Second Department of Internal Medicine Okayama University
Medical School, Okayama*

Unsaturated iron binding capacity (UIBC) was measured with Irosorb 59 kit in about 400 cases. Serum iron level was chemically estimated by Matsuhara's method. Total iron binding capacity (TIBC) and saturation percentage were calculated. And the clinical significance of UIBC was examined.

1) Control (52 cases). Serum iron : 111.0 \pm 30.1 μ g/dl. UIBC : 196.8 \pm 52.7 μ g/dl. TIBC : 306.4 \pm 57.8 μ g/dl. Saturation percentage : 37.1%.

2) Blood diseases: UIBC values were as follows; iron deficiency anemia (57 cases) 356.0 \pm 71.5, Banti's syndrome (13 cases) 251.6 \pm 94.5, hypoplastic anemia (55 cases) 67.4 \pm 77.3, hemolytic anemia 193.7, PNH 178.3 \pm 48.0, polycythemia vera (7 cases) 202.1 \pm 87.7, leucemia (5 cases) 97.6 \pm 93.6. Serum iron levels were as follows; iron deficiency anemia 33.6 \pm 22.8, Banti's syndrome 59.7 \pm 32.8, hypoplastic anemia 220.8 \pm 75.8, hemolytic anemia 119.7, PNH 75.1 \pm 23.1, polycythemia vera 122.1 \pm 64.3, leucemia 116.4 \pm 66.0, TIBC levels were increased (384.8 \pm 73.8) and saturation percentage was

8.7% in iron deficiency anemia. Saturation percentage of hypoplastic anemia was 77.2%.

3) Liver diseases: UIBC levels were 136.1 \pm 48.0 in chronic hepatitis (14 cases), 152.8 \pm 117.9 in cirrhosis of liver (12 cases). Serum iron levels were 174.6 \pm 86.4, 154.3 \pm 94.2 respectively.

4) Malignant diseases: UIBC levels were low (134.8 \pm 73.8) in liver cancer and metastatic liver cancer (7 cases) but were normal in other cancer. Serum iron levels were 58.7 \pm 32.4, 77.7 \pm 36.2 respectively. TIBC level was evidently diminished in liver and metastatic liver cancer.

5) Other diseases: In infection (12 cases) iron level was low (51.9 \pm 28.7) but UIBC was normal. Iron levels were 68.2 \pm 56.0 and 52.4 \pm 27.5 in SLE (6 cases) and Hashimoto disease (4 cases) respectively. But UIBC levels were normal in both diseases. Graves' disease (14 cases) has normal serum iron but low UIBC (150.4 \pm 72.2). Hemochromatosis has high iron level and very low UIBC. Nephrosis has also low UIBC.