tions made at intervals would be of some prognostic value, indicating the approach of a remission or relapse. Non-protein nitrogen values are not appreciably varied.

8,—Pathology of Renal System

The kidney function as studied by the Mosenthal test shows the same variations as are present in chronic nephritis. These variations tend toward the normal when the anemia improves. Albumin and casts may be present, also edema. The spleen and liver are slightly palpable in 40 per cent of cases. At times acidosis occurs during the relapse.

9,—Pathology of Cardia-Vascular System

The circulation is often disturbed and myocardial changes are present, as evidenced by cardiac hypertrophy.

Murmurs are present at the base and various valve areas. The blood pressure is frequently low.

The gastric, neurological, kidney spleen, liver and cardiocirculatory pathology occasionally leads the clinician to a faulty diagnosis in the absence of the classical blood picture. Such diseases as gastric carcinoma, indigestion, constipation, neural syphilis, nephritis, chronic malaria, endocarditis etc., are credited as the entity until late in the disease when the full blood picture reveals itself.

In all cases the typical blood picture of pernicious anemia: i.e., high color index, presence of nucleated reds, large and small many large red cells oval shaped, myeclocytes, decreased platelets and degenerated reds, is present some time during the course of the disease.

10,—Diagnostic Scheme

Given a case of severe anemia without this typical blood picture, the diagnosis can be made by the following correlated pathological study:

$$\text{Red count, hemoglobin, color index} = \frac{\text{R.B.C.}}{5{,}000{,}000}\% \text{ Hemo.}$$

White and differential count.

Red cells—polychromasia, poiklocytosis, anacytosis.

Stools for parasites and blood.

Stomach analysis for absence of HCl.

Hunter's glossitis.

Neurological examination and history.

Metabolism.

Mosenthal kidney test.

Cardio-vascular signs.

A hemorrhage, or superimposed infection, may alter the blood picture greatly. In these cases a very careful and exhaustive history and examination will show the true disease in spite of the much altered blood picture.

Pathological evidence of bone marrow activity and red cell formation may be determined through study of the following:

1. Reticulated red cell count, 2% —20%
2. Blood platelets count, 200,000 —350,000.
3. Polychromatophilia.
4. Increase in red cells.
5. Nucleated red cells.

Pathological evidence of bone marrow aplasia:

1. Severe anemia being present with a near 1 index.

a. Normal reticulated red cell count.

b. Absence of polychromatophilia

c. Blood platelets below 100,000.