

Studies on the Concentration of the Blood Serum in Anemias and Diseases of the Blood.—It has been maintained by Grawitz that the blood serum in pernicious anemia is relatively rich in protein, while in anemias of malignant or septic origin there is a marked hydremia. He has also claimed that the serum of chlorotics is comparatively rich in protein as compared to post-hemorrhagic anemias. Naegeli has apparently disproved this by studies of the viscosity of the sera. E. HEUDORFER (*Ztschr. f. klin. Med.*, 1914, lxxix, 103) has studied the question through determination of the protein content of the serum by means of the Pulfrich refractometer. His calculations have been based on the tables of Reiss. He has studied four cases of chlorosis, eight of pernicious anemia, five of secondary anemia, one of hemolytic anemia, four each of myeloid and lymphatic leukemia, four of polycythemia, four of anemia from malignant disease, and three with lymphogranulomatosis. The pathologically increased concentration of the serum was found in no instance. A decrease in concentration was not unusual. The most marked hydremia was found in chlorosis and pernicious anemia, while with malignant tumors, this was less striking. While no far-reaching conclusions can be drawn from the few observations made, still it is apparent that the protein concentration of the serum is not of differential diagnostic value in chlorosis, pernicious anemia, and anemia of malignant disease.

Determination of Blood-sugar Under Normal and Pathological Conditions.—H. G. BING and B. JAKOBSEN (*Deutsch. Arch. f. klin. Med.*, 1914, cxiii, 571) have studied the blood-sugar quantitatively by Bang's method. They find that the normal percentage is between 0.06 and 0.12, the average being about 0.1. After administration of 100 gm. glucose there is generally a well-marked increase, though at times it is lacking in normal individuals. One finds a similar rise after ordinary food. Hyperglycemia is often found in patients with nephritis, not necessarily associated with hypertension. In the cases of neurasthenia, hyperthyroidism and gastric diseases studied, no hyperglycemia was found, though it was present in connection with diseases of the pancreas. In diabetes Bing and Jakobsen found hyperglycemia after meals and during fasting periods, but there was no direct relationship between the degrees of hyperglycemia and glycosuria. In some cases of glycosuria and in some cases of diabetes mellitus, the estimation of the blood-sugar was of prognostic value.

The Demonstration of the Liver and Spleen by the Röntgen Rays.—C. LÖFFLER (*Münch. med. Woch.*, 1914, lxi, 763) describes a procedure for demonstrating the liver and spleen with the röntgen rays. It is also of advantage in detecting gall-stones and alterations in the gall-bladder. The patient fasts the day before the examination is made. The large intestine is then emptied by enemata, and gas is introduced by a rectal tube. The quantity of air or gas required for a picture of the spleen is less than for the liver, for in the former case it is only necessary to distend the colon as far as the splenic flexure. In the plate the spleen appears as an equilateral triangle about the size of a boy's hand, whose base is parallel to the lateral abdominal wall, while the apex—corresponding to the hilus—points toward the median line. Both

sides of the triangle are somewhat concave. In demonstrating the liver the gas should extend to the cecum, and the stomach is distended in the usual manner. The entire organ is well shown by this procedure. Care should be exercised in cases where there is definite ulceration in the stomach or intestines.

On the Relationship of Positive Venous Pulse and Tricuspid Insufficiency.—J. NEUMANN (*Deutsch. Arch. f. klin. Med.*, 1914, cxiv, 484) notes the swing of the pendulum in the interpretation of the positive venous pulse. Up to 1906 it was looked upon as diagnostic of tricuspid insufficiency, but since 1909 its interpretation has been in more or less doubt, since it was shown that inactivity of the auricles in the absence of tricuspid insufficiency might also lead to a positive pulse in the veins. Neumann's studies led him to conclude that the positive venous pulse which accompanies perpetual arrhythmia permits one to make no definite diagnosis for or against tricuspid insufficiency in such a case. The positive venous pulse may, however, be diagnostic of a tricuspid lesion under the following conditions: (a) If the positive venous pulse is very strong or can be palpated, or if a tone can be heard over the vein, or if the liver pulsates, tricuspid insufficiency can be diagnosed. (b) If the positive venous pulse is only slightly evident, possibly not visible without retraction of the head, then a tricuspid insufficiency may be excluded. Neumann points out that the combination of a positive venous pulse with regular rhythm of the heart is with few exceptions indicative of an insufficiency of the tricuspid valves.

On the Distribution of Glucose in the Blood.—H. TACHAU (*Ztschr. f. klin. Med.*, 1914, lxxix, 421), employing his own method, has studied the distribution of sugar in the blood. Lépine and his co-workers have assumed that, in addition to free sugar, there is combined sugar in the blood which becomes free within one-quarter of an hour after the blood is drawn. Tachau has investigated this point. He found in some cases that there is a distinct rise after the blood has stood one hour, amounting to as much as 10 per cent., though in other instances this was entirely lacking. He, therefore, devised a procedure by which he could make immediate examinations. In the blood of the fasting patient, Tachau found that the plasma showed a somewhat higher concentration in glucose than the whole blood or corpuscles. At the height of alimentary hyperglycemia, the difference between plasma and whole blood was considerably greater in many instances. In other cases, however, even an hour after taking the carbohydrate there was no difference from the condition found in the fasting patient. Calculations of the sugar content of the red blood corpuscles showed that there was a marked rise in most cases during alimentary hyperglycemia. Only in a few instances did the sugar concentration in the corpuscles remain relatively low and in one instance no sugar was found in them. A certain time after the taking of carbohydrates a lower concentration was found in the plasma than in the whole blood. Tachau advises the use of whole blood in the study of alimentary hyperglycemia.