NEWS AND VIEWS

Foreign Newsletter—Greece

D. Bakalos

To the Editor:

Hematologic research in Greece in the strict sense is non-existent. Lack of finances and continuous war conditions have been the principal obstacles to normal scientific progress. However, many physicians specializing in internal medicine are interested in clinical hematology. In the past year Codounis and his group presented new evidence on the hereditary nature of congenital methemoglobinemia (Proceedings of the Med. Soc. of Athens, 1950). Papageorgiou reported the first case observed in Greece of hereditary pseudohemophilia (Willebrand).

Bakalos and Katsiroubas initiated the study of sickle cell anemia in Greece. A great number of cases have been observed in the past year without any evidence of admixture with Negro Blood. They believe that sickle cell anemia may be included in the Mediterranean hemopathic syndromes. Further cases have been observed by Zaverdinos and Choremis et al. (Proceedings of the Med. Soc. of Athens, 1950).

Petzetakis has continued his work on the etiology of leukemia. He claims that after intraperitoneal injection in guinea pigs of whole or defibrinated blood taken from patients with acute or chronic myeloid leukemia he could produce a disease with fever, vaginitis and occasionally periorchitis with final development of meningoencephalitis. In a further series of experiments he used a filtrate of defibrinated blood from different leukemic forms or a brain filtrate taken from rabbits who were killed after showing the picture of meningoencephalitis. He examined brain smears using the Macchiavello and V-blue staining and could observe intracellular bodies which Petzetakis believes may represent the virus of leukemia (Presse Méd. January 28, 1950 p. 85 and Proceedings of the Academy of Athens 1950).

Foregin Newsletter—Denmark

A. Videbæk

To the Editor:

During 1950, Danish authors have published a number of papers of hematologic interest, dealing with widely different subjects.

The fragility of the thrombocytes to various concentrations of saline was determined in 37 healthy subjects and in 31 patients suffering from various blood disorders.[1] In several of the patients a reduced fragility was present, possibly accounting for a few cases of hitherto obscure hemorrhagic diathesis.

A comprehensive study[2] appears to show that barbiturates may cause a shift to the left in the white blood count and an increased sedimentation rate of the erythrocytes. These findings are of importance in the consideration of certain otherwise inexplicable cases of increased sedimentation rate, particularly in the elderly.

The renal excretion of tyrosine and the activity of choline esterase in the blood has been found to be low in pernicious anemia, but high in several cases of leukemia.[3] The interpretation of this finding is difficult.

A major experimental study[4] indicates that macrocytic anemia may be produced by ligating the common bile duct of the mouse, the guinea pig, and particularly the rat. The bone marrow does not appear megaloblastic. Splenic extract appeared to improve the condition. The authors do not offer any explanation, but possibly the experimental animals

were deficient in Owren's P.S. (protein synthetic) factor which secures a normal synthesis of hemoglobin and thereby normocytosis, and possibly this factor was administered in the splenic extract.

The effect of ACTH on serum proteins was studied in a nonhomogeneous group of patients by means of Darrien's salting-out procedures.[5] During the administration, the decrease in the globulin fractions usually occurred within certain salting-out intervals, provided that the clinical effect of ACTH was satisfactory. The effect of ACTH is reported in more detail in 2 cases of leukemia,[6] in which autopsy revealed necroses not due to leukemic infiltration of leukostasis; the anterior pituitary was the site of the necrosis in one case and in the other one the myocardium was sprinkled with numerous necroses. These findings may possibly be related to the power of ACTH to induce hypercoagulability of the blood.[7] Furthermore, variations were demonstrated in serum copper in the course of twenty-four hours, and it has been shown that the concentration of copper in normal erythrocytes is constant at about 70 per cent, independent of different serum copper levels.[8]

Two case reports are of particular interest. A case of hemolytic anemia with megaloblastic bone marrow and splenomegaly in which liver preparations and folic acid proved ineffective, was cured by splenectomy.[9] A case of hyperglobulinemia accompanied by visual disturbances showed at postmortum showed an infiltration with lymphocytes and plasma cells, also present in the central nervous system.[10]

For years the Danish hospital system has been highly centralized and specialized, and it is so easy and so cheap to be hospitalized that practically every case of serious illness is treated in the hospital. Since, moreover, the Danish population is stationary and rather small (4,200,000) and confined to an area of 43,000 square kilometers, Denmark offers almost ideal conditions for follow-up examinations and consequently also for the evaluation of therapeutic results and prognosis. Several hematologic studies have been based on these facilities.

The prognosis of pernicious anemia has been estimated on the basis of a follow-up study of 301 patients,[11] 224 of whom were followed up for more than ten years. An accurate calculation of the death rate among a group of healthy persons of the same age and sex distribution and followed up for the same length of time as the patients with pernicious anemia showed that female patients with pernicious anemia have the same chances of survival as if they did not have this blood disease, whereas among the male patients there was a slightly, but not significantly higher mortality. A total of 115 patients had died, 21 from carcinoma affecting the stomach in no less than 15 cases, or three times more often than in the control series. Earlier workers have pointed out that patients with pernicious anemia were particularly prone to develop gastric carcinoma,[12, 13] but without stating the sex and age distribution among the patients and the control series which is a sine qua non in evaluating the incidence of a disease which depends so much on the sex and age distribution among the group concerned.

The prognosis in cases of polycythemia vera has been reported on the basis of 125 patients.[14] The majority of these patients had received a very casual treatment or none at all. Among them the mortality was higher than the mortality calculated in a corresponding Danish population. The prognosis was more serious for males (half the males dying within four to five years, half the females within eight to nine years). Seventy-six patients had died, 50 per cent from hemorrhages or thrombosis, 18 per cent from chronic pyelonephritis, 11 per cent from cancer and only 1 patient from acute leukemia. At least 14 per cent had duodenal or gastric ulcers and 10 per cent had gout. The rather poor prognosis in this series is attributed mainly to the casual way in which the patient had been treated. It is pointed out, in agreement with other workers,[15] that in most instances good results are obtainable with gentle methods, such as repeated venesections and small doses of x-rays. If polycythemia co-exists with hematuria or with a highly increased sedimentation of the erythrocytes, the possibility of hypernephroma is worth considering.[16] This possibility is illustrated by 3 cases of hypernephroma combined with (symptomatic?) polycythemia. Moreover, polycythemia, undoubtedly of the symptomatic variety, was observed in a man suffering from generalized nevocarcinomatosis.[16]

The survival rate of Hodgkin's disease is estimated on the basis of 172 cases confirmed

by biopsy, treated by x-rays and followed up at regular intervals.[17] At the end of 5 years after the onset of symptoms only 28 per cent were alive and at the end of 10 years only 3 per cent. Thus, the prognostic outlook is on the whole poor; unfortunately it is impossible to foretell the individual prognosis with any amount of certainty.

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AAGE VIDEBÆK

BOOK REVIEWS

CHEMICAL EMBRYOLOGY, *Jean Brachet.* New York, Interscience, 1950, pp 533.

This book is a translation by L. G. Barth of Jean Brachet's *Embryologic Chimique,* 1945 French edition, for which there has been a demand by investigators in this field. Emphasis has been placed on biochemical and biophysical investigations which throw light on the phenomenon of morphogenesis. The book begins with a valuable discussion of the principles and value of histochemical and cytochemical technics and a chapter on the chemical basis of sex determination. The biochemistry of fertilization is preceded by a consideration of gamete formation and is followed by a discussion of respiratory and nonrespiratory metabolism in relation to cell division. The synthesis, localization and physiologic role of the nucleic acids is the subject of an interestingly written and important chapter.

Other subjects discussed are growth and differentiation, the chemical embryology of invertebrates and of amphibian eggs, the chemistry of the organization center and the biochemistry of the organism during regeneration. The book concludes with a summation of the established facts, those points which are controversial, and with a statement of perspectives in the field of chemical embryology. A list of 1242 references completes the volume. Brachet deals impartially and critically not only with reference to his own major contributions but also with the work of others. Various hypotheses proposed to explain experimental observations in this field have been critically and intelligently discussed. Many chapters are completed with a summary of the conclusions reached, which will satisfy the individual who has only a general interest in the subject matter. *Chemical Embryology* is, at present, the most useful and valuable book in this field and should occupy a place on the shelf of investigators interested in biological phenomena.—*W. H. Fishman*