ERYTHROCYTES


Different forms of thalassemia or related disorders were found in 116 people of apparently pure British stock. These consisted of 91 people with heterozygous β-thalassemia, three people with Hb H disease, three people with heterozygous α-thalassemia, six people with a form of β-thalassemia intermedia, 11 people with hereditary persistence of fetal hemoglobin, one child homozygous for the “silent β-thalassemia gene,” and one child with homozygous β-thalassemia. Many subjects were related in each separate group. The clinical, hematologic, and hemoglobin biosynthetic findings were similar to those of other racial groups with thalassemia. The difficulties of diagnosing these disorders, particularly heterozygous β-thalassemia and hereditary persistence of fetal hemoglobin, in a white population are discussed. J.A.W.


In this new case of hemolytic anemia related to phenacetin, the authors had found a deficiency and transient instability of glutathione which can be due to a temporary inhibition of glutathione synthetase. The authors state that determination of GSH is of prime importance in acquired hemolytic anemias. J.C.


The authors recall the fairly exceptional case of a patient with hemochromatosis which was definitely primary and familial, in whom there developed considerable anemia due to folic acid deficiency. Total cure of the anemia by administration of folic acid did not change the hemochromatosis. The facts reported did not
permit demonstration of a direct link between the folic acid-deficiency anemia and the hemochromatosis and do not suggest that the vitamin deficiency played a role in the pathogenesis of the primary familial hemochromatosis. The other members of the family, with hemochromatosis, did not have signs of folic acid deficiency. 

J.C.

Analysis of Clinical Manifestations in Acute Intermittent Porphyria. I. Koszewska-Jabłońska, W. Bielawski, and I. Bardzik. Department of Internal Medicine and Department of Laboratory Diagnostics, School of Medicine, Gdańsk, Poland. Pol Arch Med Wewn 50:545–553, 1973

Clinical symptoms and laboratory examinations were analyzed in ten patients with acute intermittent porphyria. Determination of ALA and PBG in urine during exacerbations and remissions failed to demonstrate a correlation between severity of the clinical manifestations and amounts of porphyrin precursors excreted. Postmortem examination performed in three cases with fatal outcome demonstrated the typical fluorescence of porphyrins not only in the liver but also in the adrenals. In two cases porphyrins could be detected mainly in the medullary zone, in another one in the fasciculate zone of the adrenal cortex. – M.K.


Fifty-five children aged 5–14 yr with RA lasting from 3 mo to 11 yr have been examined. The lowering of Hb level and of erythrocyte counts were found to correlate with both the activity of the inflammatory process (evaluated by several laboratory tests) and with duration of the disease. A markedly more pronounced lowering of Fe and iron binding capacity of serum and flattening of serum iron curves after Fe oral loading were observed in the group of children with high activity of the inflammatory changes as compared to those with moderate and low activity. Sideroblasts were detected in myelograms of 98% of patients. The percentages of sideroblasts did correlate neither with the Hb level nor with serum Fe concentration and iron binding capacity of serum. The pathologic, ring-formed sideroblasts were found in about 25% of bone marrows. – M.K.


Hematologic parameters (hemoglobin, hematocrit, red blood cell count) and percentage of 59Fe incorporation into red cells, liver, spleen, and bone marrow were investigated in rats treated for 75 days with sodium fluoride in drinking water (150 ppm). It was found that fluoride ingestion caused (1) decrease in red blood cell count (20.2%), and hemoglobin level (4.6%), (2) decrease in 59Fe incorporation into blood and spleen, and (3) increase in 59Fe incorporation into liver and bone marrow. The results suggest inhibition of erythropoiesis in rats treated with sodium fluoride. – M.K.

LEUKOCYTES


An experimental model was described in which the subcutaneous implantation of a plastic cylinder (PC) in BALB mice caused the development of tumors of short latency, upon inoculation with allogeneic neoplastic cells of AKR origin, with an incidence of 56% (33/59). Subsequent experiments demonstrated that the mechanism by which these allogeneic tumors develop involves the presence of serum blocking factors which facilitate tumor growth. These results led us to investigate whether this model could be reproduced with human neoplastic cells. Established cellular lines, GH7 and LDLT were used, both having originated from the same case of lymphosarcoma: 1 x 106 cells were injected into the plastic cylinder 2 days after its subcutaneous implantation in BALB mice. In these conditions, tumors appeared in 62% (16/26) of the animals, with an average latency of 9 mo. Simultaneous controls receiving the same cellular dose subcutaneously, in the absence of PC, did not develop tumors (0/36). As for the animals bearing an “empty” plastic cylinder, 17% (4/24) developed tumors with a latency of 9 mo. Comparatively, survivors of the 56%, above-mentioned animals
ABSTRACTS

bearing a plastic cylinder and inoculated with AKR neoplastic cells (S19) yielded a 71% incidence of tumors (30/42) after a latency period of 11 mo. Controls with S19 neoplastic cells subcutaneously without plastic cylinder, only exceptionally gave tumors (2/53). All the long latency tumors could be transplanted in the BALB strain only and could be maintained as cellular lines, suggesting that they were induced de novo in the BALB host and that the possibility of colonization could be discarded. It can be concluded that both human and AKR neoplastic cells contain an agent capable of potentiating the tumorigenic effect of a plastic implant. — E.S.S.


Surgical staging of Hodgkin's disease, i.e., laparotomy and splenectomy, is a complex procedure, requiring considerable preoperative preparation and anticipation by the surgeon in conjunction with his medical colleagues. The surgeon is responsible for the systematic removal of the spleen, liver biopsy samples, lymph node samples, removal of the appendix, and transposition of the ovaries in the female patient. He must adequately and systematically mark these areas of dissection to assist later in the evaluation of the pathologic findings and to assist the radiation therapist in treatment planning when that is performed postoperatively. — J.E.U.


Fifty-seven patients with advanced Hodgkin's disease who entered a complete remission after chemotherapy with mustine (nitrogen mustard), vincristine (Onconvin), procarbazine, and prednisone (MOPP) were allocated at random to one of three regimens: No additional therapy, intermittent therapy with MOPP, or intermittent therapy with 1,3-bis(2-chloroethyl)-1-nitrosourea (BCNU). Twenty-four per cent of those patients receiving no further therapy relapsed, as did 25% of those on intermittent MOPP and 13% of those on intermittent BCNU; the differences are not significant. The median duration of initial remissions was greater than 48 mo for all the patients, and there was no significant difference between the individual groups. Complications and infections were more frequently seen in the patients receiving maintenance therapy, especially in those on BCNU. Only one patient in each of the three groups has died of Hodgkin's disease, and survival is not significantly influenced by maintenance therapy. The projected 5-yr survival for the entire group of patients was 86%_. — J.E.U.


The reliability of the diagnosis of histologic subtypes of Hodgkin's disease by 16 pathologists from several countries was tested. The Rye classification was applied to a set of 40 slides, 20 of which were read twice. The interobserver agreement varied with the histologic subtype: For the nodular sclerosis subtype, agreement in diagnosis was 70% in the first reading and 91% in the second reading. For the lymphocyte predominant subtype, agreement varied between 68% and 94% in the different readings. For the mixed cellularity and lymphocyte depleted subtypes, agreement varied between 58% and 85%. Pathologists least agreed on diagnosis when slides previously thought difficult to classify were included. — J.E.U.


It has been postulated that the leukocyte count during the first year of life in premature newborns correlates with the degree of prematurity. In the present investigation the leukocyte count was determined within 5 hr after delivery in 313 premature newborns. Leukocyte counts under 8000 per cu mm were found in 11.5% of cases, from 8000 to 16,000 in 59% of cases, from 16,000 to 40,000 in 27.8% of cases, and above 40,000 in 1.7% of cases. No simple correlation could be seen between leukocyte count and degree of prematurity evaluated by birth weight.
and perinatal mortality. However, the group with the highest degree of leukocytosis comprised the newborns with the lowest birth weight and the greatest perinatal mortality.

Studies on the Reduction of Nitroblue Tetrazolium (NBT) by the Neutrophils. A. Sychowy. Department of Pediatrics, Silesian School of Medicine, Zabrze, Poland. Pediatr Pol 48:35-37, 1973

NBT reduction test of peripheral blood granulocytes before and after phagocytosis of latex particles was performed in 54 children aged 2-15 yr. In the group of 30 children with acute bacterial infections, the percentage of NBT formazane positive granulocytes was found to be high (33.9 ± 11.9%) before latex phagocytosis and to increase only insignificantly after it (36.3 ± 2.4%). Counts of formazane positive cells were much lower (7.7 ± 3.5%) in 30 patients with noninfectious diseases, but increased to 33.6 ± 11.9% after stimulation by phagocytosis. The results confirm the possible application of NBT test for differential diagnosis of bacterial diseases. — M.K.

An Attempt to Analyze the Results of Treatment of Plasma Cell Tumors. M. Żul'awski. Department of General Oncology, Institute of Oncology, Warsaw, Poland. Nowotwory 23:177-184, 1973

One hundred and thirty-five cases with various forms of plasmacytoma treated during 24 successive yr are presented. The largest (99) was the number of patients with generalized skeletal changes. In 19 cases plasma cell tumors showed nonsosseous localization. The effect of treatment on survival time was statistically analyzed in patients with the generalized form of the disease. The results indicate an increased survival from the time of diagnosis (p = 0.05) for patients treated with the Alkeran or with cyclophosphamide. — M.K.


Twenty-eight patients aged 15-64 yr with various forms of leukemia were treated according to the following schedule: Cytosine arabinoside was injected intravenously in doses of 80 mg at 12-hr intervals, 50 mg 6-mercaptopurine was given orally twice a day, encortsin was given in the dose of 30 mg/sq m of body surface. Cytosine arabinoside injections were continued for 5-7 days. In some cases this cytostatic drug was given orally in the dose of 4-6 mg/kg for several days longer. Complete hematological remission was attained in seven of 19 patients with acute myeloblastic leukemia and was accompanied by clinical remission in five cases. Remission was also observed in two cases of erythroleukemia and in one case it was complete. Results in seven patients with exacerbation of CML were much worse. Complete remission was not obtained in any case. Some improvement was observed in four patients. — M.K.


In 18 of 22 cases of acute myeloblastic leukemia, the Sudan black reaction was positive. In three cases of acute myeloid leukemia, acid phosphatase determination seemed to be promising in characterizing unclassifiable (by other means) circulating blast cells. Specific esterases as well as the reactions for myeloblastic cells are to be used in myelomonoblastic leukemias. PAS has been positive in 11 out of 14 cases of acute lymphoblastic leukemia. Using cytochemical methods, some transformations were noted from the myelomonocytic to the myeloblastic and from nondifferentiated to the lymphoblastic type. — J.C.


A 51-yr-old man developed lymphosarcoma, with mild marrow hypoplasia. Treatment with chlorambucil and prednisone for 1 yr and a single course of x-rays caused complete remission. Eight months later he developed pancytopenia with subsequent acute granulocytic leukemia. Marrow chromosomes were first normal, later aneuploid. This man probably had preleukemia, as well as lymphosarcoma, when first seen, and cytotoxic therapy accelerated the change to overt leukemia. F.W.G.
HEMOSTASIS


The purpose of the experiments reported was to study the role of platelets in blood coagulation and hemostasis. Freshly collected intact platelets were shown to initiate intrinsic coagulation by two distinct alternative mechanisms. The first mechanism concerns contact product forming activity, a metabolic or physicochemical property of the platelet surface which may be altered by exposure to adenosine diphosphate to activate factor XII and subsequently form contact activation product on the platelet surface when factor XI is present. By an alternative mechanism, collagen-stimulated platelets were shown to initiate intrinsic coagulation in the absence of factor XII provided factor XI was present. Subsequently platelets provide intrinsic factor Xa-forming activity, i.e., the capacity of platelets to enhance the reactions of factors Xa, VIII, IX, and X to form factor Xa activity on the platelet surface in the presence of natural inhibitors to active clotting factors. Finally, platelets provide platelet factor 3 activity, the well-known capacity of platelets to catalyze the reaction of factors Xa and V to activate prothrombin in the presence of calcium. Some possible interrelationships between platelet plug formation and blood coagulation, based on evidence presented here and by other investigators, are presented as a hypothesis which may account for the events of hemostasis. The events leading to platelet plug and fibrin formation seem to proceed concurrently, initiated by the vascular injury and closely linked by autocatalytic or "positive-feedback" interrelationships. Abstractor's comment: This paper was awarded the First International Prize of the Fundación Viviana Luckhaus. — E.S.S.


A number of observations have indicated that platelets play an important role in maintaining the integrity of the endothelium and vascular bed during organ perfusion. A group of experiments was developed in which rabbit kidneys were isolated and perfused. This model system allowed also evaluation of platelet function. The model permitted the simultaneous monitoring of several parameters of renal function using the contralateral kidney as a control. The isolated rabbit kidneys were prepared and perfused for 4 hr. The organ was suspended in a plastic mesh basket to permit optimal positioning of the ureter and continuous measurement of kidney weight. Renal arterial perfusion pressure was measured with a mercury manometer, and urine was collected with a flexible plastic urethral catheter which drained into a calibrated test tube. The perfusion fluid consisted of 56 ml of 6% human albumin in Tyrode's solution, 8 ml of 3.8% trisodium citrate, and 16 ml of washed rabbit red blood cells. Kidneys perfused without platelets or with stored or clumped platelets showed an increase in weight and perfusion pressure, could not maintain surface hemostasis, and produced bloody urine. Perfusion with nonfunctional adenosine-treated platelets demonstrated similar changes without an increase in kidney weight. By contrast, organs perfused with fresh, acidified platelet concentrates from several species functioned well for the duration of perfusion. Pathologic changes in kidneys perfused under the various conditions were consistent with the functional changes observed. — M.G.B.

Failure of Fibrinogen Degradation Products to Increase Plasma Fibrinogen in Rabbits. P. T. Ots and S. I. Rapaport. Department of Medicine, University of Southern California School of Medicine, Los Angeles, Calif. Proc Soc Exp Biol Med 144:124, 1973

This research was devoted to the investigation of agents controlling fibrinogen synthesis. Fibrinogen degradation products have been described by others as capable of increasing fibrinogen production in dogs. However, this finding has been contradicted in rabbits by other investigators (Thromb. Diath. Haemorrh. 19:547, 1968). In the present experiments, infusion of large quantities of early or late fibrinogen degradation products into rabbits failed to increase plasma fibrinogen levels or the incorporation of 75SeM into newly synthesized fibrinogen. It was therefore confirmed that the fibrinogen degradation products do not appear to be capable of increasing fibrinogen synthesis in the rabbit. — M.G.B.
Leukocyte Aggregation in Vitro in Glanzmann's Disease. M. C. Rozenberg, Prince Henry Hospital, Sydney, Australia. Pathology 5:229, 1973

In normal individuals thrombi produced in vitro in a cone-in-cone viscosimeter consist of platelet masses surrounded by leukocytes and a fibrin network containing red cells. In thrombocytopenia thrombi consist of red cells and fibrin, with leukocytes randomly distributed throughout. In two patients with Glanzmann's disease in vitro thrombi contained agglomerates of leukocytes. These may have been caused by a normal platelet release reaction which cannot occur in thrombocytopenia because of a paucity of platelets. F. W. G.


Using the Gouy-Chapman theory the authors have found that the number of phosphate groups (susceptible to an alkaline phosphate) on one human platelet is between 3 and $8 \times 10^5$ per cell. J. C.


Large and abnormally shaped platelets, impaired release of factor 3 and ADP, and lowered efflux rate of $^{86}$Rb from the intracellular Rb space were demonstrated in nine patients from a family, first described by Kurtjens et al. (Br J Haematol 15:305, 1968). The abnormalities were transmitted as a dominant trait. The authors have shown that the percentage of saturated lipids was higher than normal and may have caused the membrane lipid layer to have a more rigid structure and less sensitivity to release triggers. They suggest that the membrane abnormalities may also explain the increased platelet size. Abstracter’s comment: The thrombocytocrit, as calculated from the product of platelet count and volume, was in the normal range in two subjects and slightly lowered in a third one. In the presence of a normal platelet life span, this suggests that the total platelet mass produced per day in the disease described was normal, a conclusion also drawn from the study of other macrothrombocytopenias (see von Behrens, Thromb. Diath. Haemorrh. 27:159, 1972). — J. M. P.


In a group of five families where thrombocytopenia was inherited as a dominant trait, seven members were found to have normal isologous platelet survival, generally reduced recovery of infused platelet radioactivity, and increased splenic external radioactivity. In three of these patients, splenectomy resulted in an increased platelet count, although the spleen weight was normal (220, 230, and 125 g). In all cases megakaryocytes were normal and Doehle bodies were absent. (Neither platelet morphology and size nor spleen histology is described.) — J. M. P.


A case of thrombocytopenia in a 4-yr-old boy is reported. Megakaryocytes were absent in the bone marrow preparations, and platelet antibodies could not be detected in the serum. Treatment with large doses of corticosteroids during a 3-wk period remained without effect on the platelet count and on the severe hemorrhagic symptoms. Serotonin injected in the dose of 2.5 mg/day during the consecutive 13 days resulted in an abrupt increase of platelets to a normal value on day 5 and in complete recovery. In the bone marrow, the appearance of platelet forming megakaryocytes was observed. — M. K.


Cytofluorometric measurements of ploidy histogram and electron microscopic studies
ABSTRACTS

After peroxidase reaction were made on micro-megakaryocytes from the bone marrow of a 22-yr-old patient suffering from refractory anemia and thrombocytopenia (Blood 40:453, 1972). The percentage of megakaryocytes in the 2N, 4N, and 8N classes were 6.25%, and 51%, respectively, as opposed to 0, 0 and 10.7% in normal subjects, where the 2N and 4N classes cannot be identified. The micro-megakaryocytes had a positive peroxidase reaction in the perinuclear space and endoplasmic reticulum, but the Golgi apparatus and granules were negative. These reactions are similar to those recorded in megakaryocytes of normal subjects, whereas myeloblasts and promyelocytes in either the patient or normal subjects had a Golgi apparatus and granules which were both positive. The micromegakaryocytes had few granules, irregularly distributed. Many megakaryocytes contained membrane complexes, composed of both peroxidase positive endoplasmic reticulum and peroxidase negative membranes. An unusual number of nondegenerating erythroblasts was seen inside megakaryocyte invaginations (emperipolesis), an observation already made in myelocytic leukemia in rats. - J.M.P.

The Effect of Fibrinolysis on Complement and its Fractions. Z. Pietruska, A. Stasiewicz, and J. Drozd. Department of Internal Medicine, School of Medicine, Białystok, Poland. Pol Tyg Lek 28: 1137–1141, 1973

The changes in complement and its fractions C1, C2, C3, and C4 have been investigated in blood serum of healthy subjects before and after activation of fibrinolysis by venous stasis or intravenous administration of 300 mg of Sadamin (7-methyl oxyethylamino, 2-oxypropyl theophylline nicotinicum). The in vitro effect of plasmin on the hemolytic activity of complement components in the serum was also examined. It was found that fibrinolysis activation in vivo induced an increase in hemolytic activity of C1 and C4, while the in vitro plasmin action resulted in a lowering of serum titers of C and its components. The most pronounced reduction was of C2 and C4. - M.K.


Fibrin formation was studied using six tests and was compared statistically between adults and newborns of different ages. In newborns the polymerization is reduced for small quantities of thrombin, there are differences in the isoelectric pH between adult and newborn fibrinogen chains, and the quantitative technique using light absorption give discordant results. The authors insist on the differences in the isoelectric pH which had to be confirmed by more sophisticated tests. - J.C.


Changes in blood clotting and serum electrophoretic pattern in 60 patients treated for complications of influenza, most commonly pneumonias, are reported. In nine cases generalized symptoms of hemorrhagic diathesis were present. Positive protamine sulphate test in plasma of 14 cases indicated a rather frequent activation of intravascular coagulation. An increase of IgA immunoglobulin was the most common abnormality detected in serum proteins. The authors conclude that the facilities for diagnosis and treatment of intravascular coagulation should be taken into account while considering organization of hospital care of influenza complications during epidemics. - M.K.


Adrenalin infusion activates the clotting system in rats. It has been demonstrated that splenectomy prevents this response, while grafting of living spleen cells restores the reactivity. Transfusion of blood of a normal donor rat restores also the reactivity of asplenic recipient rats. However, the response of asplenic recipient rats is transient, while the response of grafted rats persists (like that of normal rats) as long as the infusion of adrenalin is continued. Blood of asplenic donor rats is not effective. A product absorbed with celite from blood plasma and eluted with 10% NaCl solution restores (like transfusion of the whole blood) the reactivity of asplenic rats when injected intravenously. Simultaneously prepared eluates from plasma of asplenic rats are ineffective. The results confirm the presumption that the response to
adrenalin depends on a splenic factor present in the circulating blood.  M. A.

Clotting and Fibrinolytic Activity of Blood in Patients With Adult Diabetes.  J. Kaniok, Z. Knapik, M. Kotschy, B. Kowal-Gierszak, and D. Paczyńska. Department of Vascular Diseases, Department of Gastroenterology, School of Medicine and District Outpatient Service for Diabetics, Wrocław, Poland. Pol Tyg Lek 28:1217-1219, 1973

In a group of 50 patients with mild adult-type diabetes blood clotting parameters were evaluated and in 40 cases hypercoagulability was found with increased activity of plasma thromboplastin in the Giggs Douglas test, and higher values of prothrombin and fibrinogen. In 20% of the patients a significant prolongation of fibrinolysis time was observed. The obtained results were compared with the blood clotting parameters in a group of 25 atherosclerotic patients and 25 young healthy subjects. The results were very similar in diabetics and in atherosclerotic patients showing no statistically significant differences (apart from prolongation of fibrinolysis time) although they differed significantly from analogous values in healthy subjects. In mild adult-type diabetes slight disturbances of carbohydrate metabolism seem to be without effect on the blood clotting process and hypercoagulability observed in these patients is related to changes in the arterial walls observed in diabetes as well as in atherosclerosis.  M. K.


When dermal collagen is carefully observed, it allows recognition of the degree of coronary and aortic atherosclerotic involvement in a given subject. The interpretation of the results varies in connection with the age of the patient.  J. C.

IMMUNOHematology


Combined studies of direct membrane immunofluorescence with antiammunoglobulin serum, and of lymphocyte blastogenic responses to autologous leukemia cells were carried out in 34 adult patients with acute leukemia. Twenty-four of 34 (71%) had positive blastogenic responses to their own leukemia cells. Eight of 19 patients with acute myelogenous leukemia and one of five with acute lymphoblastic leukemia had complete or partial abrogation of their positive blastogenesis when the lymphocytes were cultured in autologous rather than allogeneic serum. Direct membrane immunofluorescence with antiammunoglobulin serum showed bound IgG on the cells of seven of eight patients with acute myelogenous leukemia and serum inhibition, and one without the serum inhibitory effect. Membrane immuno fluorescence was negative in two patients with positive blastogenesis and serum inhibition, 14 of 15 with positive blastogenesis and no serum inhibition and, finally, in all ten patients with negative blastogenic responses to leukemia cells. A good prognosis was correlated with a positive blastogenic response, its inhibition by autologous serum, and IgG bound to the cell surface.  J. E. U.

Prophylactic Administration of Anti-Rh (D) Immunoglobulin Controlled by Immunofluorescent and Cytochemical Determinations of Fetal Hemoglobin in the Maternal Blood.  E. Gajewska. Department of Gynecology and Obstetrics, School of Medicine, Wrocław, Poland. Pediatr Pol 48:721-726, 1973

The leakage of fetal erythrocytes into the maternal circulation was evaluated by two methods, the indirect immunofluorescent technique and the cytochemical Kleinhauer Betke procedure. In 31 cases of Rh (D) incompatibility the tests were performed before and after a single injection of 32 μg of anti-Rh (D) immunoglobulin. The results indicate that the applied dose of immunoglobulin accelerated the elimination of fetal antigen from the maternal blood when the leakage of the fetal blood did not exceed 0.2 ml. In two cases with a markedly greater leakage this dose of immunoglobulin was found to be ineffective.  M. K.

Blastic Transformation of Phytohemagglutinin-Stimulated Lymphocytes in Splenectomized Patients.  A. Pluzynska, E. Palkowska-Kulesza,

Blastic transformation of lymphocytes was examined in PHA-stimulated 3-day-old cultures of white cells obtained from 29 splenectomized patients. As compared with the control group, lower values of blastic index and mitotic index were found in the patients. The mean value of blastic transformation index in splenectomized patients was 29.9%, and in the controls it was 62.1%. The respective values of the means of mitotic indices were 1.09% and 5.17%. The absence of the spleen seemed to be the only factor which could be responsible for the impairment of transformation of lymphocytes in the examined group. M.A.

Preliminary Studies on Antigenicity of Chronic Lymphatic Leukemia Cells in Humans. A. Hadziaska, S. Kollerek-Haus, R. Richter, and W. Brodzka. Department of Tumor Immunology, Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, and Hematological Clinic, Institute of Internal Diseases, Medical School, Wroclaw, Poland. Arch Immunol Ther Exp (Warsz) 21:403-415, 1973

A number of simple serologic tests were used to detect specific leukemia antigens in chronic lymphatic leukemia (CLL) cells. Results of the cytotoxic and immunofluorescent tests in 15 cases of CLL were compared with 11 cases of chronic and seven cases of acute myeloid leukemia. For comparative purposes, eight cases of inflammatory leukocytosis and 35 preparations of leukocytes from normal blood donors of different blood groups (A, B, 0, AB, Rh+) were examined. Using specific immune globulins, a large number of cross-reactions were performed with various target cells. The results showed that CLL leukocytes possess specific surface tumor antigens, which do not occur, or are present in undetectable trace quantities in the leukocytes of normal blood donors of various blood groups. Antigenic specificity was observed also in comparative tests with chronic myeloid leukemia cells and inflammatory leukocytes. M.A.

Delayed Hypersensitivity and Immunoglobulin Levels in the Course of Chemotherapy of Advanced Malignant Neoplasms. Z. Singer, and J. Salwa. First Department of Internal Medicine Silesian School of Medicine, Katowice, and Department of Tumor Immunology, Institute of Immunology and Experimental Therapy, Polish Academy of Science, Wroclaw, Poland. Arch Immunol Ther Exp (Warsz) 21:239-247, 1973

Skin reactivity to tuberculin and immunoelectrophoretic patterns of sera were repeatedly examined in 129 patients with malignant neoplasms during treatment with cytostatic drugs and radiation. Results were compared with those obtained in the control group of patients of similar age and general clinical status, but with non-neoplastic diseases. Anergy to tuberculin was found to be significantly more frequent in cases with neoplasia of the lymphoreticular system and with leukemias (76%), than in a group with cancer (54%) and on the control group (25%). Chemotherapy and radiotherapy induced a slight, further impairment of delayed hypersensitivity to tuberculin. Persistence of strongly positive tuberculin reactions (diameter above 20 mm) or their appearance in previously negative patients were shown to constitute good prognostic signs in regard to early therapeutic effects. Examination of serum protein electrophoresis indicated a high variability of the results. Pronounced lowering of IgG concentration in some cases of Hodgkin's disease at stage IV was not connected with the cytostatic therapy. M.A.


H antigen in O group, B and H in B group, A and B in AB group are different in Niokolombo (Malinke) groups and in subjects living in the Toulouse area. Expression of the mutations seems to differ in these two ethnically different groups. The Morgan and Watkins' schema of synthesis of blood erythrocytes substances can explain the results obtained for A and B. It does not explain why groups O from Niokolombo are richer in H factor than groups O from the Toulouse area. The authors stress the point of the complexity of the genetic model controlling the ABO blood system. J.C.
In a group of 225 patients suffering from Hodgkin's disease a past history of tonsillectomy and appendectomy was no more frequent than in a control group of 307 normal subjects of the same age. These surgical procedures did not appear to determine the initial localization nor the time of appearance of the disease. These results do not confirm Vianna's hypothesis that tonsillectomy and appendectomy reduce body defenses against Hodgkin's disease.—J.M.P.


Nine patients treated for psoriasis with hydroxyurea developed macrocytosis, three with mild megaloblastosis, one with associated mild anemia, and another with leukopenia. The dose of hydroxyurea was 1.25 g daily or less. —J.A.W.


The degree of sexual maturity was evaluated in 1872 boys and girls aged 11-18 yr, on the basis of development of external genital organs, pubic hair, and breast. A five-grading scale was applied for subdivision of the whole groups of boys or girls with regard to sexual maturity. Hemoglobin levels and hematocrit values were also determined. Statistical analysis of the results demonstrated that the progressive increase in Hb and hematocrit during puberty was markedly greater in boys than in girls and correlated better with their sexual maturity than with their age. —M.K.