ABSTRACTS

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ERYTHROCYTES


The maturation of rabbit reticulocytes was studied in vitro and in vivo. The RNA and Mg ++ contents of the red cells were compared in vitro and in vivo. The maturation time of reticulocytes in vivo was 60-80 hr; in contrast, the decline in RNA content of incubated reticulocytes suggested maturation times of 36-48 hr. P.F.


Kininase activity of plasma, whole blood, erythrocytes, and hemolysates was examined in patients with hypochromic anemia and in healthy subjects. Kininase activity was found to be highest in erythrocyte hemolysates. It was demonstrated that kininases do not penetrate through undamaged erythrocyte membrane. Trasylol (200 U/ml) and epsilon-aminocaproic acid (6 x 10⁻³ M) did not inhibit the kininase activity of plasma, whole blood and of hemolysates. 11-orthophenantroline (3 x 10⁻³ M) was found to inhibit the kininases present in plasma or hemolysates while EDTA (4 x 10⁻³ M) induced an inhibitory effect on plasma kininases only. No significant differences in kininase activity could be detected in hemolysates from anemic patients and from controls. M.A.

Erythropoietin in Human Milk. M. Bielecki, F. Praga, and M. Jazewska. Second Department of Obstetrics and Gynecology, School of Medicine, Białystok and Institute of Physiology and Biochemistry of Animals, School of Agriculture, Olsztyn, Poland. Acta Physiol Pol 23:497-502, 1972

Blood, Vol. 42, No. 6 (December), 1973 967
The content of erythropoietin in human milk during the first week of lactation was examined using a biological test. The effect of extracts of deproteinated human milk on 59Fe incorporation into erythrocytes of polycythemic mice was determined and compared with the results obtained in two control groups treated either with saline or with preparations of standard erythropoietin. It was found that human milk contained circa 0.015 IU of erythropoietin per milliliter. M.K.


The results of investigations on changes occurring in complexes of iron with nucleotides during blood storage are reported. The blood was collected into ACD solution and stored at 4°C. Free nucleotides of erythrocytes were separated by column chromatography on the Dowex 1 x 8 (200-400 mesh) using continuous formate gradient. No changes of total content of iron in the acid-soluble fraction of erythrocytes were observed during storage of the blood for 21 days. During this period of time, disintegration of the complex of ATP with Fe was demonstrated. The iron released from this complex was eluted with the fractions containing NADP, IMP, and ADP. In the samples of blood stored for 21 days, the total content of iron in the erythrocyte extracts decreased and the concentration of Pi, ADP, NADP, NAD, and ATP diminished probably due to impairment of cell membrane permeability. – M.K.


Incorporation of 59Fe into erythrocytes and its retention in the liver and spleen were compared in control rats and in rats with experimental polyarthritis induced by intradermal injections of complete Freund adjuvant. 59Fe-citrate, 59Fe-hemoglobin isolated from rat erythrocytes and erythrocytes labeled in vivo with 59Fe and stored for 16 days before injection were used as radioiron preparations. In the rats with postadjuvant disease but without pronounced anemia, incorporation of 59Fe from old erythrocytes into red blood cells was significantly lower while retention of 59Fe from 59Hb and old erythrocytes in the liver was markedly greater than in controls. In the rats with postadjuvant disease associated with severe anemia incorporation of 59Fe into erythrocytes was significantly greater than in controls independently on the form in which 59Fe was applied. Retention of 59Fe from old erythrocytes in the liver in experimental groups with marked anemia was greater than in controls. The results indicate that reutilization of iron from effete erythrocytes is impaired in post adjuvant disease but considerable anemia may diminish this impairment. – M.K.


The level of serum haptoglobin was determined in patients with polycythemia vera and with polycythemia secondary to the syndrome of cor pulmonale, cyanotic cardiac diseases and kidney diseases. Highly significant increase of haptoglobin level was observed only in patients with the cor pulmonale syndrome. The authors conclude that determination of serum haptoglobin level may be helpful in differentiating polycythemia associated with cor pulmonale syndrome from polycythemia vera and other forms of polycythemia. The second conclusion is that “central” hypoxia has no effect on the development of hyperhaptoglobinemia. – M.K.


The appearance of symptoms of permanent intravascular hemolysis (hemoglobinemia, hemosiderinuria) together with positive Ham’s and Hartmann-Jenkins tests on a background of hypoplastic bone marrow is not infrequently the first clinical symptom of the Strübing-
Marchiafava disease, i.e. PNH. When this is disregarded, the disease may remain unrecognized for a long time, until the typical syndrome of paroxysmal nocturnal hemoglobinuria becomes apparent. In some cases the disorder begins with thrombocytopenic purpura (TP), while the typical PIH appears several years in one female patient 12 yr after the removal of the spleen for TP. In other cases, transformation of the hypoplastic bone marrow in a partially hyperplastic one with predominance of erythroid cells, imitating erythremocytosis developed spontaneously. Because of the permanent character of the intravascular hemolysis, we suggest that the title PIH (permanent intravascular hemolysis) is more correct than that of PNH which only reflects a moment of the clinical moving picture. The development of symptoms of PIH on the background of a hypoplastic bone marrow is considered as the second phase of the Strübing-Marchiafava disease. The myeloid metaplasia of the spleen is considered as the third phase. 

LEUKOCYTES


This is a very comprehensive review which emphasizes that from this type of study the following facts have emerged: (a) The cells of chronic and acute myeloid leukemia are not autonomous cancer cells. (b) Leukemic cells may respond to regulatory control and be induced to produce nondividing progeny. (c) Leukemia transformation is not a single-step transformation event. J.M.B.


By measuring the contact angle which a drop of saline makes with bacteria or phagocytic cells, it was determined that noncapsulated bacteria have higher interfacial tension than phagocytes. In vitro phagocytosis tests using human neutrophils showed that such bacteria could be spontaneously phagocytosed without requiring opsonization. More hydrophilic encapsulated bacteria resisted phagocytosis (having a lower interfacial tension). The interfacial tension of encapsulated bacteria could be increased by specific anticapsular antibody. Complement produced further increases in interfacial tension and phagocytosis of sensitized and encapsulated bacteria. P.F.


In view of the relationship between irradiation of the fetus, chromosomal damage and leukemia, a study was made of the lymphocytes of 20 neonates whose mothers had been injected with 113mIndium for placental scanning. Cord blood was cultured with PHA and 20 metaphases examined. No difference was found from control infants, and it was concluded that the isotope did not cause microscopically evident chromosomal damage. A.A.M.


Obstructive prostatic symptoms were encountered in 14 patients with leukemia, in six of whom there was leukemic infiltration of the gland; these six patients showed no characteristic symptoms or physical findings. J.M.B.


Twenty-one patients with Hodgkin’s disease who were in relapse following extensive radiation therapy were treated with a combination chemotherapy program (MOPP), which included nitrogen mustard, vincristine, prednisone, and procarbazine for 6 monthly cycles. Sixteen patients (76%) achieved complete re-
Activity of Nonspecific s-Naphthylacetate

mission. In a comparable group of patients with extensive disease but no previous radiotherapy, the over-all remission rate and the degree of myelosuppression were similar. The interval between the end of radiotherapy and the onset of chemotherapy did not correlate with the extent of subsequent drug toxicity. Relapse of Hodgkin's disease in the patients following intensive radiotherapy with curative intent does not preclude a subsequent excellent response to combination chemotherapy and a prolonged disease-free interval. J.E.U.


Case records of 425 patients with Hodgkin's disease treated at the NIH were reviewed. Note of all biopsy-proved malignant tumors other than Hodgkin's disease was made. Cases were divided into subgroups on the basis of treatment received, and expected incidences of malignant tumors were calculated for each subgroup on the basis of age, sex, and mean follow-up period from the time of diagnosis of Hodgkin's disease. Significantly increased risks of development of second malignant tumors were found in the entire 425 patients (ratio of observed to expected, 3.5) and in the subgroups treated with both radiotherapy and chemotherapy (ratio, 3.3) and with intensive radiotherapy without intensive chemotherapy (ratio, 3.8). The greatest increase in risk was observed in 35 patients who received both intensive radiotherapy and intensive chemotherapy (ratio, 29). - J.E.U.


The HL-A phenotypes of 127 patients with Hodgkin's disease have been determined. A very significant association has been found between Hodgkin's disease and two HL-A antigens, HL-All (p < 0.009), and W5 (p < 0.005). The families of 40 of these patients were genotyped for HL-A antigens. A normal mendelian segregation of the relevant antigen was found in all 12 families of HL-All positive patients and in six of eight families of W5 positive patients. These findings suggest that certain Hodgkin's patients have a genetically determined susceptibility to their disease. It is postulated that this susceptibility could be due to linkage between HL-A genes and genes controlling immune responsiveness. Analysis of subgroups of Hodgkin's patients based on age, sex, and pathology suggests that these HL-A associations are most marked in certain subgroups. J.E.U.

Characteristics of Lymphoid Cells of Acute Leukemia in Children. N. S. Kislyak, R. V. Lenskaya, and E. A. Morozova. Second Institute of Medicine, Moscow, USSR. Probl Gematol Pereiv Krovi 1:11 14, 1973

Cytochemical and clinical investigations in 49 children (ages 3 15 yr) with acute lymphocytic leukemia are presented. Two types of lymphoid cells (lymphoblasts and lymphoreticular cells) are described. These two types of cells are morphologically similar, but we can differentiate one type from the other by cytochemical properties (especially by the high activity of acid phosphatase revealed by the method of Goldberg and Barka). High activity of hydrolytic enzymes in the microsomal fraction was observed in the lymphoreticular cells. Because of this peculiarity, the lymphoreticular cells look like the cells of a monocytoid line. A marked tendency to tumor growth of lymph nodes and thymus in children with lymphoreticular cell infiltration in the bone marrow was noted. G.A.

Differentiation of Bone Marrow Cells by Examination of Acid Phosphatase in Children With Diseases of the Blood System. I. S. Peterson. Institute of Pediatrics, Moscow, USSR. Probl Gematol Pereiv Krovi 1:15 16, 1973

The activity of acid phosphatase was studied by the method of Goldberg and Barka in the bone marrow of 19 children (ages 5 14 yr) with various hematological diseases. Three children with acute lymphoblastic and a child with acute myeloblastic leukemia were studied during complete remission. In all these cases a high activity of acid phosphatase was observed in the cells of the granulocytic line. G.A.

Activity of Nonspecific α-Naphthylacetate
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Esterase in the Bone Marrow Cells of Children With Acute Leukemia. N. A. Rybakova, and R. V. Lenskaya. Second Institute of Medicine, Moscow, USSR. Probl Gematol Pereliv Krovi 10/9 14, 1972

The activity of nonspecific α-naphthylacetate esterase was studied in the cells of blood and bone marrow of 130 children with acute leukemia. A method based on the use of α-naphthylacetate was utilized. A parallel test with an inhibitor of the reaction (sodium fluoride in concentration of 1.5 mg/ml) was carried out. A precise identification of leukemic cells was possible by this method. This reaction is of particular significance for the differentiation of monocytic leukemia. In monocytic cells the activity of the enzyme which can be completely blocked by the inhibitor is high. In promyelocytic acute leukemia, activity of nonspecific esterase is also high, but it can only little be affected by sodium fluoride. Particularly high activity of the enzyme in 100° of cells, which was not influenced by the inhibitor, was observed in patients with plasma-cell leukemia. In cases of erythroleukemia, a characteristic picture was observed. On the background of an intensified diffuse staining in the perinuclear zone of the erythroblasts one could see "spots" corresponding to high activity of the enzyme. The inhibitor suppressed the activity of the enzyme by one half. Besides the identification of cell forms, of great importance is the determination of cell maturity. In lymphoid and monocytic cell lines the enzyme activity increased together with the increase of cell maturity. In the neutrophilic cell line, the highest activity was in the promyelocytes. In the myeloblasts and segmented neutrophils, the enzyme activity was absent. — O.A.


The results of cytogenetic analysis of lymphocytes of peripheral blood from 13 roentgenologists and 10 control healthy subjects without occupational exposure are reported. The frequency of chromatid breaks and chromosomal aberrations per cell was found to be increased in roentgenologists as compared with controls. The period of occupational exposure in the examined group was 15-40 yr. — M.K.

Mitotic Indices in Various Forms of Acute Leukemia. I. Urasinski. Second Department of Internal Medicine, School of Medicine, Szczecin, Poland. Acta Haematol Pol 4:9-26, 1973

Mitotic indices were determined in populations of bone marrow paraleukoblasts in 51 patients with various forms of acute leukemia and compared with these indices calculated for granulocyte precursors in bone marrow of five healthy subjects. Mitotic indices in patients with acute leukemias were significantly lowered and showed a very wide scatter. The lowest values of mitotic indices were observed in lymphoblastic leukemia, undifferentiated cell leukemias and in patients with the blastic crisis during the course of chronic granulocytic leukemia. Higher values were usually found in paracryplastic, monocytic and particularly pararmyelocytic leukemias. The results are discussed in respect to pathogenesis and treatment of acute leukemias. — M.K.


Cytophotometric determinations of DNA and histone proteins in leukocytes of peripheral blood were carried out in 22 patients with various types of leukemia. Paraleukoblasts from patients with paramyeloblastic and parapromyelocytic leukemias as well as with myeloblastic crisis in the course of chronic granulocytic leukemia were found to contain decreased amounts of histone proteins as related to DNA content. Therefore, the DNA/histone ratio was increased in the leukemic cells. On the contrary, leukemic lymphoblasts showed the DNA/histone ratio approximating the values obtained for normal lymphocytes. The authors suggest that the changes observed may be connected with heterochromatinization of the nuclei of paramyeloblasts. — M.K.

Storage of Leukocyte Concentrates at a Temperature of ~196°C. J. Daszyński and M. Karelus. Blood Bank, Institute of Hematol-
A technique for storage of leukocyte concentrates at low temperatures is reported and a special device enabling freezing at slow rates is described. Viability of leukocytes suspended in four cryoprotective fluids (containing either various concentrations of glycerol or dimethylsulfoxide or polyvinylpirrolidone) was compared after freezing and thawing. On the basis of the results obtained the authors recommend a fluid of the following composition: 26.0 g of glycerol, 9.0 g of sucrose, 2.0 g of glucose, 0.1 g of Na₂ EDTA, bidestilled water to 100.0 ml.

The Function of Blood Leukocytes in Diabetic Children as Investigated by Nitroblue Tetrazolium (NBT) Reduction Test. A. Sychlow. Department of Pediatrics, Silesian School of Medicine, Zabuze, Poland. Pol Tyg Lek 28:284-286, 1973

The ability of leukocytes to phagocytize latex particles and to reduce NBT was investigated in diabetic children by the method of Park et al., and compared with the results obtained in controls. Both groups were divided into two subgroups depending on the presence or absence of bacterial infections. A significant suppression of the leukocyte functions was observed in diabetic patients without bacterial infections if compared with appropriate controls. The ability of NBT reduction by leukocytes of diabetic children during bacterial infections approached that observed in the nondiabetic children. The author suggests that disturbances in phagocytosis and NBT reduction by leukocytes may be of some significance for the course of bacterial infections in diabetic children.


Investigations were carried out in seven patients with chronic lymphatic leukemia (CLL), eight with chronic myeloïd leukemia (CML), and five with acute myeloïd leukemia (AML). Phagocytic ability of leukocytes was found to be significantly increased in untreated CLL, normal in CML, and markedly decreased in AML. Repeated examinations showed no fluctuations in phagocytic activity of leukocytes in CML and AML, but slowly decreasing values in CLL. The bacteriostatic activity of sera depended on the type of antibodies administered during the observation. Complement activity did not differ from normal values in all cases while properdin level was found to be significantly lowered in the majority of the patients.


Thirty-four patients with burns of various severity were examined. Differential leukocyte counts and selected morphological, cytochemical, and functional parameters were investigated. Peripheral leukocytes were found to be increased with higher proportion of young forms of granulocytes and absolute lymphopenia. The presence of persisting granules in granulocytes was found to correlate with increased alkaline phosphatase activity. Significantly increased was the percentage of PAS positive lymphocytes (in some cases above 50%). Some impairment of blastic transformation was observed in lymphocytes cultured in the presence of the patients own plasma and stimulated with PHA.

HEMOSTASIS


Specific antibodies were prepared against human prothrombin, thrombin, and serum derivatives of prothrombin, respectively. These allowed to tentatively analyze the changes in the prothrombin molecule during its activation into thrombin. Thrombin and serum prothrombin derivatives had antigenic determinants in common with prothrombin, but none in common with each other. It appears that the thrombin moiety of prothrombin can acquire
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some new antigenic determinants during prothrombin fragmentation. J.C.


Analysis of the technical conditions for a better use of the fibrin plate method is described. It is recommended to use always the same substrate, with a 100 mg/100 ml fibrinogen concentration. P.d.N.


The study includes 35 patients. In 65% of the cases the plasminogen values were lower than in normal conditions. A good correlation was found between the results obtained with the immunologic method and those obtained with the enzymatic method. The authors assume that in liver cirrhosis there is a reduced synthesis of inhibitors of fibrinolysis which may influence the enzymatic evaluation method. P.d.N.


This is a study of 18 cases. Low values of plasminogen were found in 18%, and related to a decreased synthesis in the liver. No hemorrhagic symptoms were observed. These investigations are limited to a particular aspect of the problem but deserve to be taken into consideration because of the proper technique used and of the number of cases studied. P.d.N.


Prostaglandins E_2 and F_2 are known to be formed and released from platelets by thrombin. In this study the authors investigate the effect of ADP, epinephrine and collagen on the production and release of prostaglandins by platelets. The prostaglandins were identified either by biological assay or by a radioimmuno assay. Nonaggregated platelets showed exceedingly low prostaglandin levels (less than 1 pmol PGF_2a/ml). When platelets were aggregated by ADP (40 μM) and epinephrine (40 μM) production and release of prostaglandins from platelets was increased to 3 and 4.4 pmoles/ml, respectively. A proportional increase in prostaglandin E_2 and F_2a was noted with increasing concentrations of collagen added to the platelet suspension. In experiments using low concentrations of ADP (1.4 μM) prostaglandin formation could not be demonstrated. Prostaglandin production was highest in thrombin aggregated platelets (9.8 pmoles/ml). Almost 100% of the prostaglandin produced by the platelets was released during the aggregation process. Prostaglandins were synthesized apparently as aggregation began. Synthesis stopped after 5 min of incubation with collagen. The authors suggest that formation and release of prostaglandins is associated with secretion of endogenous ADP and 5-hydroxytryptamine in the release reaction. M.S.

Thrombokinetics in Dietary Induced Folate Deficiency in Human Subjects. D. H. Cowan and J. D. Hines. Department of Medicine, Case Western Reserve University, School of Medicine and the Cleveland Metropolitan General Hospital, Cleveland, O. J Lab Clin Med 81:577, 1973

Platelet production and survival were performed in human subjects with dietary induced folate deficiency. The mean number of megakaryocytes in seven nonthrombocytopenic folate deficient chronic alcoholic subjects studied during periods of abstinence was three times that observed in normals. A similar increase was also noted in the total mass of megakaryocytes but the mean volume of megakaryocytes in the folate deficient group differed only insignificantly from that in the normal. In three chronic alcoholic subjects provided with folate supplementation the values of megakaryocyte number, volume and total mass were normal. ^{31}Cr survival of autologous platelets was normal in both groups and the shape of the
defined in folate deficiency before thrombocytopenia sets in. M.S.


The release of platelet antiheparin factor is proportional to the concentration of catecholamines added to platelet-rich plasma. It is early in occurrence and takes place at the time of the second wave of aggregation. It only occurs at 37°C (not at 25°C). Abstractor's comment: The results are interesting and accurate. P.d.N.


The authors demonstrated that activation of clotting induced in rats by infusion of adrenaline (4 μg/kg body weight) is accompanied by significant drop in platelet counts. These two responses to adrenaline could be abolished by splenectomy and restored in splenectomized animals by intravenous infusion of 5.5 x 10⁸ autologous spleen cells. It was found that Trasylol inhibits blood clotting activation and drop in platelet counts induced by adrenaline. 10 times lower doses of Trasylol being required for inhibition of platelet changes. The authors conclude that activation of clotting and decrease in platelet counts induced by adrenaline depend on spleen cell and are mediated by a factor sensitive to Trasylol which is known to inhibit kallikreine and trypsin. It is assumed that this factor may be a proteolytic enzyme. M.K.

Results of Long-term Administration of Anticoagulants in Patients With Myocardial Infarction and Coronary Disease Without Infarction. A. Korolko. Department of Cardiology, School of Medicine, Lublin, Poland. Pol Tyg Lek 27:1897 1900, 1972

Long-term treatment with anticoagulants (Sintrom, Synumar) was carried out in 300 patients with myocardial infarction and in 106 patients with coronary disease without infarction, aged 31 71 yr. The duration of treatment ranged from 1 to 6 yr and the prothrombin level was maintained in the range of 35%, 45%. The control groups of patients nontreated with anticoagulants comprised 347 cases with myocardial infarction and 195 with coronary disease without infarction. Treatment with anticoagulants was started on the first day of hospitalization and was continued after discharge under control of the outpatient service. In the group of patients with myocardial infarction treated with anticoagulants the death rate was 8.0%, while in the nontreated patients it was 20.5%. In the treated group, repeated infarctions occurred in 12.7%, in the controls these were 33.1%. On the contrary, no difference in death rate was observed in patients with chronic coronary disease treated with anticoagulants and in the respective control group. M.K.

IMMUNOHEMATOLOGY


A longitudinal study of immunoglobulin levels was performed in 103 infants of low birth weight and in their mothers. The immunoglobulin levels of the mothers were not related to the birth weight of their infants but the level of cord IgG in the infants was significantly related to birth weight. The rate of decay of the maternally acquired IgG was not related to weight and the ultimate nadir of IgG reached between 12 and 24 wk reflected the initial IgG level. Thus of infants weighing less than 2000 g, 50% showed a serum IgG level below 200 mg/100 ml and this was associated with a high incidence of infection. A.A.M.
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Mice were rendered tolerant to injection of "remission" bone marrow cells from acute leukemia patients by simultaneous injection of cyclophosphamide. Antisera were then raised to blast cells from two patients, one with acute myeloblastic and the other with acute lymphoblastic leukemia. In both cases the antisera produced were more toxic to blast cells than to remission cells and were believed to be directed against leukemia-specific antigens. -- A.A.M.


PHA transformation of lymphocytes from patients with AML before therapy was reduced only if cultures contained a significant number of primitive cells; modification of the cultural conditions could be associated with significant PHA response in such cultures. Serum from the majority of patients with AML inhibited "in vitro" transformation of normal lymphocytes. -- J.M.B.


In two patients presenting as chronic lymphocytic leukemia, immunofluorescence studies have demonstrated the presence of an accumulated intracytoplasmic material reacting with antisera to \( \mu \) chains and only to one type of light chains, whereas their serum contained neither monoclonal IgM nor free \( \mu \) chains. In the first case, the IgM \( \lambda \) inclusion bodies were crystals detected in the cytoplasm of small lymphocytes and were not clearly lined by rough endoplasmic reticulum. IgM \( \lambda \) molecules were present at the surface of the lymphocytes. In the other patient, who elaborated free \( \kappa \) light chains, the inclusions found in marrow plasma cells and in peripheral blood lymphocytes were Russell bodies. The practical and theoretical importance of nonsecretory immunoproliferative disorders, characterized by an unreleased monoclonal immunoglobulin marker, is outlined. -- J.E.U.


Incorporation of radioactive precursors into protein, RNA and DNA was examined in PHA stimulated cultures of lymphocytes isolated from dairy cattle blood. Significant synthesis of protein and RNA was observed after 12 hr contact of PHA with lymphocyte cultures. Induction of DNA synthesis required 30-40 hr of PHA treatment. Experimental conditions for preparation and culture of bovine lymphocytes as well as for protein, RNA, and DNA synthesis determination are reported. -- M.K.

ABO System Blood Groups of Erythrocytes in Patients with Mammary Carcinoma. K. Jaegerman, H. Glińska, K. Smolak, and A. Urban. Department of Forensic Medicine, School of Medicine and Institute of Oncology, Kraków, Poland. Patol Pol 23:327-334, 1972

An analysis of the distribution of blood groups in ABO system in 739 patients with mammary carcinoma showed deviations related to age of the patients and advancement of the neoplastic process. In women with advanced mammary carcinoma over 50 yr of age the A group was significantly more frequent and the O group was less frequent than in a group of lower age and in the general population of South Poland. The authors consider the possibility that the biological factor which controls the dynamics of the neoplastic process is the reason for blood group selection. -- M.K.

The sera of 17 patients with Addison-Biermer disease containing antibodies type I (blocking) or type II (binding) or both against the intrinsic factor were examined. In 12 sera (70%), antiparietal cells activity was detected by an indirect immunofluorescent technique. In all cases antibodies against parietal cells were identified as IgG. Thyroid antibodies were found in sera of four (23%) patients. Antibodies against nuclear, mitochondrial, and smooth muscle antigens were not detected.

**Miscellaneous**


The effect of chronic poisoning with carbon disulfide on the peripheral blood was investigated in rats. Hemoglobin, hematocrit, erythrocyte, leukocyte and platelet counts were examined. It was found that changes in peripheral blood resulting from chronic CS₂ poisoning consisted in normocytic and normochromic anemia, eosinopenia, some increase in the percentage of reticulum cells and monocytes. No differences in white cell and platelet counts were observed.

**News and Views**

**Annual Meeting, International Society for Experimental Hematology, and International Cooperative Group for Bone Marrow Transplantation**

The third annual meeting of the International Society for Experimental Hematology will be held at the Holiday Inn (Medical Center), Houston, Texas, from March 31 to April 3, 1974. The meeting is open to nonmembers. The opening ceremony will be held the evening of Sunday, March 31, the day after the close of the annual meeting of the American Association for Cancer Research, also being held in Houston. The program of the Experimental Hematology meeting will be organized from abstracts submitted by both members and nonmembers. Subjects include the control of differentiation and proliferation of both normal and malignant stem cells, bone marrow transplantation, prevention and control of graft-versus-host reactions, immunohematology, immunogenetics, cancer immunity, and applications of the former to the treatment of marrow aplasia, leukemia, lymphoma, and immune deficiency diseases.

Deadline for receipt of abstracts and pre-registration is December 20, 1973. Abstract forms and further information may be obtained from the meeting organizer and chairman, Dr. John J. Trentin, Division of Experimental Biology, Baylor College of Medicine, Texas Medical Center, Houston, Texas 77025.

Partial support of the meeting has been obtained from the Leukemia Society of America, and from the Texas Division of the American Cancer Society.

The annual meeting of the International Cooperative Group for Bone Marrow Transplantation will be held on April 4, 1974, also at the Holiday Inn (Medical Center). This year the meeting will consist of a workshop, organized by Dr. Mortimer Bortin, to develop cooperative clinical trial protocols.