ABSTRACTS
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ERYTHROCYTES


The six cases reported in this study have in common a congenital anemia with erythropoietic hyperplasia and low reticulocyte count. Ineffective erythropoiesis was demonstrated in five cases by iron kinetics studies showing (1) elevated plasma iron turnover together with high initial sacrum activity, (2) incomplete release of the radioisotope by the marrow, and (3) diminished iron incorporation into red cells. Three groups could be individualized, mostly on morphologic grounds. Type I is characterized by recessive autosomal transmission and various anomalies of nuclear pattern, size, and number visible after the basophilic normoblast stage. The acid serum test is negative, and there is no agglutination by anti-i sera. Other somatic malformations may also be present. Type II is the recently described “Hereditary Multinuclearity with a Positive Acid Serum Test” (Crookston et al., Br J Haematol 17:11, 1969). Type III is characterized by multinuclear and giant erythroblasts, macrocytic anemia, negative acid serum test, and autosomal dominant heredity.—J.M.P.


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Erythrokinetics was studied in 14 cases of ineffective erythropoiesis, including six congenital cases (types I, II, and III in Heimpel's classification) and eight cases with acquired disease (PNH three cases, idiopathic refractory anemia four cases, Hodgkin's disease one case). In each case, iron kinetics was studied in vivo, and radioautographs were made of bone marrow after in vitro incubation with $^3$H-thymidine. A model of erythropoiesis was built to calculate the per cent erythroblastic lysis at each stage of maturation and the average number of divisions and transit time in the erythroblastic pool. Early hemolysis was the major finding in type II and PNH cases, while intramedullary lysis occurred predominantly in non-PNH acquired diseases, congenital type I, and in the multinucleated subpopulation of type III cases. In all cases, the average number of divisions and the transit time in the erythroblastic pool were found to be increased.—M.P.

The Role of Iron in the Pathogenesis of Porphyria Cutanea Tarda: An In Vitro Model. J. P. Kushner, G. R. Lee, and S. Nacht. Departments of Internal Medicine of the Veterans Administration Hospital, and the University of Utah College of Medicine, Salt Lake City, Utah. J Clin Invest 51:3044, 1972

Porphyria cutanea tarda (PCT) is an acquired disorder. It is usually associated with liver disease and hepatic cell iron load. Removal of iron induces clinical remissions. Porphyrin synthesis was studied in mitochondria-free crude extracts from human and porcine livers. Ferrous sulfate was shown to stimulate greatly porphyrin synthesis; the porphyrin produced was uroporphyrin I, which is usually found only in trace amounts but is synthesized in excess in patients with PCT. It is felt that in PCT the iron inhibits the enzyme uroporphyrin III cosynthetase.—R.O.W.


A method was developed for determining the distribution of $^{59}$Fe between parenchymal and reticuloendothelial cells of the liver; grain count radioautographs of isolated Kupffer's cells were obtained after selective destruction of hepatocytes by a proteolytic enzyme. The uptake and cellular distribution of hemoglobin-haptoglobin, heme-hemopexin, and free hemoglobin were measured. Ninety-three to 100% of the hepatic radioiron were localized in the parenchymal cells. Similar findings have recently been reported by Rudi Schmid's group. (Blood 40:812, 1972); they also showed that intact but deformed red cells, (e.g., spherocytes) unlike hemoglobin, are sequestered by sinusoidal cells.—R.O.W.
is obtained when increasing concentrations of erythropoietin are added to the cultures, and this is easily reproducible with Step I and step III material and with the international reference preparation. At a dose above 0.2 U/ml the response decreased. This phenomenon has been noted by other authors using rat marrow cultures but remains unexplained. This technique is simple, rapid, and reproducible and is accurate down to a concentration of 0.005 IU/ml. It seems to be a useful erythropoietin assay for routine use.—J.A.W.


In 147 patients with acquired hematologic disorders, moderate deficiencies of erythrocyte adenylkinase were found in 14 cases with refractory anemia and preleukemic states. However, pyruvate kinase and phosphofructokinase were more affected. The acquired enzymatic deficiencies were not specific of any type of malignant hematologic disorders.—J.C.


A patient with rapidly progressive chronic lymphatic leukemia is described who developed a severe hemolytic anemia with direct antiglobulin test strongly positive (IgG). Late in the course of his illness he had a paroxysmal nocturnal hemoglobinuria-like defect of his red cells that also showed increased lysis by cold antibody and a positive sucrose lysis test. This is the first time such an association has been reported, and its possible causes are discussed.—J.A.W.


In a Greek girl with hemolytic anemia, the activity of glycolytic enzymes was determined in the erythrocytes. After finding a deficiency of glucose-6-phosphate dehydrogenase (1.6 U/g Hb), the enzyme was isolated from the erythrocytes and was studied. It had a normal electrophoretic mobility, it showed a normal affinity for the substrate and normal pH dependence, but it had an increased Km value for NADP and a weak thermal resistance. A cell membrane defect was found likewise with a low cholesterol-to-phospholipid ratio and with increased loss of lipids into the medium during incubation. Both the cell membrane defect and the decreased activity and stability of glucose-6-phosphate dehydrogenase were thought to be the cause of increased hemolysis in this patient.—M.K.

LEUKOCYTES


In a previous paper (Biochem Pharmacol 19:209, 1970), the authors showed that cells of a drug-resistant strain of Yoshida ascites sarcoma are capable of hydrolyzing the chloroethyl groups of chlorambucil and of modifying its aromatic ring more extensively than drug-sensitive cells. These effects lead to maintenance of higher, immo-dified drug levels in sensitive cells. The authors have extended their observations to the lymphocytes of patients with chronic lymphatic leukemia (CLL). Using a simple in vitro assay procedure, uptake of chlorambucil into lymphocytes incubated at 37°C is measured, and the proportion of the drug containing functional mustard
groups (i.e., "active" drug) is determined by reference to a standard curve. Lymphocytes from the peripheral blood of treated patients do not modify the mustard group but lymphocytes from patients with an unsatisfactory clinical course of poor response to treatment were able to modify the aromatic ring of the drug molecule. Limited evidence is presented suggesting that the development of clinical resistance to chlorambucil is accompanied by an alteration of the lymphocytes ability to modify the drug's aromatic ring. Another in vitro assay system to detect CLL lymphocyte sensitivity to chlorambucil was proposed by Lawler, Lee, and Pentycross (Br J Cancer 25:493, 1971), but it is much more time consuming, requiring 5 days for assessment.—J.A.W.


Two hundred and seventy-six patients with myelomatosis were treated at random with low-dose continuous cyclophosphamide or melphalan. Two hundred and fifty-eight patients were evaluated over a follow-up period of 34–80 mo. Blood urea was the most important factor influencing prognosis \( p <0.001 \) and was so important that it had to be allowed for when assessing any other parameter. Three subgroups with blood ureas of below 40 mg/100 ml, 40–79 mg/100 ml, and above 80 mg/100 ml had mean survival times of 39 mo, 20 mo, and 2 mo, respectively. Bence Jones proteinuria correlated adversely with prognosis, but the effect disappeared when the blood urea was allowed for. However, this was not so for high molecular weight protein in urine, where the relative death rate for patients with proteinuria of 40 mg/100 ml or more was about twice that of patients with less proteinuria at all urea concentrations. The patients' serum albumin concentration \( \text{SAC} \) correlated strongly with prognosis, even when the blood urea concentration and urinary high molecular weight protein concentration had been allowed for, and throughout the range the prognosis improved with increasing concentration. The relative death rate of patients with SAC below 3 g/100 ml was about twice that at SAC above 4 g/100 ml. Hemoglobin concentration was adversely correlated with prognosis. For patients who had a hemoglobin below 7.5 g/100 ml, the relative death rate was about twice that of patients with a level above 9.0 g/100 ml. Other factors examined, including paraprotein type, light-chain type, IgM concentration, total leukocyte count, neutrophil count, platelet count, serum alkaline phosphatase, serum calcium, and radiologic lesions, showed no significant correlation with prognosis after adjustment for blood urea concentration had been made.—J.A.W.


Crowther et al. (Br Med J 4:513, 1970) have already reported the initial experience at these institutions using daunorubicin and cytosine arabinoside to treat adults with acute myelogenous leukemia. They achieved a 54% complete remission rate when these observations were extended in two of the three trials reported here. Older patients and those with low initial platelet counts responded less well. Twenty three patients who achieved remission were divided into two groups: one group received cyclical maintenance chemotherapy, the other group received the same chemotherapy plus immunotherapy with intradermal BCG and irradiated allogeneic leukemic cells. Of 10 patients receiving chemotherapy, only eight have relapsed (seven in less than 30 wk). While of 13 patients receiving chemotherapy plus immunotherapy, eight patients remain in remission, seven of these remissions having lasted for more than 35 wk. These preliminary results are encouraging.—J.A.W.

In a 69-yr-old woman, the authors found skin lesions with mast cell invasion of the blood and bone marrow, and eosinophilia. Platelet survival was within the normal range. The spleen was enlarged. Hot flashes were very typical. In the enlarged spleen no mast cell infiltration was found. Histamine mucopolysaccharide urinary excretion was normal. Unfortunately, blood heparin was not estimated. Physiopathology of the disease and inefficiency of various treatments are discussed.—J.C.

Activity of Non-Specific Alpha Naphthylacetate Esterase in the Bone Marrow Cells of Children With Acute Leukemia. N. A. Ribakova and A. V. Lenskaya. Second Moscow Medical Institute, Moscow, USSR. Probl Gematol Pereliv Krovi 17:9-14, October, 1972

In 130 children with acute leukemia, the activity of nonspecific alpha naphthylacetate esterase in the cells of the blood and bone marrow was studied. By observing the proportion of blasts showing positive staining reactions (compared with parallel tests using a reaction inhibitor, fluoride), it is possible to differentiate the monocytoid, promyelocytic, and plasma cell forms of leukemia and erythroleukemia and also to assess the maturity of the cells.—J.V.


In a review of 36 patients with reticulum cell or lymphosarcoma in whom acute leukemia had supervened, the morphologic resemblance of abnormal blood cells to the original tumor was noted. These episodes were also marked by a more rapid, malignant course, the appearance of large tumor masses, and resistance to treatment as compared to the more a priori disease. —J.V.


Antiprotozoal and antibacterial properties of polymorphonuclear leukocyte extracts of rabbits, rats, guinea pigs, mice, cats, hamsters, dogs, and chickens were studied. The following microorganisms were used: Euglena gracilis, Tetrahymena pyriformis, Trypanosoma cruzi, Leishmania braziliensis, Escherichia coli 26/52, Salmonella adelaidae 161/64, Bethesda 107/69. Antiprotozoal and antibacterial activities were present only in rabbits, while the chicken and dog extracts were effective only on certain tested microorganisms. The leukocytes of other species under study did not show any antiprotozoal or antibacterial activity. Extracts of macrophages and lymphocytes from the spleen possessed no activity in any way. The antibacterial activity was not affected by heating at 56°C for 30 min. The antiprotozoal and antibacterial activities were completely destroyed when lipopolysaccharide 1000 μg/ml, was added.—L.D.

Lymphoreticulocytic Haemoblastomata. F. Hermansky, B. Friedmann, E. Benesová, J. Jirasek, B. Bednar, O. Blazek, and V. Stasek. Department of Medicine, University Charles, Czechoslovakia. Cas Lek Cesk 111:887–901, 1972

On the basis of an analysis of patients with lymphoreticular lymphoma over the past 20 yr, elements regarding etiopathogenesis, diagnosis, and classification were analyzed. With regard to etiopathogenesis, the possible role of induction of activation of the malignant process by virus is stressed. The limited applicability of the Lukes classification is discussed. Diagnostic problems in the reticulo proliferates were evident in the initial stages of the disease with an unclear picture of varied hyperplasia and epithelioid cell forms of lymphogranuloma. In reticulosarcoma and lymphosarcoma there were sometimes difficulties in differentiation from some carcinomatous metastases. For studies of lo-
Environmental Factors and Leukemia Morbidity. K. Janicki. Department of Hematology, School of Medicine, Kraków, Poland. Patol Pol 23:29-48, 1972

A retrospective analysis is presented of leukemia morbidity in relation to 25 environmental factors connected with demographic data, health service, agricultural chemicals, water supply, and breeding of some domestic animals in 18 administrative units of the Cracow region in the years 1961-1968. A statistical analysis of rectilinear and multiple correlations between leukemia morbidity and intensity of the environmental factors was made. A significant (at the 1% confidence level), positive rectilinear correlation was demonstrated between leukemia morbidity in rural environments in the administrative units of the Cracow region and “consumption” of seed dressings, percentage of people supplied with water from wells vs. local water lines, frequency of cattle and poultry breeding, and indices of herd size. Significant, positive rectilinear correlation was also found between acute leukemia morbidity in different administrative units of the region and indices of “consumption” of chemical herbicides and insecticides used for spraying. A negative rectilinear correlation significant at the 1% confidence level was found between indices of leukemia morbidity in the rural environment and population density, number of physicians per 100,000 population, and percentage of people supplied with drinking water from collective water reservoirs. The first of these correlations was rejected as being due to heterogeneous population density; the second and third correlation were attributed to a favorable indirect influence of sanitary supervision, larger number of physicians, and better sanitary condition of water supplies compared with water from wells or other open, uncontrolled sources. The work provides a basis for further prospective studies designed to aid organization for a rational leukemia prophylaxis by improving sanitary supervision and by limiting the influence of environmental factors found to be positively correlated with leukemia morbidity, and, also, by intensifying the negatively correlated factors.

—M.K.

HEMOSTASIS

Contribution to the Heterogeneity of Hemophilia B. J. Prochazka. Department of Medicine, Olomoue, University Palacky, Czechoslovakia. Vnitr Lek 18:256-261, 1972

Human and ox brain thromboplastin time was repeatedly examined in 18 patients with hemophilia B. Human brain thromboplastin time and thrombotest were prolonged in seven patients. In the remaining 11 subjects, it was normal or even somewhat shortened. The trend of the ox brain thromboplastin time changes was the same in all hemophiliacs of every single family. There was no relationship with age, factor IX activity, severity of the illness, and the blood group. In agreement with other authors, it is presumed that prolongation of the ox brain thromboplastin time in these patients is due to an abnormal factor IX molecule, acting as an inhibitor in the presence of ox brain thromboplastin. The inhibitory activity is removed by adsorption on barium sulfate and can be demonstrated in the serum.—L.D.


The in vitro biphasic reaction of platelets to hypotonic stress measured in a spectrophotometer (reversal reaction) was used as an indicator of platelet integrity in a series of experiments on preservation of human platelets by freezing. Following these results as a guideline, human platelets were cooled at 1°C/min to −35°C using 5% DMSO in plasma as the cryoprotective agent. Addition and removal of the DMSO was done very gradually to minimize osmotic stress. Survival studies, after labeling with radioactive sodium chromate, demonstrated nearly normal viability of the frozen-thawed platelets. Platelets frozen in
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Polyvinyl chloride bags had lower recovery values than platelets frozen in polyolefin bags. Correlation between in vivo viability of the frozen platelets and values of in vitro reversal reaction was highly significant, further suggesting that this practical in vitro test may be a valid indicator of platelet viability in experiments of this type.—M.G.B.


It is known that trauma is followed by an increase in platelet count and by the tendency of platelets to aggregate. These changes have been related to the tendency to thrombosis that follows trauma. The aim of the present study was to see if there was an increase in platelet stickiness and platelet count after a traumatic bone fracture produced experimentally in rats. The rats were under ether anesthesia when fracture of both hind legs was inflicted using an artery forceps. Platelet stickiness was measured by the decrease in platelet number that took place when the suspensions of blood in ammonium oxalate have been rotated for 1 hr in siliconized test tubes. After bone fracture, the platelet count increased, and on day 6, it was about 25% higher than in the control group. The platelet stickiness measured 6 days after the traumatic bone fracture was also increased 61% above the control value. Platelet aggregates were found significantly more often in lungs and kidneys of the animals after the bone fracture than in the control group. These experiments confirmed that traumatic fracture of bones is followed by the simultaneous increase in platelet count, platelet stickiness, and occurrence of intravascular platelet aggregates. This research also demonstrates that the method used for estimation of platelet stickiness reflected conditions occurring in vivo.

—M.G.B.


A case of thrombocytopenic purpura, mekaryocytopenia, and signs of autoimmune processes (positive direct Coombs’ test) was presented. It was later complicated by intracranial hemorrhage. At autopsy, a thymoma (microscopically a lymphoepithelioma with spindle cell predominance) was found. The possible causal relationship between the two disorders is discussed.

—M.G.B.


The effect of soluble complexes (resulting as a final product of the interaction between the fibrin monomer and the fibrinogen degradation products) on platelet aggregation, platelet factor 3 availability (PF 3), release of acid phosphatases, liberation of platelet factor 4 (PF 4) and ADP was studied. It was found that contrary to the fibrinogen degradation products, which are more likely to inhibit platelet aggregation, the soluble complexes are able to induce platelet aggregation, as well as liberation of PF 4, ADP, and availability of PF 3 and of acid phosphatases. It seems that this phenomenon will have importance for the interpretation of the syndrome of intravascular coagulation.—L.D.

Platelet Adhesiveness in Acute Myocardial Infarction. O. Kusá. Department of Medicine, University of Bratislava, Czechoslovakia. Bratisl Lek Listy 58:590–593, 1972

An increase in platelet adhesiveness by as much as 23% in comparison with healthy controls (p <0.005) was found in 30 males with the diagnosis of acute myocardial infarction within 6 hr from the beginning of pain.—L.D.

The Use of Cadaver Blood and of Fibrinolysin Obtained From It, in Patients After Thoracic Surgery. I. V. Androzhs-kaya, S. V. Ruzhkov, V. T. Pleshakov,
ABSTRACTS


Two cases manifesting an association of chronic liver disease and mixed IgG-IgM cryoglobulinemia are presented. The IgG fraction was polyclonal, while IgM was monoclonal, type K. In one case, the IgG was shown to be devoid of sialic acid. A specific interaction between IgG and IgM suggesting that they were an antigen-antibody complex was demonstrated. Periodic acid-Schiff precipitates were found in the dermal vessels, and immune complex deposits similar in content to the cryoglobulin were demonstrated in the glomeruli in one of the cases. The clinical symptoms included hepatosplenomegaly, ulcerative purpura, Raynaud’s phenomenon, arthritis, neuropathy, encephalopathy, and terminal glomerulonephritis. A review of the literature revealed 14 cases of chronic liver disease associated with mixed cryoglobulinemia. The nature of this association is discussed in the light of the available knowledge. It is suggested that the liver disease is primary rather than as a result of immune complex deposition in the hepatic blood vessels.—B.R.

IMMUNOHEMATOLOGY

Mixed Cryoglobulinemia With a Monoclonal IgM Component, Associated With


Following thoracic surgery, 31 patients were transfused using cadaver blood; no fibrinolytic effects were observed in these patients. Extracts of cadaver blood were found to possess fibrinolytic activity, and on intravenous injection into patients with vascular thromboses or embolism, a distinct fibrinolytic effect was produced.—J.V.


An extract of Aspergillus (terricola strain) has been found to possess thrombolytic activity in vitro, and in pharmacologic studies in rabbits the compound was well tolerated and no red cell destruction was noted.—J.V.

Hemocoagulating and Fibrinolytic Factors of Lung Tissue and Their Role in the Pathogenesis of Al fibrinogenemic Hemorrhages. N. S. Ruseikin. Mordovsky University, Saransk, USSR. Probl Gematol Pereliv Krovi 17:17–21, September 1972

A study of lung tissue from 80 cadavers of persons age 20 to 80 yr revealed these to contain hemocoagulating and fibrinolytic compounds. Tissue extracts, in up to 1:50,000 dilution, reduced recalcification times, increased prothrombin utilization, and diminished plasma prothrombin times; they could also prolong the prothrombin time of Ac-globulin-deficient plasma. Throm-induced fibrin formation was inhibited by the extract due to the presence of natural anticoagulants. Lung tissue contains an enzyme similar to fibrinase (factor XIII), plasminogen activators, and also inhibitors. Analyses suggest that hemostatic disturbances following lung injury are produced by leakage of such juices into the blood with development of thrombotic or fibrinolytic syndromes.—J.V.

The Release of Antigen-binding Cells From the Spleen Into the Blood. G. Sanberg.
The splenic release of lymphocytes specifically engaged in an immune response was quantitated in guinea pigs during their secondary response to sheep red blood cells (SRBC). To detect the splenic release of cells engaged in an immune response, the number of rosette-forming cells (RFC) was compared in the afferent and the efferent splenic blood and was related to the number of RFC in the whole spleen during a secondary immune response to SRBC. The splenic venoarterial difference in the number of RFC was compared in normal guinea pigs and at different intervals after a booster dose of SRBC, given 3 wk after a primary dose. In normal guinea pigs there was no release of RFC from the spleen. A small release was found 3 wk after a primary dose of SRBC. After a booster dose, the splenic venoarterial difference in the number of RFC increased to a maximal value after 6 days. Simultaneously, the number of RFC was increasing in both the spleen and the blood. The results clearly indicate that the spleen releases lymphocytes with specific antigen receptors during the secondary immune response to SRBC.—M.G.B.


Biopsies of exfoliated cells from the oral epithelium were investigated with both a double layer immunofluorescence (IF) staining method and the mixed cell agglutination (MCA) reaction. Eighteen anti-A and 16 anti-B serums were tested. Fourteen anti-A serums were able to react in the IF method and only nine reached in the MCA reaction. All tested anti-B serums produced positive IF staining; 11 also reacted in the MCA reaction. Blood group antiserums could in most cases be used in higher titers in the IF method than in the MCA technique. In the IF method, 14 antihuman IgG-FITC and porcine antihuman IgM-FITC were used as the second layers. Blood group antiserums could generally but not invariably be used in higher titers with antihuman IgM-FITC. The importance of careful matching of blood group antiserum and conjugate is emphasized. These are valuable techniques that permit the topographic study of blood group substances throughout the tissues of the body including those of the cell membranes of the oral epithelium. The MCA reaction on formalin-fixed paraffin-embedded tissue is reported to be more sensitive than the IF technique. However, the IF technique will give more detailed information about the localization of the blood group substances. The present work demonstrates methods by which the sensitivity of the IF technique for detection of blood group substances can be improved.—M.G.B.


The discovery of a new blood group property “Zd” is reported in this paper together with a detailed examination of the pedigree and by study of its individual members, by examination of old settlers and of blood donors in the locality of the kinship, and finally, by examination of the population of Southern Bohemia and of Prague. The antibody remained in the serum of the propositus and was reacting in nearly all immunologic tests for incomplete antibodies. The results are supporting the conclusion that the “Zd” property should be included in the group of antigens with very low frequency.—L.D.

By the method of immunodiffusion and electroimmunodiffusion 6472 blood donors were examined for Au-antigen. A positive result was found in 19 cases (0.29%). Of the 19 Au-positive donors, 10 donors had boundary or increased values of SGOT and 18 donors had increased values of SGPT. In liver disease, mostly chronic cases, there were 32.1% Au-positive results. In hematologic cases, the positivity of Au-antigen occurred in 4.8%, most often in leukemia (12.3%) and in aplastic anemia (14.2%) cases. The positivity of Au-antigen in hematologic diseases did not depend only on the frequency and number of blood transfusions received, but also on the character of the disease. —L.D.


A simple method for demonstration of LE cells using a modified "skin window" technique is described. On a superficial skin lesion on the forearm one to two drops of patient's own serum are applied after 2 hr of observation. On the slide removed after 4 hr from the beginning of the examination, the formation of LE cells can be observed. —L.D.


Six boys over two generations were affected by the disease consisting clinically of diarrhea, a measleslike rash, respiratory infections and moniliasis, onset at 3 mo of age and death at 7 mo. Hypogammaglobulinemia and lymphopenia were the main laboratory signs of this sex-linked recessive disease. Abstractor's comment: Is this disease different from the autosomal recessive disorder described by Glanzmann (Ann Paediatr (Basel 175:1, 1950)? —J.C.


Long-term intensive plasmapheresis had no influence on hemoglobin, plasma iron level, hematocrit, and reticulocyte and erythrocyte counts. This finding was obtained even after a withdrawal of 1000 ml of plasma weekly. The white cells react to long-term intensive plasmapheresis. There was an increase in the total number of leukocytes with an increase in neutrophils, monocytes, and eosinophils. The number of lymphocytes decreased. The number of platelets did not change even when they were withdrawn in considerable amounts. —L.D.

The Toluidine Blue Discoloration Test for the Diagnosis of Mucopolysaccharidoses. F. Teixeira Mendes and N. Medeiros. Central Laboratory, Hematology Section, Faculty of Medicine, University of Sào Paulo Medical School, Sào Paulo, Brazil. Rev Bras Pesquisas Med Biol 5:139-145, 1972

A screening test for high degrees of urinary mucopolysaccharide excretion is presented. It is based on toluidine blue precipitation from a saturated solution when urine is added. Spectrophotometric readings give "toluidine blue discoloration." Reproducibility is of good degree for a screening test, although the normal range is wide. The is no overlap with the pathologic results in mucopolysaccharidosis patients. Positive results by the present method and by the Dorfman-Steiness method coincide, but the degrees of positivity are not similar. —M.J.

Acid Phosphatase (AP) Activity in Blood and Bone Marrow Cells in Various Hematologic Disorders and Inflammatory States. K. Orzechowska-Juzwenko, S. Kotlarek-Haus, and W. Brodzka. Department of Hematology and Department of
Pharmacy, School of Medicine, Wroclaw, Poland. Acta Haematol Pol 3:229–235, 1972

AP activity was examined in nucleated cells of peripheral blood and bone marrow using the cytochemical method of Suzuki. A significant increase in AP activity was observed in granulocytes of patients with chronic myeloid leukemia and with acute inflammatory states, when compared with a control group of healthy subjects. In acute leukemias the AP activity varied considerably from complete absence to marked increase in monocytic and promyelocytic leukemias. AP activity was detected in the megaloblasts of patients with Addison-Biermer's disease (pernicious anemia) and in the macronormoblasts of some cases of aplastic anemia but not in the normoblasts. The high scatter of AP scores in all groups examined limits the diagnostic value of this test.—M.K.

Age and Sex, and Erythrocyte Sedimentation Rate (ESR). G. Gnaclnska. Department of Physiology, School of Medicine, Gdansk, Poland. Pol Tyg Lek 27:1161–1168, 1972

Changes in ESR with age were analyzed in 2918 men and 523 women. It was found that ESR rises with progressing age in men and decreases in women. The respective regression curves were obtained, and their slopes were calculated. The changes in ESR are probably related to changes in the activity of sex hormones.—M.K.

NEWS AND VIEWS

AMERICAN SOCIETY OF HEMATOLOGY

SIXTEENTH ANNUAL MEETING,

CHICAGO, ILLINOIS

DECEMBER 1-4, 1973

The Sixteenth Annual Meeting of the American Society of Hematology will be held at the Conrad Hilton Hotel, Chicago, Ill., on December 1–4, 1973. Programs by the Educational Committee and the Scientific Subcommittee will be held Saturday afternoon December 1st and Sunday, December 2nd. The Presidential Symposium will be held Sunday afternoon December 2nd. Contributed papers will be presented on December 3rd–4th. Abstract deadline for contributed papers is August 31st, 1973, and forms may be obtained from Dr. Stephen Robinson, Beth Israel Hospital, Boston, Mass.