ABSTRACTS

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ERYTHROCYTES


In eight patients with terminal renal failure, bilateral nephrectomy was followed by a considerable fall of the hematocrit. Erythropoiesis, measured by ferrokinetic studies, was depressed but persisted at a basal level. Erythropoietin activity could be demonstrated in some anephric patients receiving androgen therapy. This finding suggests the presence of an extrarenal factor, stimulating erythropoiesis and that androgens may serve to stimulate erythropoiesis in anephric patients.—H.-J.H.


Erythropoietic-stimulating and -inhibiting activities of plasma and urine were investigated in 39 patients suffering from iron deficiency anemia. The short-term bone marrow culture with determination of mitotic activity of erythroid cells in the presence of colchicine was used. Erythropoietin was revealed in the plasma of 22 patients and in the urine of 15 patients. Erythropoietic inhibitors were found in the plasma of 12 patients and in the urine of 14 patients. Fractionation of plasma showed erythropoietic inhibitors to concentrate mainly in the α-globulin and β-globulin fractions. In comparison with the plasma and urine of healthy persons, erythropoietin in iron deficiency anemia was found less frequently. On the contrary, erythropoietic inhibitors were very common in iron deficiency anemia, thus pointing to a disturbance of erythropoiesis in this anemia.—G.A.

On the Mechanism of Erythropoietic Action of Large Doses of Serotonin in Rabbits.
E. Mietkowski, B. Kosmicki, and W. Mizgiert. Department of Physiology, School of Medicine, Szczecin, Poland. Acta Physiol. Pol. 23:25-34, 1972.

The results of prolonged intramuscular treatment of rabbits with substantial doses of serotonin (3 mg/kg) are presented. Significant decrease of hemoglobin saturation with \( \text{O}_2 \) and increase of erythropoietic activity of plasma were demonstrated in the experimental animals. Both changes were more pronounced after 2 wk than after 4 wk of daily serotonin injections.—M.K.


The relative concentration of hemoglobin S in the hemolysate of erythrocytes of 153 heterozygous carriers, as determined by vertical starch gel electrophoresis, ranges from 31.8% to 48.4%. The frequency distribution shows bimodality with one mode at 34%-36% and another at 40%-42%. The ratio of individuals with a high concentration of hemoglobin S to that with a low one was 3:1. Seven families with heterozygous carriers of hemoglobin S, totaling 20 individuals, were investigated in order to determine if the level of Hb S within a family was maintained. In five families this was indeed the case. Hemoglobin S from heterozygous carriers with a low relative concentration of this hemoglobin has a lower resistance to thermal denaturation than that found in carriers with a high relative concentration. Determination of the specific optical rotation at the minimum of the Cotton effect (233 \( \text{m} \)) indicates that hemoglobin S from carriers with low and high relative concentrations shows no detectable differences in molecular conformation.—M.J.


The authors have collected five cases of severe pulmonary infection due to \textit{Mycoplasma pneumoniae} in children with sickle cell disease. Mycoplasma cultures were positive in three patients, and complement-fixation titers were significantly elevated in four patients. The disease was characterized by evidence of widespread pulmonary infiltration, marked leukocytosis, prolonged clinical course, respiratory distress, and, in two of the five, lack of clinical response to either penicillin or ampicillin. In several of the children, clinical improvement coincided with the initiation of erythromycin therapy. Pulmonary infections in children with sickle cell disease are usually thought to be due to pneumococcus and are thus treated with penicillin as the initial antibiotic. This paper points out that in those children who fail to respond other causative agents must be considered and that \textit{M. pneumoniae} must be included in this list.—T.F.N.

Pathophysiologic Aspects of Sickle Cell Anemia. C. A. Finch. Division of Hematology, Department of Medicine, University of Washington School of Medicine, Seattle, Wash. Am. J. Med. 53:1-6, 1972.

The author presents a succinct review of the physiologic aspects of sickle cell disease and points out some unknown quantities. Of particular interest is a discussion of the role of various compensatory mechanisms in the anemia of sickle cell disease, a discussion of some aspects of erythrocyte stasis and crises, and a review of newer development in the therapy of sickle cell disease. The author includes a selective bibliography on the pathophysiology of sickle cell disease.—T.F.N.


The relative proportion of Hb S in individuals heterozygous for sickle hemoglobin varies from 27% to 50%. The cause of this substantial variation has never been
When the red cell mass, the bone marrow section cellularity, and the number of large megakaryocytes are increased, the diagnosis is almost always polycythemia vera. However, after cytostatic therapy, cellularity and megakaryocytes are normalized.

—P.G.R.

LEUKOCYTES


Charcot-Leyden crystals of typical shape were prepared in vitro from blood of three patients with eosinophilia and were characterized by light and electron microscopy. Similar structures were found in vivo in reticulum cells and granulocytes of bone marrow from patients with eosinophilia and with acute and chronic granulocytic leukemia. Their numbers were correlated with those of eosinophils, and since they were also found within clearly recognizable eosinophils, the crystals appeared to be derived from this cell type. Structural abnormalities of leukemic granulocytes conceivably may predispose these to form crystals. Charcot-Leyden crystals did not appear to arise from intact eosinophil granules and differed clearly from Auer bodies, both by optical and electron microscopic criteria.—F.W.G.


Based on experimental evidence in mice, an attempt was made to increase the antigenic properties of myeloblasts in man by means of infection with a myxovirus adapted in vitro to myeloblasts. Through numerous passages, the Turkey/England/63 Virus was adapted to the leukemic cells of a 71-yr-old patient suffering from acute...
myelogenous leukemia. Optimal growth of the virus was obtained in vitro. Since chemotherapy is of little value in acute leukemias of elderly patients, in the present case, myeloblasts were incubated with the virus-cell cultures. The myeloblast virus suspension was given in a slow intravenous drip. A striking hematologic improvement was observed during the following days, characterized by a reduction of the marrow myeloblasts from 95.5% to 40.5% and by a fall in the peripheral blast counts. A transient agranulocytosis led to septicemia and death of the patient.—H.-J.H.


The transfusion of leukocytes obtained from patients suffering from chronic myelosis to patients with malignant neoplasms and marked depression of hemopoiesis revealed a statistically reliable increase in the level of total proteolytic activity of the recipient's blood at the end of the first week after the transfusion. The changes in protease activity corresponded to variations in the total number of donor leukocytes (marked by sex chromatin) in the peripheral blood of the recipient.—G.A.


The transfusion of a concentrate of nucleated cells from patients with chronic myeloid leukemia led to the rapid (within 24–36 hr after transfusion) reduction of "blasts" in the peripheral blood. This "blastolytic" effect is attributed to increased total blood protease activity in the recipients due to the transfusion of leukemic cells with high protease activity.—G.A.

Phosphatases of Leukocytes. II. Isolation and Characterization of Acid Phosphatase of Normal Leukocytes and Leukocytes of Patients With Chronic Granulocytic Leukemia. W. Pajdak and J. Sznejd. Department of Clinical Chemistry, Institute of Internal Medicine, School of Medicine, Kraków, Poland. Przegl. Lek. 29:301-306, 1972.

Acid phosphatase (AP) was isolated from leukocytes of normal subjects and patients with chronic granulocytic leukemia (CGL). Leukocyte homogenates were fractionated with sodium chloride and ammonium sulfate. Gel filtration on Sephadex G-75 and Bio-Gel P-150 columns and ion exchange chromatography on CM-Sephadex G-50 and DEAE-Sephadex A-50 were applied in the subsequent step of the isolation procedure. Chromatography on DEAE-Sephadex separated AP into three active fractions. All three were characterized by the same molecular weight (about 105,000), similar optical pH range, thermostability, and sensitivity to the action of activators and inhibitors, and all were homogeneous during electrophoresis on starch gel. The fractions exhibited different electrophoretic mobilities. The most abundant fraction III had the same mobility as the main AP fraction isolated from human prostate. Fractions I and II had lower mobilities. It was found that leukocytic AP shows properties similar to those of prostatic AP and of fraction II AP obtained from human placenta. No significant differences were found between the properties of AP originating from normal leukocytes and leukocytes obtained from patients with CGL.—M.K.


Twelve patients with various forms of acute leukemia refractory to cytostatic drugs were treated with L-asparaginase. Full remission was obtained in three cases and partial remission was obtained in seven. In two patients no improvement was observed. The longest duration of remission after L-asparaginase treatment was 5 mo. The most frequent side effects were hypofibrinogenemia, hypoalbuminemia, and signs of liver function damage. These complications
disappeared shortly after drug withdrawal. —M.K.

Free Nucleotides of Normal Leukocytes and Leukocytes in Chronic Leukemias. S. Maj, E. Zdebska, J. Danzynski, and J. Radziszewski. Department of Internal Medicine and Blood Bank, Institute of Hematology, Warsaw, Poland, Acta Hema-

The content of free nucleotides (NAD, NADP, ADP, ATP, GMP, GTP, and UDP) and of total phosphorus was determined in normal granulocytes and lymphocytes, in leukocytes of 15 patients with chronic lymphatic leukemia, and in 12 patients with chronic myeloid leukemia. The content of free nucleotides and total phosphorus was lower in normal lymphocytes than in granu-
locytes and in leukemia leukocytes as compared with normal. Only the level of NADP was increased in leukemic leukocytes.

—M.K.

Factors in Pathogenesis of Central-Nervous-
System Leukemia. R. J. West, J. Graham-

Of 198 children with acute lymphoblastic leukemia seen between 1958 and 1970 at a London hospital, 165 were able to be evaluated, and 83 of these children developed central nervous system (CNS) leukemia, as judged by clinical findings and the presence of leukemic cells in the cerebrospinal fluid. CNS involvement tended to be recurrent, and the 83 patients had 194 separate episodes. In the first 2 1/2 yr, the rate of incidence of CNS leukemia was constant (75%), but it fell thereafter. The lower the initial platelet count, the greater was the incidence of CNS disease. A similar correlation was seen with a high initial leukocyte count and a high initial peripheral blood blast cell count. The development of CNS disease was more frequent in patients with liver, spleen, or lymph node enlarge-
ment at diagnosis, with the effect of lymph node enlargement being particularly noticeable (p < 0.001). It is postulated that leukemic cells enter the CNS via intracranial petechial hemorrhages around the time of the initial diagnosis, and this is supported by the finding of a rising incidence of CNS disease with increasing degrees of thrombo-
cytopenia. However, as the authors indicate, the increase in CNS leukemia seen in recent years is not wholly explained by increased survival of patients. They imply that excessive thrombocytopenia produced by more intensive chemotherapy regimens could be partly responsible.—J.A.W.

Daunorubicin Therapy in Adult Acute Lymphatic Leukemia. C. Bloomfield, R. Brunning, and B. Kennedy. University of Minnesota School of Medicine, Minneapolis, Minne-

Twelve adults with acute lymphatic leukemia, all but one of whom had relapsed during treatment with the usual antileu-
kemic agents, were treated with daunorubi-
cin and prednisone. Two complete and three partial remissions were obtained. The average duration of remission was 3 mo. Dauno-
rubicin was especially useful in prolonging survival in the pathologic type designated acute, rather than subacute, lymphocytic leukemia. Regardless of the initial response, no patient treated a second time with daunorubicin obtained a second remission. There are seven reports in the literature describing 19 adults with acute lymphatic leukemia treated with daunorubicin alone or with prednisone. Our results indicate a less favorable response to daunorubicin than did these earlier reports. However, daunorubicin does appear to be a useful agent in adults with acute lymphatic leukemia who are resistant to conventional leukemia therapy.—J.E.U.

Combined Fractionated Isotopic and Exter-

Of 21 Hodgkin’s disease patients with laparotomy-documented splenic and/or hepatic involvement (Stages III or IV) treated with total lymphoid and combined external and internal (198Au) whole liver irradiation, nine patients remain disease-
free for 17–34 mo. All but two of the relapses occurred in patients previously treated to local fields only. One death was directly attributable to the isotope. Another
death at 34 mo was due to intercurrent disease. About half of the combined whole liver dose of 2500 rads was delivered by external megavoltage x-ray therapy and half was delivered by radioactive colloidal gold (198Au). The usual isotopic dose was 25-30 mCi administered intravenously at a maximum rate of 10 mCi every 2 wk. Tumoridical doses can thus be delivered to the critical periportal areas within the liver, whereas the dose to the central vein region of the lobule remains within the normal liver tissue tolerance level, thus avoiding the immediate reaction of radiation hepatitis and the remote development of cirrhosis. Thrombocytopenia, the most serious complication, may be prevented or lessened by adjusting the fractionated and total dose of the isotope.—J.E.U.


A retrospective analysis of 110 patients with non-Hodgkin’s lymphoma who received one or more courses of single-agent chemotherapy was conducted to determine the relationship between the histopathologic category of lymphoma, based on the scheme of Rappaport et al., and the results of chemotherapy. The data were most complete for oral alkylating agents. Complete tumor regressions occurred significantly more often in patients with nodular rather than diffuse lymphomas \( p < 0.01 \) and were of longer duration. Responses and survival after the initiation of chemotherapy correlated closely with the histopathologic category of lymphoma, ranging from a 5% complete response (CR) rate in patients with diffuse histiocytic lymphoma to a 48% CR rate in patients with nodular lymphocytic poorly differentiated lymphoma. The latter group exhibited a median survival of 60+ mo from the initiation of chemotherapy. This study emphasizes the need to employ the more precise histologic classification of non-Hodgkin’s lymphomas, according to the criteria of Rappaport et al., in the design and interpretation of future prospective chemotherapy trials in patients with non-Hodgkin’s lymphomas.—J.E.U.


Hematologic data in previous cases of eosinophilia with fibrosing endocarditis have been too limited to establish firmly a relation to the myeloproliferative disorders. A patient with the typical clinical and autopsy features of Loeffler’s endocarditis also had an equally definite eosinophilic myeloproliferative disorder. The neutrophil alkaline phosphatase score, peripheral blood basophilia, serum vitamin B_{12}, B_{12}-binding proteins, serum muramidase, peripheral blood smear, and bone marrow and autopsy findings were all consistent with the neutrophilic type of chronic granulocytic leukemia. A presumed Philadelphia chromosome (Ph1) later proved to be a short Y chromosome, which indicates the need for physicians to be alert for its presence in males with ap-
The authors investigated the effects of glucose and other hexoses on the release of the parental Phi chromosome.—J.E.U.


Nodular sclerosis as a morphologic variant of Hodgkin's disease was found in 32 patients. This form was more frequent in women (72%) than in men. Most of the patients (91%) were younger than 40 yr of age. The disease started in the mediastinal lymph nodes (65%) and in the cervical and supraclavicular groups. It was localized in the organs and lymph nodes above the diaphragm in 96.5% of cases. The mean duration of life in the nodular sclerosis patients (59 mo) was greater than in the mixed cellular variant of lymphogranuloma (22 mo). More prolonged remissions (3–5 yr) in nodular sclerosis were observed when radiation therapy was used than when chemotherapy was employed.—G.A.

HEMOSTASIS


The studies reported here were intended to investigate the relationship of platelet transfusions to hemostatic plug formation and to the endothelial supporting function of platelets, with the idea that information of this nature could be of value in clinical studies on platelet replacement in thrombocytopenic patients. Seventeen mongrel dogs were made thrombocytopenic by total body x-irradiation. Seven to 10 days later, the thrombocytopenic dogs were anesthetized, and the thoracic duct was cannulated. Lymph samples were collected in sodium citrate, and the total red cell output in the lymph was determined. Simultaneously, platelet counts and bleeding time were also determined before and at 30-min intervals for 4 hr following infusion of dog platelet concentrates or platelet-poor plasma. Each unit of platelet contained approximately 10^{11} platelets. The ten dogs that received only platelet-poor plasma had no effect on the platelet count, nor was there any reduction of the bleeding time. Concomitantly, the output of red blood cells in the lymph increased from an average of 1455/10^9/min cells to an average of 1620/10^9 cells/5-min period, an increase of 11%. With platelet-rich plasma, an increase of the platelet count to more than 50,000 platelets/cu mm produced in seven of eight animals normalization of the bleeding time. In three of four dogs in which the platelet count failed to reach 50,000/cu mm, the bleeding time remained markedly abnormal. In 15 of 17 determinations, the bleeding time was within normal limits when the platelet count exceeded 50,000/cu mm. In 40 of 42 occasions with the platelet counts below 50,000/cu mm, the bleeding time was prolonged. By infusing small amounts of platelets into the dogs, it was found that there was no decrease in the bleeding time but there was a decrease up to 50% of output of red blood cells in the thoracic duct. These results indicate that transfusion of small numbers of blood platelets, well below the numbers required to restore the bleeding time to normal, can reduce the abnormal red cell content of lymph in thrombocytopenic animals. These findings are interpreted as evidence that the platelets may sustain vascular integrity or repair blood vessel structures by unknown mechanism presumably discrete from that of hemostatic plug formation, which determines the duration of the bleeding time from a mechanically injured blood vessel.—M.G.B.


The authors investigated the effects of glucose and other hexoses on the release
of platelet constituents by thrombin and on platelet aggregation induced by thrombin, collagen, or antigen-antibody complexes in suspensions of washed pig or rabbit platelets. Platelets suspended in a medium without glucose and maintained at room temperature gradually lose their response to thrombin usually within 15–30 min. Addition of glucose to the suspending fluid restored platelet sensitivity. Mannose, galactose, and fructose had little effect in this respect. Antimycin inhibited the ability of glucose to restore the sensitivity of platelets to thrombin even after prolonged incubation with glucose, indicating that oxidative phosphorylation is important in this process. In the absence of glucose, the release of adenine nucleotides was inhibited. The release reaction could be restored by adding glucose to the suspending medium. When the effect of thrombin on platelets suspended in a glucose-free medium was inactivated by tosyl arginine methylester (TAME), the subsequent addition of glucose could restore the release of adenine nucleotides. This indicated to the authors that there are at least two steps in the thrombin-induced release of platelet constituents: an initial reaction of thrombin with the platelet membrane, and the sequence of events leading to the release of granule contents. The latter requires a source of energy.—M.S.


Both arvin, the enzyme fraction of the Malayan pit viper, and thrombin are capable of clotting fibrinogen. This study compared the effect of these two enzymes on blood platelets. Arvin, like thrombin, is capable of clotting platelet fibrinogen but, unlike thrombin, did not cause release of potassium, serotonin, ADP, or ATP from platelets. In the presence of calcium, arvin was capable of producing platelet aggregation. It was, however, much less in degree and appeared only after longer incubation than that produced by comparable concentrations of thrombin. Preincubation of platelets with arvin without calcium did not prevent aggregation when subsequently exposed to thrombin and calcium. Platelet counts and lifespan of platelets in rabbits defibrinogenated by the administration of arvin were normal. This was thought to be evidence that defibrinogenation can be produced without the hazard of thrombocytopenia. —M.S.


The effects on fatty acid synthesis in platelets of feeding glucose and other sugars to fasted volunteers were investigated. Platelets were isolated from volunteers who had fasted for 15 hr and again 1 hr after the subjects had ingested glucose or other sugars. The incorporation of 14C-acetate into fatty acids of washed platelets was increased 68% after feeding. Glucose had a more marked effect than fructose, whereas galactose did not stimulate acetate incorporation. A direct effect of the sugar on the platelet leading to stimulation of fatty acid synthesis could be ruled out. The ingestion of glucose neither altered the level of glycogen or of lactate in platelets, nor changed the date of glycogenolysis or of lactate production. Similarly, evolution of 14CO2 from 14C-glucose or from 1,14C-acetate was unchanged by feeding. The authors speculate that feeding of glucose or fructose causes the release of a humoral factor that stimulates lipogenesis or inhibits lipolysis or fatty acid oxidation. Based on the evidence presented by other authors, it appears unlikely that insulin is the humoral factor.—M.S.


Of 104 patients hospitalized with acute infectious hepatitis, 26 had clinical evidence of liver failure and a uniformly severe
ABSTRACTS

A coagulation defect (often less than 5% normal), factors II, V, VII, and X were markedly reduced with plasminogen reduced in all patients and half showing low plasma fibrinogen and thrombocytopenia. Fifteen of 26 patients, subsequently dying with liver failure, had the most severe coagulation defect, with 80% having clinical bleeding. The prothrombin time was more prolonged during the bleeding episodes than at other times but improved significantly in nine patients who received exchange transfusion, with 75% cessation of bleeding. However, as these patients received fresh-frozen plasma and platelets, it is difficult to be certain of the role of exchange transfusion in treating the bleeding episodes.

A mild coagulation defect was found in 57 of 58 patients without liver failure (slight prolongation of prothrombin time and mild reduction in factors V, VIII, and X in about 40% of patients). In 21 patients, coagulation was continuously normal. Factor IX levels remained normal throughout in all 104 patients.


Thrombocytopenia in ten cases of liver cirrhosis was due to an increase in the splenic platelet pool and not to increased intravascular consumption. In the same patients, a decrease in fibrinogen concentration was mainly due to increased plasma volume and sometimes to decreased production, but it was never to excessive destruction.—J.C.


Especially in the newborn, analytical studies of blood coagulation are very helpful and can easily be done using capillary blood obtained by micropuncture. The results obtained by this method, the accuracy of which depends on the quality of the blood collection, are well correlated with those obtained using venous blood. The collection of the first sample had to be done not longer than 30 sec after the puncture, otherwise factors V and VIII values were falsified by the rapid activation of these factors in vivo in the early stage of hemostasis.—J.C.


In a large series (449) of patients with Werlhof’s disease, 17 (9.5%) tolerated steroid therapy very poorly and were selected for splenectomy. The operations were uneventful, but histologic studies of the spleen revealed large pale cells with eccentric nuclei resembling Gaucher’s cells. Special stains revealed the presence of cytoplasmic lipid and neutral fat, but morphologically they could be distinguished from Gaucher’s cells. No similar cells were seen in bone marrow aspirates, liver biopsies, or lymph nodes. No splenomegaly or hypersplenism was noted, and no bone lesions were detected. The authors postulate that these cells indicate an alteration in fat metabolism brought about by the hormonal therapy. Abstractor’s comment: Fat cells in the spleen of ITP patients have been known for some time in the Western hematologic literature.—J.C.


In a study of the platelets of 21 patients with hemophilia A and B, viscous metamorphosis was found to be reduced as a result of inhibition of the formation of thromboplastin and thrombin. Thromboplastic activity of the platelets was unaltered.—J.V.
IMMUNOHEMATOLOGY


Susceptibility to bacterial infection was studied in 41 patients with myeloma and in nine patients with Waldenström’s macroglobulinemia. Susceptibility to bacterial infections was increased, as compared to a matched control group without paraproteinemia, but only one patient’s history was reminiscent of that of an antibody deficiency syndrome. IgG and IgA myelomas were more prone to infections than was macroglobulinemia. Twenty-five per cent of the patients showed low normal or low isoagglutinin titers; the titers were related to the severity of the disease, rather than to the susceptibility to infections. The physiologic (polyclonal) immunoglobulins were reduced to variable degrees. Low IgA levels were correlated with increased incidence of respiratory infections. Antistreptolysin-O titers were not different from those of the control group. Immunization with tetanus anatoxin resulted in antibody formation in all patients treated with neither cytostatic drugs nor steroids. The antibody titer observed was within the range of that obtained in healthy subjects. Thus, although a moderate disturbance of immunoglobulin synthesis can be assumed to be present in patients with paraproteinemia, the full picture of an antibody deficiency syndrome is rarely seen in these patients.—H.-J. H.


Using phytohemagglutinin (PHA-M) stimulation, blastic transformation of peripheral blood lymphocytes was studied in 15 Indians in a state of hyperimmunity. They were Indians from the Parque Nacional do Xingu who had holoendemic malaria. While the rates of blastic transformation in ten normal donors ranged from 44% to 55%, in the Indians they ranged from 11% to 55% and showed blastogenesis depression in six subjects. Lymphocytes of normal donors were incubated with autologous serum, with Indian serum showing normal blastic transformation, and with Indian serum showing depression of blastic transformation. In the two former groups the rate of blastogenesis was normal, and in the latter it was depressed. These results led the authors to postulate an inhibiting serum factor in the blood of the affected Indians. Such a factor might be a toxic substance due to malaria infection. However, new incubations were set up 3 mo later using new serum from 12 of the 15 Indians previously studied. Data of the two measurements showed a fluctuation in the levels reached by each subject in both measurements and led to the conclusion that the possible toxic factor is a transitory one.—M.J.


Orosomucoid and lymphocytes were found by immunodiffusion to share common antigenic determinants. It is suggested that serum orosomucoid is related to cells of the immune system.—M.K.

MISCELLANEOUS


α-Fetoprotein (AFP) has been measured by Ouchterlony technique and cross-over immunoelectrophoresis. It was detected in sera of three of six patients with hepatoma and in two of three patients with teratoma. No AFP was found in sera of 65 subjects with various other liver diseases. Presence
of AFP in the serum of adults is considered to be diagnostic of hepatoma or teratoma, and AFP disappears after successful surgical removal of the tumor.—H.—J.H.


Alkoxyglycerols contain long-chain aliphatic radicals (CH$_2$OH-CHOH-CH$_2$O-R), usually a C-18 chain with one double bond and C-16 chains with one and no double bonds. A dose of 0.6 g/day was given to 849 patients receiving radiotherapy (RT) for cervical cancer for 2–11 wk. The 3-yr mortality was about 30% both for controls (given only RT, during 1968) and for patients (given simultaneous RT and alkoxyglycerols). However, when alkoxyglycerols were started a week before RT, the mortality decreased to about 20%. Larger doses of alkoxyglycerols seemed to reduce mortality to 14%, possibly because the alkoxyglycerols enhance host immunity.—P.G.R.

**NEWS AND VIEWS**

**INTERNATIONAL SOCIETY ON THROMBOSIS AND HAEMOSTASIS**

The IVth Congress of the International Society on Thrombosis and Haemostasis will be held in Vienna, Austria, from June 19–22, 1973. Please bring this to the attention of your colleagues interested in thrombosis and hemostasis.

Plenary sessions will be held with presentations on the following main topics: (1) biochemistry and biosynthesis of normal and abnormal clotting factors; (2) clinical trials in the treatment of thromboembolic disorders; (3) pathogenesis of thrombosis. Free Paper Sections and/or Symposia are scheduled for one full day and for all afternoons. Free communications are solicited and conference participants are asked to submit abstracts on the proposed topics. Speaking time allotted for free papers is 10 minutes. The abstracts should not exceed 200 words. English is the official language of the Congress.

All correspondence regarding the Congress should be sent to: Erwin Deutsch, President of the Congress, Intercongress, Stadiongasse 6–8, A-10 Vienna, Austria.