

HEMOSTASIS STUDIES IN PATIENTS WITH COLON CANCER. S.J. Scialla and D.B. Kimball. Hematology-Oncology Service, Walter Reed Army Medical Center, Washington, D.C.

Coagulation and platelet function studies were evaluated in eighteen patients with colon cancer (all clinical stages) prior to treatment with chemotherapy. All patients were asymptomatic from bleeding or thrombosis and were not taking aspirin. The tests included general coagulation screening, coagulation factor analyses, platelet aggregation, fibrin split product concentration and a serial dilution protamine sulfate test for the presence of fibrin monomer. Average values compared to normal controls showed an elevated fibrinogen 400.5 mg.% (normal 300.0 mg.%), shorter activated partial thromboplastin time 29.4 seconds (normal 36.0), increased factor VIII coagulant activity 127.2% (normal 100%), and elevated fibrin split products 28.8 ug/ml. (normal less than 16 ug/ml.). Seven patients showed the presence of fibrin monomer. Eight patients showed enhanced aggregation reacting at or below 0.16 micromolar epinephrine. Six patients in the study showed more advanced cancer (five requiring intra-hepatic artery infusion for extensive liver metastasis). Of this subgroup four patients demonstrated fibrin monomer and three patients showed spontaneous platelet aggregation. In this group, the fibrinogen was 484.2 mg.%, fibrin split products were 28.8 ug/ml., and factor VIII was 176%. A state of hypercoagulation with signs of a chronic process of intravascular coagulation was demonstrated in a group of colon cancer patients which corresponded to their extent of disease.

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STIMULATION OF THROMBASTHENIC PLATELETS BY COLLAGEN. A SCANNING MICROSCOPIC STUDY. L.Balleisen, W.Schramm, R.Marx. Medizinische Universitätsklinik Münster, Medizinische Universitätsklinik München, Germany.

The spreading of platelets on a silicone-coated surface has been evaluated as a sensitive test for the stimulation of thrombasthenic platelets by different collagen types. The platelets from six patients with Thrombasthenia were incubated with soluble type I, type III, methylated type I collagen and collagen type I fibrils and allowed to settle for one hour on a silicone surface. The platelets from two patients scarcely reacted, only a few pseudopodes were seen, no platelets had spread and no adhesion on collagen fibrils occurred, whereas the platelets from the four other patients showed many long pseudopodes, some of the platelets had spread and the adhesion on collagen fibrils seemed to be normal. Without collagen the platelets of all patients showed no pseudopodes and no spreading. The three collagen types under investigation were qualitatively effective in the same manner, quantitatively was a decreasing activity from the methylated type I collagen to type III to type I collagen. The platelet reactivity correlated with the clinical severity of the disease. The results indicate that there are two groups of patients affected with thrombasthenia and that the reactivity of the thrombasthenic platelets with collagen may contribute to the variable clinical severity of the disease.

HAEMOSTASIS DISORDERS AFTER AN EXTRA-CORPOREAL CIRCULATION IN CARDIAC SURGERY, BASED ON A STUDY OF 850 PATIENTS. Ch. Doutremepuich, A. Chauve, M. Deckmyn, M. Boisseau and F. Fontan. Hôpital du Tondu, Bordeaux, France.

The purpose of the study was to determine the influence of Extra-Corporeal Circulation (E.C.C.) on the principal factors of haemostasis, then to define biological troubles with a view their prevention. Tests performed 25 minutes after the conclusion of E.C.C., neutralization of heparin by protamin, Kunitz inhibitor injection, produced the following results: platelet count $75795 \pm 22045/\text{mm}^3$, prothrombin value $60.81 \pm 10.97\%$, fibrinogen $2.06 \pm 0.85 \text{ g/l}$; the euglobulin lysis time was positive within 30 minutes for 1.16 % of the patients; an heparinaemia lower than 0.2 UI/ml was found in 69.41 % of the cases when the E.C.C. was performed in conditions of moderate hypothermia (28°C) and in 41.81 % in deep hypothermia. A further injection of protamin was given in all cases where the heparinaemia was found to be above 0.2 UI/ml. A new control reading was made 3 hours later and showed an heparin rebound in 34.05 % of the cases. These results allowed us to formulate a standard monitoring program in case of post-operative bleeding.