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ABSTRACTS OF PAPERS

(An asterisk (*) following an author's name indicates "by invitation"; a (T) before a title indicates "read by title")

The distribution and excretion of morphine-C14 in the presence of N-allyl normorphine and 5-aminoacridine. LEONARD B. ACHOR* AND E. M. K. GEILING. *Univ. of Chicago.* The administration of N-allyl normorphine (NANM, 25 mg./kg.) or 5-aminoacridine (2.5 mg./kg.) to mice previously given 10 mg./kg. morphine-C14 (54,400 cpm/20 gm. body weight) produces marked changes in the distribution and excretion of radioactivity. All tissues are affected to a greater or lesser degree, but special reference is made to liver, kidney, small intestine (and contents) and urine. NANM-treated animals accumulate radioactivity in bladder urine at approximately the same rate as controls, but void within two hours after administration of morphine and antagonist. The percentage injected dose of morphine excreted by control mice is approximately equal at 6 hours to that excreted by the NANM group at the end of 2 hours. 5-Aminoacridine also facilitates the excretion of radioactivity following doses of morphine-C14, but appears to be more active in this respect than NANM. Further, its distribution pattern presents certain differences which indicate that this antagonist (5-Aa) may act in a different manner from NANM. The possibility that these compounds alter the free:bound morphine ratio in urine has been suggested by the distribution data and is being investigated at this time.

Fibrinolytic and pharmacologic effects of various enzyme preparations. J. L. AMBRUS, C. M. AMBRUS, N. BACK*, S. GOLDSTEIN* AND J. W. E. HARRISSON*. *Roswell Park Memorial Institute, Buffalo, N. Y. and Dept. of Pharmacology, Philadelphia College of Pharmacy and Science, Graduate School.* In a previous report (Fed. Proc., **14**: 315, 1955) quantitative methods were described for the *in vivo* testing of potential fibrinolytic agents. Fibrinogen was labeled with I^{131} and with this material intravenous or intraarterial clots were produced in dogs and rabbits. Pulmonary or peripheral embolism was produced by injecting labeled fibrin particles intravenously or into the femoral artery. Radioactivity was continuously recorded over the clots or embolized areas using specially constructed shields, a scintillation counter, radiation rate meter and an Esterline recorder. In addition, as qualitative tests, radio-arteriographic and transillumination techniques were used to determine the presence or absence of the clot. The following enzymes were studied with these methods: various preparations of human and bovine plasmin, streptokinase-streptodornase, crude pancreatic protease, trypsin, ficin, papain and carboxypeptidase. Except for the last, all decreased plasma fibrinogen level and the clotting index; all had some hypotensive effect; in the EKG only nonspecific changes were observed. With nontoxic doses only the plasmin preparations showed significant fibrinolytic activity. A preparation of human plasmin was found to dissolve clots in doses which did not affect the clotting index. Daily administration of plasmin resulted in decreased fibrinolytic, hypotensive and clotting index reducing effect, probably because of antiplasmin production. Toxic doses of the above enzymes caused multiple hemorrhages. Histopathologic findings will be discussed.

Plasma epinephrine and norepinephrine content in mammals. LEWIS ARONOW, FRANK A. HOWARD AND DIETER WOLFF (introduced by OTTO KRAYER). *Dept. of Pharmacology, Harvard Medical School,*