P6.3.19

THE ASSESSMENT OF 5-HYDROXYTRYPTAMINE ON THE HAEMODYNAMIC CHANGES AND PLATELET AGGREGATION ON GASTRIC MUCOSAL BLOOD FLOW IN RATS.

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The effects of 5-hydroxytryptamine (5-HT) on gastric mucosal blood flow and lesion formation have been established. However, the mechanisms accounted for the reduction of gastric mucosal blood flow have not been defined. The current study was to attest the hypothesis that decrease of gastric mucosal blood flow is the result of changes of systemic blood pressure and/or platelet aggregation in rats. 5-HT (given i.p. 5 or 10 mg/kg) time- and dose-dependently reduced gastric mucosal blood flow and systemic arterial blood pressure; it also potentiated ethanol-induced mucosal damage. Methysergide (a 5-HT_2-receptor blocker) pretreatment alleviated the decrease of gastric mucosal blood flow and lesion formation but not the systemic blood pressure. Also in the 5-HT-treated animals, the mucosal oxygen (O_2) and haemoglobin levels as well as the systemic blood CO_2 were reduced, but the blood O_2 was increased. The latter two parameters correlated with elevation of respiratory rate. The blood platelet count was not affected by 5-HT pretreatment. Adenosine diphosphate (ADP) dose-dependently induced a similar degree of platelet aggregation in platelet rich plasma fractions in the saline and 5-HT treated rats *in vitro*. 5-HT in the concentrations of 1 or 10 μM, promoted the platelet aggregation produced by ADP. However, this action was attenuated in the 5-HT-pretreated rats, indicating that a tachyphylaxis of 5-HT action on platelet aggregation could occur. It is concluded that the depression of gastric mucosal blood flow by 5-HT is caused by the decrease of systemic blood pressure and gastric vascular constriction but not by the induction of platelet aggregation *in vivo*.

P6.3.21

CHOLINERGIC, PEPTIDERGIC AND SEROTONERGIC INTERACTIONS ON LASER-DOPPLER BLOOD FLOW AND SALIVARY SECRETION IN RAT PAROTID GLANDS.

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The intraarterial infusion of either acetycholine (ACH, 10^{-4}M), serotonin (5-HT, 10^{-6}M) and calcitonin gene-related peptide (CGRP, 10^{-7}M) alone or in combination was administered at the rate of 0.15mL/min for 20 min. Blood flow was measured by laser-doppler shifts. Increased blood flow responses were obtained with both 5-HT (10^{-6}M) and CGRP (10^{-7}M) as compared