Interaction of Serotonin and Propranolol on the Isolated Left Rat Atria

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Serotonin 4·μg/ml produced positive inotropic effect on isolated left rat atria. Methysergide 0.47 μg/ml. completely abolished this positvie inotropic effect. However this positive inotropic was not reduced but significantly increased by addition of 0.15 μg/ml propranolol. Cocaine 0.5 μg/ml, potentiated the positive inotropic effect of serotonin. In the present of cocaine, propranolol did not reduce but magnified the positive inotropic of serotonin. However methysergide absolutely abolised it. The direct effect is the action of serotonin that mainly mediated the positive inotropic. Beside NE uptake, cocaine could inhibit serotonin uptake. Serotonin uptake inhibition might also be the action of propranolol other than β-adrenoceptor blocking effect. These results would be discussed.