The role of thromboxane A2 (TxA2) in liver injury in mice.

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The role of thromboxane A2 in CCl4-induced liver disease was investigated in mice. Significant elevation of TxB2 in the liver was observed 6 hours after the injection of CCl4. Administration of OKY-046 (10 and 50 mg/kg) and ONO-3708 (0.5, 1 and 2 mg/kg) suppressed the elevation of serum GOT and GPT levels and histological changes of the liver. In addition, OKY-046 inhibited the elevation of TxB2 in the liver. When U-46619, a stable TxA2 mimetic was injected i.v. into the mice, clear elevation of serum GOT and GPT levels and histopathological score of the liver were observed. These results suggest that TxA2 play a role for the onset of CCl4-induce liver injury in mice.

Effect of OKY-046 and ONO-3708 on liver injury in mice.

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The effect of OKY-046, a selective thromboxane A2 (TXA2) synthetase inhibitor, and ONO-3708, a novel TXA2 receptor antagonist, on liver disease were investigated in mice. The liver injury was induced by either an injection of anti-basic liver protein antibody (a-BLP) into DBA/2 mice immunized previously with rabbit IgG or by an injection of bacterial lipopolysaccharide (LPS) into Corynebacterium parum pretreated DDY mice. Administration of OKY-046 and ONO-3708 suppressed the elevation of serum GOT and GPT levels and histopathological changes in both of the models. Indomethacin inhibited the injury caused by a-BLP but not by LPS. Prostaglandin I2 inhibited the a-BLP induced injury and showed the tendency to inhibit the LPS-induced injury.

Inhibitory effect of β-adrenergic stimulants on increased vascular permeability caused by passive cutaneous anaphylaxis, allergic mediators, and mediator releasers in rats.

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The effect of isoproterenol, salbutamol, theophylline, and forskolin on IgE antibody-mediated homologs passive cutaneous anaphylaxis (PCA) and on skin reactions caused by allergic mediators and mediator releasers were investigated in rats. The results obtained indicate that β-adrenergic stimulants inhibit the increased vascular permeability caused by allergic mediators, and suggest that this activity of β-adrenergic stimulants might play an important role in their antiallergic actions. Inhibition of increased vascular permeability might be mediated via β-receptors and may be related to the increased in intracellular cyclic AMP levels.