

[Prostaglandins, 38, 439 (1989)]

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-induced liver injury in mice.

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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 parvum* 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.

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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 homologous 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 intracellular cyclic AMP levels.