Doxylamine Concentration in Blood and Tissues of Rats after the Oral Administration

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As fatal cases by doxylamine overdose are increased, we tried to analyze the concentration of doxylamine in tissues and blood of rats. There is two kind of death cases which related to the doxylamine overdose. The one is pretreated with common dose of doxylamine and the other one is non-pretreated. So we also separated rats with two groups and compared with each other. The first group of rats pretreated with common dose(5mg/kg) for a week but the second group was not pretreated. At 8th day of experiment, we orally administered to rats with doxylamine overdose (750mg/kg) which value is more than LD50, 500mg/kg.
When the rats were alived, then they were sacrificed with ether. Isolated tissues were liver, lung, brain, kidney and spleen. Tissues and blood were compared between two group.
After all, doxylamine concentration in tissues and blood of first group was higher than those of second group. But tissue distribution of doxylamine concentration has difference among tissues. The order of doxylamine concentration was liver> kidney> spleen≥lung> brain in first group. On the contrary in second group the order was kidney> lung≥
spleen> liver> brain.

[PA3-2] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl,.Bldg 3]]

The inhibitory effects of hypoxic condition and nitric oxide on dioxin stimulated endogenous CYP1A1 activity in Hepa I cells

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In order to understand the effects of hypoxic agents and nitric oxide on endogenous CYP1A1 activity in Hepa I cells, the ethoxyresorufin-O-dealkylase (EROD) activity was determined. When 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) administered into Hepa I cells, EROD activity was induced in dose dependent manner. SNP (Sodium nitroprusside), Which donates nitric oxide, inhibited TCDD stimulated EROD activity. And LPS (lipopolysaccharide), which induces iNOS, also inhibited TCDD stimulated EROD activity. NG-nitro-l-arginine, the inhibitor of iNOS, recovered the TCDD stimulated induction suppressed by LPS, and this effect was abolished when the substrate of iNOS, l-Arginine was administered concomitantly. To mimic hypoxic condition, cobalt chloride, picolinic acid and desferrioxamine were administered into Hepa I cells. When the iron chelating agents, such as picolinic acid, desferrioxamine, were administered concomitantly with TCDD, TCDD stimulated EROD activity was reduced in dose dependent manner. Cobalt chloride known as hypoxia inducing agent also inhibited TCDD stimulated EROD activity. These data shows that hypoxic agents and nitric oxide inhibit TCDD stimulated endogenous CYP1A1 activity in Hepa I cells.

[PA3-3] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Anti-platelet activity by specific thrombin inhibitor, LB30057

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The effect of LB30057, a synthetic compound, on platelet activity and its mechanism of action was