

[PA3-3] [10/19/2000 (Thr) 10:00 – 11:00 / [Hall B]]

Antiplatelet and antithrombotic activities of CP201, [2-(3,5-di-tert-butyl-4-hydroxy)-3-chloro-1,4-naphthoquinone]

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The possibility of CP201, 2-(3,5-di-tert-butyl-4-hydroxy)-3-chloro-1,4-naphthoquinone, as a synthetic antithrombotic agent was investigated. Effects of CP201 on platelet aggregation in human in vitro, murine pulmonary thrombosis in mouse in vivo, and the mechanism of antithrombotic activity were examined. CP201 inhibited collagen-, thrombin-, thapsigargin- and calcium ionophore A23187-induced aggregation of human platelets with the IC50 values of 3.42 \pm 0.39, 3.93 \pm 0.03, 1.45 \pm 0.25 and 3.17 \pm 0.10 μ M. In the vivo study, CP201 prevented murine pulmonary thrombosis dose-dependently. CP201 did not alter the activated partial thromboplastin time (APTT), prothrombin time (PT) and thrombin time (TT) in human plasma. The LDH activity released from CP201-treated platelets did not change compared with control (DMSO). These results suggest that CP201 may be a promising antithrombotic agent, and the antithrombotic activity of CP201 may be due to the antiplatelet aggregation activity not to anticoagulation.

[PA3-4] [10/19/2000 (Thr) 10:00 – 11:00 / [Hall B]]

Effects of Zinc on the Cytokine Production induced by Lipopolysaccharide in the Tumor Bearing Mice

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Zinc levels in plasma are decreased in malignant patients with endotoxemia or other infections. These low zinc levels may be restored by zinc administration. In this study, we investigated effects of zinc chloride (Zn) on the TNF- α , IL-1 β , IL-2 and IFN- γ production induced by lipopolysaccharide (LPS) in tumor bearing ICR mice.

The results estimated by ELISA in serum and supernatants were the following: Zn treatment significantly increased IFN- γ levels in supernatants compared with those in controls; LPS treatment significantly increased TNF- α and IL-1 β levels in serum and TNF- α , IL-1 β and IFN- γ levels in supernatants compared with those in controls; combination of Zn and LPS significantly increased TNF- α and IL-1 β levels in serum and IFN- γ levels in supernatants compared with those in controls; combination of Zn and LPS significantly decreased IL-1 β levels in supernatants compared with those in LPS group and significantly increased IL-2 levels.

These results suggest that zinc might attenuate the inflammation of malignant patients with endotoxemia and enhance resistance to tumor.

[PA3-5] [10/19/2000 (Thr) 10:00 – 11:00 / [Hall B]]

Effects of Phellius linteus on nitric oxide production from peritoneal macrophage in normal and cyclophosphamide-treated mice.

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