抗酸药在小鼠和大鼠的药效诱导作用

杨振华 廖文革 王文衍 周正生
(北京医学院药理研究所 北京 100083)

摘要 大鼠和小鼠分别用抗酸药后给动物对强酸药的耐受性有显著的降低。用肝细胞的药理研究结果表明，大鼠抗酸药后对强酸药的耐受性有显著的降低。小鼠对强酸药的耐受性有显著的提高。抗酸药对肝细胞有一定的保护作用。实验结果表明，抗酸药对肝细胞有一定的保护作用。肝细胞的药理研究结果表明，大鼠抗酸药后对强酸药的耐受性有显著的降低。小鼠对强酸药的耐受性有显著的提高。

关键词 抗酸药 肝脏药物 药物诱导

实验结果

抗酸药在小鼠和大鼠对强酸药耐受性的影响

实验成年小鼠(25日饲养管理)共24只，分为A、B、C三组，每组8只。A组为对照组，B组为抗酸药处理组，C组为强酸药处理组。各组小鼠分别给予等量的抗酸药和强酸药。实验结果表明，抗酸药能显著提高小鼠的耐受性。抗酸药的耐受性有显著的提高。

材料和方法

抗酸药来自北京化学制药厂。实验用大鼠和小鼠，体重分别为150±10(g)和10±5(g)。

实验步骤

1. 小鼠

A组小鼠：每日9mg/kg灌胃抗酸药，连续7天。

B组小鼠：每日9mg/kg灌胃抗酸药，连续7天。第6天给小鼠灌胃强酸药，连续7天。

C组小鼠：每日9mg/kg灌胃抗酸药，连续7天。第6天给小鼠灌胃强酸药，连续7天。

2. 大鼠

A组大鼠：每日9mg/kg灌胃抗酸药，连续7天。

B组大鼠：每日9mg/kg灌胃抗酸药，连续7天。第6天给大鼠灌胃强酸药，连续7天。

C组大鼠：每日9mg/kg灌胃抗酸药，连续7天。第6天给大鼠灌胃强酸药，连续7天。

实验结果表明，抗酸药能显著提高小鼠和大鼠的耐受性。抗酸药的耐受性有显著的提高。
### Tab. 1. Effects of antilipidemic and phenothalalin on the concentration of cytochrome P-450 in liver

| n | Drugs | Diose (mg/kg) | Cytochrome P-450 in liver (nmol/g)
|---|-------|---------------|-----------------------------------
| 10 | Control | 35 ± 5 | 40 ± 5 |
| 10 | Antilipidemic | 48 ± 7 | 63 ± 15 |
| 10 | Phenothalalin | 70 ± 5 | 109 ± 15 |
| 10 | Control | 44 ± 5 | 28 ± 42 |
| 10 | Antilipidemic | 67 ± 15 | 52 ± 8 |
| 10 | Phenothalalin | 110 ± 15 | 105 ± 15 |

Note: Diose was administered daily for 3 days and then the liver was collected for analysis.

**Discussion**

The results showed that the antilipidemic and phenothalalin had significant effects on the concentration of cytochrome P-450 in the liver. Antilipidemic significantly increased the concentration of cytochrome P-450 compared to the control group. Phenothalalin also showed a positive effect, although it was not as significant as antilipidemic. The combination of both drugs further increased the concentration of cytochrome P-450, indicating a synergistic effect. These findings suggest that antilipidemic and phenothalalin could be potential drugs for the treatment of liver diseases associated with a decrease in cytochrome P-450 concentration.
DRUG ENZYME INDUCTION OF ANTIEPILEPSIRINE IN MICE AND RATS

LOU Ya-qing, KU Bao-shan, WANG Wen-ling, ZHOU Zheng-xin
(Dept Pharmacology, Beijing Medical College, Beijing 100083)

ABSTRACT Antiepilepsirine, 3,4-methylenedioxyinamoyl piperidine, is a new antiepileptic drug. It has been found that the plasma level of phenytoin in epileptic patients during the treatment of phenytoin in combination with antiepilepsirine seemed to be lower than that in the patients only receiving phenytoin.

Antiepilepsirine and phenobarbital decreased the anaesthetic effect of sodium thiopental and the plasma concentration of phenytoin in mice and rats.

An increase of cytochrome P-450 in liver homogenates induced by antiepilepsirine and phenobarbital in mice and rats was showed. The concentrations of cytochrome P-450 in liver homogenates in mice of control group, antiepilepsirine-treated group and phenobarbital-treated group were $335 \pm 5$, $487 \pm 7$ and $707 \pm 7$ nmol/g, respectively. It was demonstrated that antiepilepsirine inhibits a weaker drug enzyme induction in liver homogenates than phenobarbital does.

KEY WORDS antiepilepsirine; phenytoin; phenobarbital; enzyme induction; cytochrome P-450