PRELIMINARY COMMUNICATION

EFFECTS OF CYTOCHROME P-450 INDUCERS ON THE PERAZINE METABOLISM IN A PRIMARY CULTURE OF HUMAN HEPATOCYTES

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The metabolism of perazine in a primary culture of human hepatocytes after treatment of cells with TCDD (a CYP1A1/2 inducer) or rifampicin (mainly a CYP3A4 inducer) were studied in vitro. The concentrations of perazine and its main metabolites (perazine 5-sulfoxide, N-desmethylperazine) formed in hepatocytes were assayed in the extracellular medium using the HPLC method. TCDD and rifampicin induced the formation of perazine 5-sulfoxide, however, such an effect was not observed in the case of N-desmethylperazine. The accumulation of perazine 5-sulfoxide in the extracellular medium was enhanced until up to 4 h by rifampicin, and until up to 8 h by TCDD. After 24 h, perazine and perazine 5-sulfoxide were not detected in the extracellular medium of the inducer-treated cultures, except for perazine 5-sulfoxide in the TCDD-treated cultures. The obtained results indicate that CYP1A2 and CYP3A4 are involved in the perazine metabolism via 5-sulfoxidation pathway.

Key words: perazine, metabolism, human cytochrome P-450, inducers, hepatocytes

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