

P141. OXIDATIVE STRESS INDUCING EFFECTS OF PERFLUOROOCCTANOIC ACID IN KIDNEYS OF MICE AND POSSIBLE PROTECTIVE EFFECTS OF TAURINE AND COENZYME Q

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PFOA is an important environmental contaminant that is detected in serum samples of human and liver of numerous animals in many countries. The present study was designed to evaluate the possible oxidative stress inducing effects of perfluorooctanoic acid (PFOA) in kidney tissues of mice. Administration of 15 or 30 mg/kg, ig, PFOA to mice for 10 days caused a significant ($p \leq 0.02$) decrease in kidney tissue weights of animals. Both concentrations of PFOA significantly ($p \leq 0.02$) increased MDA, and decreased ($p \leq 0.02$) total glutathione levels. Activities of antioxidant enzymes glutathione peroxidase (GPx), catalase, and Cu-Zn-superoxide dismutase (Cu-Zn-SOD) increased following administration of 15 or 30 mg/kg PFOA. Pretreatment of mice with taurine or coenzyme Q10 did not provide a protection against oxidative stress inducing effects of PFOA. However, catalase activities were decreased significantly in taurine and coenzyme Q10 pretreated animals following 30 mg/kg PFOA administration. In addition, GPx and Cu-Zn-SOD activities were increased only in coenzyme Q10 pretreated animals. These results suggest that PFOA treatment introduces an oxidative stress in kidney tissues of mice.

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