

عنوان مقاله:

Oxidative stress, biochemical alterations, and hyperlipidemia in female rats induced by lead chronic toxicity during puberty and post puberty periods

محل انتشار:

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خلاصه مقاله:

Objective(s): Lead (Pb) is a toxic metal inducing many destructive effects leading to a broad range of physiological, biochemical, and neurological dysfunctions in humans and laboratory animals. **Materials and Methods:** Here, we investigated the effect of chronic exposure to Pb (50 mg/l) on oxidative stress, hepatotoxicity, nephrotoxicity, and lipid profile of two different age groups of female rats treated with Pb from delivery until puberty period (40 days, Pb40) and post puberty period (65 days, Pb65). **Results:** Our results clearly show that the administration of Pb produces oxidative damage in liver and kidney, as strongly suggested by the significant increase in TBARS, decrease in total SH, and the alteration of SOD activity. Elevation in liver function biomarkers, alanine aminotransferase (ALT) and aspartate aminotransferase (AST) and reduction in total protein (liver and plasma) and albumin are evidence of perturbations of liver synthetic function. In young Pb-treated group, Pb-induced nephropathy was more pronounced by the increase in the levels of creatinine, urea, and uric acid. However, hyperlipidemia was evident for both Pb-exposed groups leading to a potential risk for cardiovascular diseases and atherosclerosis. **Conclusion:** It is concluded that Pb induces metabolic and oxidative disturbances depending on the age of the animals, which are not negligible.

کلمات کلیدی:

Female, Hepatotoxicity Hyperlipidemia, Lead, Nephrotoxicity, Rat

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