

عنوان مقاله:

Antioxidative Effects of Nanocurcumin and Curcumin Against Aluminum Phosphide-induced Serum Oxidative Stress

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خلاصه مقاله:

Objectives: Aluminum phosphide (AIP) is the commonly used pesticide in agriculture, which induces oxidative stress in almost all major body systems and organs. The aim of this study was to evaluate the efficacy of nanocurcumin and curcumin on serum oxidative stress level in subacute toxicity with AIP. **Materials and Methods:** In this study 36 male Wistar rats (220-250 g) were randomly divided into six groups. Control (C) receiving normal saline; group AIPreceiving AIP (2 mg/kg daily); group Cur receiving curcumin (100 mg/kg daily); group Nano-cur receiving nanocurcumin (100 mg/kg daily); group AIP+ Cur receiving AIP (2 mg/kg daily) and curcumin (100 mg/kg daily); and group AIP and Nano-cur receiving AIP (2 mg/kg daily) and nanocurcumin (100 mg/kg daily). Serum total antioxidant capacity (TAC), lipid peroxidation (LPO), total thiol groups (TTG), and catalase (CAT) activity were measured. **Results:** AIP administration led to a significant increase in LPO, and decreased the CAT activity, TAC, and TTG compared to the control group ($P < 0.05$). Curcumin and nanocurcumin caused a significant decrease in the levels of LPO compared to the AIP-exposed groups ($P < 0.05$). Moreover, in the nanocurcumin-treated groups, compared to a poisoned group, TAC and TTG increased significantly ($P < 0.01$). There were no significant changes in CAT activity improvement. **Conclusion:** Nanocurcumin and curcumin improved the AIP-induced oxidative damage.

کلمات کلیدی:

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