

عنوان مقاله:

Protective effect of nanocurcumin on acetaminophen-induced hepatic and renal toxicities in pigeons

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خلاصه مقاله:

In this study, the effects of nanocurcumin on acetaminophen-induced acute hepatorenal toxicity in domestic pigeons (*Columba livia*) were investigated. Fifteen pigeons were randomly assigned into three groups. Group I was served as a negative control group and received tap water as a placebo. Pigeons in groups II and III were administered acetaminophen at the beginning of the experiment (hr 0). Group III was further treated with nanocurcumin, at 12 hr after acetaminophen administration, being continued every 12 hr for two days. The birds were observed for clinical signs of acute drug toxicity. Blood samples were collected from the pigeons at hr 0, 12, 24 and 48 of the experiment for biochemical analysis of the serum. The results showed that acetaminophen toxicity increased the serum levels of aspartate aminotransferase, alanine aminotransferase, urea and uric acid in the pigeons. Nanocurcumin treatment of acetaminophen intoxicated pigeons attenuated increases in biomarkers of the liver and kidney functions towards control levels. Also, the consumption of nanocurcumin minimized histopathological changes in the liver and kidney. A mortality of 60.00% was seen in the acetaminophen-induced toxicity group; while, none of the birds treated with nanocurcumin died. It can be concluded that nanocurcumin alleviates the acetaminophen-induced acute toxic liver and kidney damages, which can lead to pigeon mortality.

کلمات کلیدی:

Acetaminophen, Serum biochemistry, Nanocurcumin, domestic pigeon

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