

عنوان مقاله:

The protective effect of nano-curcumin in experimental model of acute pancreatitis: The involvement of TLR4/NF-kB pathway

محل انتشار:

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خلاصه مقاله:

Objective(s): The objective of the present study is to explore whether Nanocurcumin improves pancreatic inflammation through the inhibition of the TLR4/NFkB signaling pathway in cerulein-induced acute pancreatitis. **Methods:** Acute pancreatitis was induced by five intraperitoneal (i.p.) injection of cerulein (50 µg/kg) with 1h intervals. Vehicle and nanocurcumin (100mg/kg/day) were given to the animals by oral gavage six days before the induction of pancreatitis. The last dose was administered 1 hour before pancreatitis induction. The serum level of amylase and lipase and the tissue level of MPO enzymes were assessed by biochemical analysis. Microscopic lesions were examined. In addition, the expression level of TLR4, NF-kB p65 and TNF-α proteins were measured by western blotting analysis. **Results:** Nanocurcumin reduced the microscopic lesions. In addition, the drug decreased the level of amylase, lipase and MPO enzymes. Furthermore, nanocurcumin inhibited the cerulein-induced expression of TLR4, NF-kB p65 and TNF-α proteins. **Conclusion:** It is suggested that the anti-inflammatory effect of nanocurcumin on .cerulein-induced acute pancreatitis may involve the inhibition of the TLR4/NFkB signaling pathway

کلمات کلیدی:

Nanocurcumin, Acute pancreatitis, Cerulein, TLR4/NF-kB pathway

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