

عنوان مقاله:

Dexamethasone Blunts Lung Inflammation in Cholestatic Mice

محل انتشار:

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خلاصه مقاله:

Cholestasis/cirrhosis is a multifaceted clinical complication that influences many organs, including the liver, kidney, heart, skeletal muscle, and lung. Cirrhosis-associated lung injury could lead to severe and lethal consequences, including acute respiratory syndrome and patient death. Unfortunately, there is no specific pharmacological intervention to manage cholestasis-induced lung injury. It has been revealed that severe inflammation and its associated complications, such as oxidative stress, are involved in the pathogenesis of cholestasis-associated pulmonary damage. The current study was designed to evaluate the role of dexamethasone (DXM) on lung inflammation in cholestatic mice. For this purpose, bile duct ligated (BDL) mice received DXM (1 and 2.5 mg/kg, i.p., 2 times/week) for 14 days. On day 15, the bronchoalveolar lavage fluid (BALF) was prepared. Several markers, including inflammatory cell infiltration, TNF- α , and IgG, were assessed in the BALF of BDL animals. Significant infiltration of

inflammatory cells along with increased TNF- α and IgG were detected in the BALF of BDL mice (۱۴ days after surgery). Moreover, significant ROS formation, glutathione depletion, lipid peroxidation, and protein carbonylation were evident in the lung tissue of the BDL group. It was found that DXM (۱ and ۲.۵ mg/kg) significantly blunted inflammation and oxidative stress in the lung of cholestatic mice. Moreover, lung tissue histopathological changes, including inflammatory cell infiltration, were significantly mitigated in DXM-treated mice. These data offer the potential therapeutic effects of DXM against cholestasis-related complications. Therefore, patients with cholestasis-induced lung injury might benefit from repurposing DXM in clinical settings

کلمات کلیدی:

Bile acid, Inflammation, Lung injury, Oxidative stress, Pulmonary disease

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