

عنوان مقاله:

Evaluation of the Effects of Caffeic Acid Phenethyl Ester on Prostaglandin E₂ and Two Key Cytokines Involved in Bleomycin-induced Pulmonary Fibrosis

محل انتشار:

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خلاصه مقاله:

Objective(s): Pulmonary fibrosis (PF) is the most common outcome of a collection of diverse lung disorders known as interstitial lung diseases. It is proposed that alterations in the levels of fibrogenic mediators and the profibrotic/antifibrotic imbalance play a substantial role in the progression of PF in animal models and possibly in humans. Caffeic acid phenethyl ester (CAPE), an active component of propolis, has numerous biological effects. In the present study, the main objective was to investigate the effects of CAPE on some key mediators including TGF- β ₁, TNF- α and prostaglandin E₂ (PGE₂) involved in profibrotic/antifibrotic balance and pathogenesis of idiopathic pulmonary fibrosis (IPF). **Materials and Methods:** In this study, forty male Sprague–Dawley rats were divided into 5 groups (n=8). (1) "Bleomycin (BLM)-treated (Model) group": BLM (5 mg/kg, single intratracheal dose), (2) "Saline-treated group": the rats were given only saline, (3) "Treatment-1 group": BLM + CAPE (5 μ mol/kg/day, 28 days, IP), (4) "Treatment-2 group": BLM + CAPE (10 μ mol/kg/day, 28 days, IP) and (5) "Vehicle + CAPE group": CAPE (10 μ mol/kg/day, 28 days, IP). **Results:** BLM could significantly increase the levels of TNF- α and TGF- β ₁ and decrease the PGE₂ concentration compared to the saline control group. CAPE could considerably improve these values almost

close to normal levels. Conclusion: Briefly, CAPE can be suggested as a novel, attractive and effective agent for prevention and treatment of pulmonary fibrosis

کلمات کلیدی:

Bleomycin CAPE Cytokine Pulmonary Fibrosis PGE₂ TGF-β₁ TNF-α

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