عنوان مقاله:

عصاًره سورفکتانت ریوی گوساله از ریه خرد شده منجر به ترشح IFN-γ و TGF-β از سلول های تک هسته ای خون محیطی می شود: یک پاسخ تنظیمی برای ریه

محل انتشار:

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خلاصه مقاله:

BACKGROUND: Inflammatory reactions in pathophysiologic conditions of lung are a critical problem in the treatment process, which in some cases lead to death, particularly in neonate. Exogenous lung surfactant has been considered as a candidate to treatment of inflammation in the lungs. OBJECTIVES: The aim of this study is to examine the efficacy of this substance in vivo and in vitro. METHODS: Calf lung surfactant extract (CLSE) was obtained from freshly slaughtered calves' minced isolates. For in vivo study: the New Zealand white rabbits as appropriate animal model were treated with formulated CLSE, then peripheral blood mononuclear cells (PBMC) were collected and the level and gene expression of IL-10, IL-6, IL-1 β , IFN- γ and TGF- β were assessed before and after surfactant treatment for 30 days. In vitro study: four different formulated drug concentrations were added to rabbit PBMC and cytokines level and gene expression were evaluated. RESULTS: Our results indicate that IFN- γ and TGF- β increased at 24, 48 and 72 h which were statistically significant compared to baseline. While, IL-6 and IL-1 β also started to decrease, IFN- γ and TGF- β increased due to surfactant therapy which reached its maximum expression after 7 days. CONCLUSIONS: This study suggested that CLSE could contribute in reducing pathology effects of pro-inflammatory cytokines by inducing regulatory response in lung which can be used as auxiliary and protective drug in respiratory .

كلمات كليدى:

Calf lung surfactants extract, cytokines level, exogenous lung surfactant, regulatory response

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