

題名:Up-regulation of Connective Tissue Growth Factor in Hyperoxia-Induced Lung Fibrosis.

作者:陳中明

Chen CM; Wang LF; Chou HC; Lang YD; Lai YP

貢獻者:小兒學科

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摘要:Pulmonary oxygen toxicity plays an important role in the lung injury process that leads to the development of bronchopulmonary dysplasia. Connective tissue growth factor (CTGF) is a fibroblast mitogen and promoter of collagen deposition. We investigated the effects of postnatal hyperoxia on lung collagen and CTGF expression in rats. Rat pups were exposed to 7 d of >95% O₂ and a further 3 wk of 60% O₂. CTGF mRNA and protein expression increased after hyperoxia treatment, and the values were significantly higher in hyperoxia-exposed rats on postnatal d 7 and 14. Lung collagen levels increased as rats aged, and the values were comparable between room air-exposed and hyperoxia-exposed rats on postnatal d 7 and 14 and were significantly higher in hyperoxia-exposed rats on postnatal d 21 and 28. Increases in CTGF mRNA and protein expressions preceded the onset of increased lung collagen. These data demonstrate that CTGF is up-regulated at time points preceding the fibrotic phase of the lung injury adding credence to the hypothesis that CTGF seems to be involved in the pathogenesis of hyperoxia-induced lung fibrosis and an anti-CTGF strategy might attenuate hyperoxia-induced lung fibrosis.