

عنوان مقاله:

PKCa Agonists Enhance the Protective Effect of Hyaluronic Acid on Nitric Oxide-Induced Apoptosis of Articular Chondrocytes in Vitro

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خلاصه مقاله:

Objective(s): Protein kinase C (PKC α) is involved in modulating articular chondrocytes apoptosis induced by nitric oxide (NO). Hyaluronic acid (HA) inhibits nitric oxide-induced apoptosis of articular chondrocytes by protecting PKC α , but the mechanism remains unclear. The present study was performed to investigate the effects and mechanisms of PKC α regulate protective effect of hyaluronic acid. Materials and Methods The ratio of apoptotic cell and cell viability was surveyed by PCNA and MTT assay. The expression of caspase-3 was determined by real-time PCR and western blot. Results: It was showed that HA was able to reduce the nuclei fragment and PCNA expression, and NO-induced articular apoptosis blocked by HA, pretreated chondrocytes with PMA, HA significantly inhibits the activation of caspase-3 induced by NO, but pretreatment with CHR, HA significantly increased the expression of caspase-3. Conclusion: The results may be showed that PKCa regulate the expresion of caspase-3, which contribute to the apoptosis of chondrocytes induced by NO. PKC α agonists enhance the protective effect of hyaluronic acid on nitric oxide-induced articular chondrocytes apoptosis.

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