



Effects of sinusoidal endothelial cell conditioned medium on the expression of connective tissue growth factor in rat hepatic stellate cells

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Abstract

AIM: To investigate the effects of sinusoidal endothelial cell (SEC) conditioned medium on the expression of connective tissue growth factor (CTGF) in rat hepatic stellate cells (HSC).

METHODS: By *in situ* collagenase perfusion and two-step Percoll gradient centrifugation, SECs were isolated and cultured from

normally and CCl₄ treated Wistar rats, and the SEC conditioned media were collected. HSCs were prepared from Wistar rats by *in situ* perfusion and single step Nycodenzgradient, and were cultured with SEC conditioned media. Expression of CTGF in HSC was assessed using reverse transcription polymerase chain reaction (RT-PCR).

RESULTS: Expression of CTGF was not found in freshly isolated HSC and in primary culture of HSC on day 4 with SEC conditioned media from normal rats, but was present in primary culture of HSC on day 4 with SEC conditioned media from CCl₄ induced liver fibrosis rats. Expression of CTGF was observed in culture-activated HSCs, and the effect of SEC conditioned media from CCl₄ induced liver fibrosis rats on the expression of *CTGF* gene in activated HSCs was not significant.

CONCLUSION: Expression of CTGF might be relative to the activation of HSC and the liver fibrogenesis, and damaged SECs play a very important role in the early stage of activation of HSC.

Key words: Sinusoidal endothelial cell; Hepatic stellate cell; Connective tissue growth factor; Culture media; Clostridium histolyticum collagenase; Polymerase chain reaction

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