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Effects of Rhus Verniciflua Strokes Extracts snd its Components on the Proliferation, Collagen Synthesis, and the Mrna Level of Hepatic Fibrosis Related Proteins in Rat Hepatic Stellate Cells.

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Hepatic stellate cells (HSC) and the derived myofibroblasts are known to play a central role in liver fibrosis. Rhus verniciflua Strokes (RVS) has traditionally been used in Korea herbal medicine for a stomachic tonic. In this study, we observed the effect of RVS acetone extract (Ra) on the proliferation, the collagen synthesis, and hepatic fibrosis related proteins mRNA levels in HSC-T6 cells which is a fully activated rat hepatic stellate cell line. Ra inhibited the proliferation and decreased the content of collagen in the HSC-T6 cells. The mRNA levels of TGFβ1, Timp-1 and procollagen 1a1 were significantly reduced by Ra treatment. We isolated the active components of Ra by column chromatography, HPLC and determined five structures which are butein, fustin, sulfuretin, ficetin and 3,4-dihydroxybenzoic acid by ^{1}H-NMR and ^{13}C-NMR. The anti-fibrotic activity of each component of Ra was not excellent in compared with that of total Ra judging by collagen excretion and mRNA levels of hepatic fibrosis related proteins. Collectively, Ra inhibited hepatic stellate cell proliferation and collagen synthesis that might have a protective role against liver fibrosis.

Keyword : Rhus verniciflua Strokes, antihepatofibric effect, rat hepatic stellate cell