



Salvianolic Acid A Inhibited Angiotensin II-Induced Proliferation of Vascular Smooth Muscle Cells by Restraining Src and Akt Phosphorylation

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SUMMARY. The purpose of this study is to investigate the inhibitive effect of salvianolic acid A (SAA) on angiotensin II-induced proliferation in rat aortic vascular smooth muscle cells (VSMCs) and the possible mechanisms. The objects of study are divided into control group, angiotensin II group, SAA group and angiotensin II + SAA group (12.5, 25, 50, 100, and 200 μ M). Compared with control group, angiotensin II could significantly increase the proliferation of VSMCs and SAA markedly decreased the quantity of VSMCs. The levels of p-Src, p-Akt308 and p-Akt473 expression in angiotensin II +SAA group were significantly lower than those of angiotensin II group in a concentration-dependent fashion. In addition, with the extension of time, the expressions of p-Src, p-Akt 308 and p-Akt 473 were significantly lower than those of angiotensin II group in a time-dependent fashion. SAA could inhibit angiotensin II-induced proliferation of VSMCs in concentration and time-dependent fashions, the effects were carried out through decreasing the activation of p-Src and p-Akt.

RESUMEN. El propósito de este estudio es investigar el efecto inhibitor del ácido salvianólico A (ASA) sobre la proliferación inducida por angiotensina II en las células de músculo liso vascular (CMLV) de aorta de rata y sus posibles mecanismos. Los animales fueron divididos en grupo control, grupo de la angiotensina II, grupo SAA y grupo angiotensina II + SAA (12.5, 25, 50, 100 y 200 μ M). En comparación con el grupo control, la angiotensina II podría aumentar significativamente la proliferación de CMLV y ASA disminuir notablemente la cantidad de CMLV. Los niveles de expresión de p-Src, p-Akt 308 y p-Akt 473 fueron significativamente menores en angiotensina II + grupo de SAA que los del grupo de la angiotensina II de manera dependiente de la concentración. Además, con la extensión de tiempo, las expresiones de p-Src, p-Akt 308 y p-Akt 473 fueron significativamente menores que los del grupo de la angiotensina II. SAA podría inhibir la proliferación de CMLV inducida por la angiotensina II tanto en formas dependientes de la concentración como del tiempo, efectos debidos a la disminución de la activación de p-Src y p-Akt.

KEY WORDS: Angiotensin II, P-Src, P-Akt, Proliferation, Salvianolic acid A, Vascular smooth muscle cells.

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