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Fosinopril Improves Liver Fibrosis by Upregulating ACE2/Angiotensin-(1-7) Axis Activation in Rats with Nonalcoholic Steatohepatitis

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***SUMMARY*. The aim of this research was to evaluate the effect of the angiotensin converting enzyme (ACE) inhibitor fosinopril on liver fibrosis in rats with high fat diet (HFD) induced nonalcoholic steatohepatitis (NASH). We found that treatment with fosinopril improved liver fibrosis. Moreover, treatment with fosinopril decreased serum Angiotensin (Ang) II, leptin, transforming growth factor β1 and hyaluronic acid concentrations, increased serum ACE2, Ang-(1-7), and adiponectin concentrations in rats fed with HFD. In the liver, fosinopril led to decreased leptin, α-smooth muscle actin, and collagen I expression, increased ACE2 and adiponectin expression. In conclusion, Fosinopril improves liver fibrosis by upregulating ACE2/Ang-(1-7) axis activation in rats with HFD-induced NASH. Furthermore, fosinopril might regulate the progression of liver fibrosis through the downregulation of leptin and the upregulation of adiponectin.**

KEY WORDS: Adiponectin, Angiotensin converting enzyme 2, Fosinopril, Leptin, Liver fibrosis, Non-alcoholic steatohepatitis.

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