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عنوان مقاله:

Atractylodes chinensis volatile oil up-regulated IGF-1 to improve diabetic gastroparesis in rats

محل انتشار:

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خلاصه مقاله:

Objective(s): Diabetic gastroparesis (DGP) is one of the main complications of diabetes, and more than half of diabetes cases are accompanied by gastroparesis. This study aims to explore the effect of Atractylodes chinensis volatile oil (ACVO) on DGP rats.Materials and Methods: The rats were injected with STZ combined with a high-sugar and high-fat diet in an irregular manner to establish the DGP model. ACVO at different doses (9.1) mg/kg, 1λ.Y^m mg/kg, and ^w۶.F^Δ mg/kg) were given by intragastric administration. A mixture of cisapride and metformin was used as the positive control. At the end of the experiment, gastric emptying and intestinal propulsion were determined. Then the tissue samples and blood were taken from each group for serum analysis, western blot and immunopathological examination. Results: After treatment with ACVO, body weight increased and blood glucose decreased when compared with rats in the DGP group. Gastric emptying and intestinal propulsion were accelerated, and gastric acid secretion increased. The serum insulin-like growth factor-1 (IGF-1) level was increased. Protein expressions and positive cells of IGF-1 receptor (IGF-1R), acetylcholine transferase (CHAT), and stem cell factors (SCF) in the stomach were significantly increased determined by western blot and immunofluorescence staining. The morphology and the

number of interstitial cells of Cajal (ICCs) in the stomach were restored, determined by hematoxylin and eosin staining and immunohistochemical staining, respectively. Conclusion: ACVO effectively alleviated DGP in rats, and its .mechanism may be related to the up-regulation of IGF-1/IGF-1R signaling

كلمات كليدى: Atractylodes, Gastroparesis, Insulin-Like Growth Factor I, Interstitial cells of Cajal, Stem cell factor

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