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EDITORIAL

- 471 Renin-angiotensin system blockers-SGLT2 inhibitors-mineralocorticoid receptor antagonists in diabetic kidney disease: A tale of the past two decades!
Singh AK, Singh R

REVIEW

- 482 Fetal programming of obesity and type 2 diabetes
Seneviratne SN, Rajindrajith S
- 498 Biochemical composition of the glomerular extracellular matrix in patients with diabetic kidney disease
Adeva-Andany MM, Carneiro-Freire N

ORIGINAL ARTICLE

Retrospective Cohort Study

- 521 Association between urinary concentrations of bisphenol A substitutes and diabetes in adults
Moreno-Gómez-Toledano R, Vélez-Vélez E, Arenas MI, Saura M, Bosch RJ

Retrospective Study

- 532 Efficacy and mechanism of anti-vascular endothelial growth factor drugs for diabetic macular edema patients
Li YF, Ren Q, Sun CH, Li L, Lian HD, Sun RX, Su X, Yu H

Observational Study

- 543 Elevated levels of fructosamine are independently associated with SARS-CoV-2 reinfection: A 12-mo follow-up study
Huang XY, Yang LJ, Hu X, Zhang XX, Gu X, Du LJ, He ZY, Gu XJ

- 553 Factors associated with trabecular bone score in postmenopausal women with type 2 diabetes and normal bone mineral density
Fazullina ON, Korbut AI, Klimontov VV

Prospective Study

- 566 Relationship between quality of life and adolescent glycolipid metabolism disorder: A cohort study
Liang XH, Ren YL, Liang XY, Chen JY, Qu P, Tang X

LETTER TO THE EDITOR

- 581 More studies are necessary to establish the effectiveness of Jinhuang powder in the treatment of diabetic foot
Ye YW, Yan ZY, He LP, Li CP

- 584** Epidemiology for public health practice: The application of spatial epidemiology

Liu L, Nagar G, Diarra O, Shosanya S, Sharma G, Afesumeh D, Krishna A

ABOUT COVER

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More studies are necessary to establish the effectiveness of Jinhuang powder in the treatment of diabetic foot

Ya-Wen Ye, Zi-Yun Yan, Lian-Ping He, Cui-Ping Li

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Abstract

Diabetes mellitus is a common global public health problem that can cause serious illness and premature death. Diabetic foot ulcer, one of the complications of diabetes, is a major cause of morbidity and mortality and is associated with many other devastating complications. Previous study found that a group of traditional Chinese medicine (TCM) can be used for treating diabetic foot ulcers. More and more attention is being paid to the use of Chinese medicine to heal diabetic feet. Under the guidance of relevant theories of traditional Chinese medicine, more studies are needed to reveal the key active components and related signal pathways of TCM in the treatment of diabetic foot ulcer. One clinical study explored the treatment of diabetic foot with infection combined moist exposed burn ointment with Jinhuang powder. However, large-scale multi-center, double blind, randomized, placebo-controlled clinical trials and animal studies are necessary to establish the effectiveness of Jinhuang powder in the treatment of diabetic foot.

Key Words: Diabetic foot; Jinhuang powder; Traditional Chinese medicine

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Core Tip: In recent years, most diabetic foot patients in China are adopting traditional Chinese medicine and western medicine. The short duration of clinical follow-up was not sufficient to explain the efficacy of the treatment, and the safety of the treatment was not mentioned. Large multicenter, double-blind, randomized, placebo controlled clinical trials and animal studies are necessary to determine Jinhuang powder as supplement combined with other Chinese medicine or western medicine as an effective and safe therapy for diabetic foot.

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TO THE EDITOR

This is a comment on “This is a comment on “Clinical Study of moist exposed burn ointment (MEBO) Combined with Jinhuang powder for Diabetic Foot with Infection”[1]. We were pleased that read the research article by Hong-Bo Zhan, *et al*[1]. Their work highlights that the use of Jinhuang powder as supplement combined with MEBO as an effective and safe therapy for diabetic foot. This study provides important clues to the treatment of foot infection, ulcer.

Diabetic foot ulcers are one of the most challenging complications of diabetes[2-4]. Previous study found that a group of traditional Chinese medicine (TCM) (*e.g.*, herbal medicine foot bath decoction[5], TCM injections[6,7], Chinese herbal medicine ulcer oil[8], moxibustion[9], Astragali Radix and Rehmanniae Radix Mixture[10], the peptide compounds of Wuguchong[11], Astragali Radix and Rehmanniae Radix[12,13]) played an important role in the treatment of the disease. Some study also found that interventional radiology plays a crucial role in the treatment of diabetic foot disease[14]. However, the study only focuses on Jinhuang powder has improved the efficacy and safety of MEBO in the treatment of diabetic foot. Thus, some questions still need further be discussed.

In recent years, most diabetic foot patients in China are adopting TCM and western medicine[5,15]. A series of systematic review articles showed that TCM can increase the clinical effective rate of conventional therapies by 27%[6], regulate the signaling pathways to promote diabetic wound healing[16]. An experiment on albino Wistar rats found that Astragali Radix and Rehmanniae Radix in the ratio of 2:1 significantly enhance the circulating CD34+/VEGFR2+/CD45-EPCs levels in diabetic foot ulcer[17]. Another study confirmed the effect of the peptide compounds of Wuguchong in treating diabetic ulcers to a certain extent[11]. However, therapeutic effect criterion is observing wound surface and assessing degree of pain. The research evaluation index was single and lacked objective evaluation.

Another problem of this study was research design. It was only a single-center trial, no double blindness, no placebo group. The short duration of clinical follow-up was not sufficient to explain the efficacy of the treatment, and the safety of the treatment was not mentioned. Large multicenter, double-blind, randomized, placebo controlled clinical trials and animal studies are necessary to determine Jinhuang powder as supplement combined with other Chinese medicine or western medicine as an effective and safe therapy for diabetic foot.

Increasing attention is being given to the use of Chinese medicine for healing diabetic foot. Under the guidance of relevant theories of TCM, more studies are needed to reveal the key active components and related signal pathways of TCM in the treatment of diabetic foot ulcer, so as to promote the further research and clinical application of TCM[16].

Overall, MEBO combined with Jinhuang powder is more effective than MEBO alone in treating diabetic foot. However, large-scale multi-center, double blind, randomized, placebo-controlled clinical trials and animal studies are also necessary to establish the effectiveness of Jinhuang powder in the treatment of diabetic foot.

FOOTNOTES

Author contributions: Li CP and He LP conceived of the presented idea and provided critical feedback to the final manuscript; Li CP, Ye YW and Yan ZY wrote and revised the manuscript; Li CP and He LP approved the main conceptual ideas and proof outline; all authors provided final edits and approved the manuscript.

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