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LETTER

Comment on the Use of Gegen Qinlian Decoction to Treat Type 2 Diabetes Mellitus [Letter]

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Dear editor

I sincerely commend Xiaomin Kang and his research team for their in-depth and meticulous investigation into the therapeutic effects of Gegen Qinlian decoction (GQD) on type 2 diabetes mellitus (T2DM). Their study, which comprised three highly rigorous randomized double-blind clinical trials, thoroughly explored the dose adjustments of Pueraria (Gegen) and Coptis (Huanglian). Through this exploration, they evaluated various efficacy-related indicators and clearly identified Coptis as the pivotal component within GQD.[1] T2DM is a highly prevalent chronic metabolic disorder. Kang's study underscores the remarkable potential of GQD, a classical formula, in effectively controlling blood glucose levels and alleviating related symptoms. This research enriches the existing theoretical frameworks and refines our understanding of the dose-effect relationship. However, there are limitations in the external validity and scientific rigor of the experimental design, which require further validation and optimization. Such efforts are essential to enhance the accuracy, safety, and clinical applicability of the research findings.

Firstly, although the study compared different doses of GQD, the absence of a Western medication control group, such as using metformin or SGLT-2 inhibitors, severely restricts our ability to objectively evaluate the efficacy of GQD in comparison with first-line hypoglycemic agents.[2] Consequently, the clinical value and the potential advantages of GQD over conventional therapies remain rather ambiguous. Secondly, the long-term impact of GQD on diabetes-related complications was not considered. The study mainly focused on the reduction of glycated hemoglobin (HbA1c) but neglected to assess the effects of GQD on diabetic nephropathy, cardiovascular diseases, retinopathy, and other complications. It is important to note that achieving glycemic control does not necessarily mean a reduction in the risk of complications. In fact, some hypoglycemic agents may lower HbA1c levels while paradoxically increasing the risk of developing complications.[3] Therefore, future studies should incorporate long-term follow-up investigations to determine whether GQD can effectively mitigate the incidence of diabetic complications. Finally, the influence of lifestyle interventions was inadequately addressed. Although all participants received dietary and exercise guidance, the study lacked detailed documentation regarding the standardization of these interventions and the proportional impact of these factors on HbA1c changes. Variables such as dietary composition, physical activity levels, and stress management can significantly confound the research outcomes.[4] Thus, it remains uncertain whether the observed reduction in HbA1c was due to GQD, lifestyle modifications, or a combination of both. Subsequent research should use tools such as dietary logs and activity monitors to accurately quantify the contributions of lifestyle factors, thereby improving the scientific rigor of the research.

In summary, while this study provides valuable insights into the role of GQD in T2DM management, its limitations pose challenges when translating the research conclusions into real-world clinical practice. Addressing these gaps will not only strengthen the evidence base but also facilitate the safer and more effective application of GQD in the treatment of T2DM.

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