INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Effects and safety of Ginkgo biloba on blood metabolism in type 2 diabetes mellitus: a systematic review and meta-analysis

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Review question / Objective: **Since the harmfulness and high prevalence of type 2 diabetes mellitus (T2DM), we tried to analyze the effects and safety of Ginkgo biloba (GKB) on T2DM patients.**
Eligibility criteria: **Studies were eligible if they contained the following information: random control trails or observational studies reporting blood metabolism: hematological parameters, lipid profile, glycemic control markers and adverse events.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 25 May 2023 and was last updated on 25 May 2023 (registration number INPLASY202350096).

INTRODUCTION

Review question / Objective: **Since the harmfulness and high prevalence of type 2 diabetes mellitus (T2DM), we tried to analyze the effects and safety of Ginkgo biloba (GKB) on T2DM patients.**

Condition being studied: **We compared T2DM patients and healthy people.**

METHODS

Participant or population: **We compared T2DM patients and healthy people.**

Intervention: **Ginkgo biloba.**

Comparator: **Hematological parameters of T2DM patients maintained treated with GKB extract and placebo. (A) Plasma**

viscosity (mPa /s). (B) Hematocrit (%). (C) Velocity of dorsalis pedis artery (m/s). (D) Ankle brachial index.

Study designs to be included: RCT.

Eligibility criteria: Studies were eligible if they contained the following information: random control trails or observational studies reporting blood metabolism: hematological parameters, lipid profile, glycemic control markers and adverse events.

Information sources: PubMed, Scopus, Embase, Google Scholar, Web of Sciences, Cochrane Library and China National Knowledge Infrastructure.

Main outcome(s): Hematological parameters of T2DM patients maintained treated with GKB extract and placebo. (A) Plasma viscosity (mPa /s). (B) Hematocrit (%). (C) Velocity of dorsalis pedis artery (m/s). (D) Ankle brachial index.

Quality assessment / Risk of bias analysis: The quality of the included studies was evaluated by two independent reviewers using the ROB 2.0 scale (A revised Cochrane risk-of-bias tool for randomized trials).

Strategy of data synthesis: Using the Cochrane Q statistic and Higgins and Thompsons' I^2, we evaluated heterogeneity. I^2 was used to categorize heterogeneity as low, moderate, or high depending on its value: 25%, 50%, or 75%. The fixed-effect model was utilized for the meta-analyses considering I^2 was less than 50%, if not the random-effects model was used. More specifically, data for standard mean difference (SMD) with 95% CI was retrieved or recalculated for effect sizes of continuous outcomes.

Subgroup analysis: None.

Sensitivity analysis: We performed a sensitivity analysis to evaluate the final results' robustness further.

Country(ies) involved: China and Iraq.

Keywords: Ginkgo biloba; GKB; Type 2 diabetes mellitus; T2DM; meta-analysis.

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