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Abstract

Ethnopharmacological relevance:

Fenugreek is a widely used herb for the treatment of diabetes mellitus (DM) but the effects in randomized controlled trials (RCTs) were controversial. Therefore, a meta-analysis was conducted to estimate the overall effects of fenugreek on hyperglycaemia and hyperlipidemia in diabetes and prediabetes.

Materials and methods:

PubMed, EMBASE, web of science, Chinese Biomedical Literature database (CBM), the Cochrane library, China Doctor Dissertations Full-text Database (CDFD), Wan Fang medical database, China Proceedings of Conference Full-text Database (CPCD), China national knowledge internet (CNKI) and China Master's Theses Full-text Database (CMFD) were searched to find the available literatures. RCTs with regard to the efficacy and safety of fenugreek on prediabetes or DM were included. The data of fasting blood glucose (FBG), postprandial 2h blood glucose (2hBG), glycosylated hemoglobin (HbA1c), triglyceride (TG), total cholesterol (TC), low density lipoprotein cholesterol (LDL-c) and high density lipoprotein cholesterol (HDL-c) were extracted to appraise the net change with fixed or randomized effect model.

Results:

A total of 10 articles (12 studies) were included in the analysis. Pooled results showed fenugreek significantly decreased the levels of FBG (MD -0.84 mmol/L; 95% CI -1.38 to -0.31; p=0.002), 2hBG (MD -1.30 mmol/L; 95% CI -1.78 to -0.83; $p < 0.0001$), HbA1c (MD -1.16; 95% CI -1.23 to -1.09; $p < 0.00001$) and TC (MD -0.30