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Abstract

Abelmoschus esculentus (okra) in regulation of hyperglycaemia in pre-diabetic and type 2 diabetic patients: Meta-analysis

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Abstract: This study investigated the beneficial effects of okra on glycaemic control in pre-diabetes and type 2 diabetes mellitus (T2D). MEDLINE and Scopus were searched for relevant studies. Search followed an updated preferred reporting items for systematic review and meta-analysis. Collected data were analysed using Review Manager version 5.4, metaHun and reported as mean difference and 95% confidence intervals (CI). Eight clinical studies, including 331 patients with pre-diabetes and T2D, were eligible. Our findings showed that okra treatment reduced the levels of fasting blood glucose, mean difference (MD) = −14.70 mg/dL; 95% CI (-25.46, −3.95, p = 0.0074); I^2 = 34.6%, p = 0.17 compared to placebo. Glycated haemoglobin, however, did not differ significantly between the groups: MD = 0.01%; 95%CI (-0.63, 0.65, p = 0.9767); I^2 = 42%, p = 0.26. This study revealed an improved glycemic control following okra treatment in pre-diabetes and T2D patients. The findings suggest that okra may be used as a supplemental dietary nutrient, especially in pre-diabetic and T2D patients due to its potential to regulate hyperglycaemia.

Keywords: okra; antioxidant; type 2 diabetes; inflammation; hyperglycaemia; pre-diabetes

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