

Retrospective study on the use of bitter melon for type 2 diabetes at Dansai Crown Prince Hospital, Thailand

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Bitter melon (*Momordica charantia*) is a member of Curcubitaceae family. This plant grows in Thailand and tropical area including Asia, Africa, and South America. It has been widely used as herbal medicine for lowering blood glucose levels^{1, 2}. Fruits of bitter melon have been reported to exhibit hypoglycemic effect in normal and diabetic animals³⁻⁶. The hypoglycemic activity of bitter melon are proposed to act via both pancreatic and non-pancreatic mechanisms including increased insulin secretion,⁷ increased glucose uptake in tissues⁸ as well as improving liver and muscle glycogen storage⁸. Moreover, the plant has been found to improved the activity of some key enzymes in glycolytic pathway⁹ and to regenerate or recover injured beta-cells¹⁰. These mechanisms might augment the effects of other hypoglycemic drugs.

Dansai Crown Prince Hospital is located in the north-eastern part of Thailand. This community-based hospital routinely cares for 1,532 patients with diabetes. In its practice, bitter melon had been used as an adjunct to other antidiabetic treatments for 8 years. The retrospective study of the use of bitter melon in this hospital will give additional insights regarding the information of clinical use, hypoglycemic effect and adverse events related to this herbal medicine.

Keyword: *Momordica charantia*, bitter melon, hypoglycemic effect, diabetes mellitus

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