MINISTRY OF EDUCATION AND SCIENCES OF MONGOLIA
HEALTH SCIENCES UNIVERSITY OF MONGOLIA

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A PILOT STUDY ON ANTI-DIABETIC POTENTIAL OF CHURU-5

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SUMMARY

Background

The number of patients with type 2 diabetes is increasing rapidly in both developed and developing countries around the world.In many cases, scientific studies have validated the anti-diabetic nature of plant-based medicines.A large number of plants have proved their efficacy in management of diabetes especially hyperglycemia.

Churu-5 compound isused for the treatment of diabetes in traditional medicine. It is composed of *Phyllanthus emblica* Linn., *Curcuma longa* Linn., *Berberies aristata* Berberidaceae, *Thlaspiarvense* L.and *Tribulus terristris* L. Recent studies have shown the antidiabetic effects of all ingredients of Churu-5 tablet except of *Thlaspi arvense* although there is no study done on Churu-5 tablet. In this study, we conducted a pilot study to investigate the efficacy of a Bhutanese herbal formula, Churu-5 tablet, in treating patients with type 2 diabetes mellitus.

Methods

The subjects included in this study are those who are between the ages of 18 to 69 years. Thirty patients with type 2 diabetes mellitus received 3 tablets (500 mg/tab) ofChuru-5 three times daily for 28 days.

The primary outcome was change in glycemic control as evidenced by fasting blood glucose and 2 h postprandial blood glucose (PPBG). Other measures included body mass index (BMI), waist circumference, body weight,and diabetic symptoms such as polyuria, polyphagia, polyphasia, and fatigue. Diabetes symptoms were evaluated by using visual analogue scale. Traditional body constitutions were determined using specific table which consist of physical observation, pulse reading and questionnaire. The visits and the evaluations were done at the screening (visit O), 0^{th} day (visit 1; baseline), 7^{th} day (visit 2; 1^{st} week), and 14^{th} day (visit 3; 2^{nd} week), 21^{st} day (visit 4; 3^{rd} week), 28^{th} day (visit 5; 4^{th} week) and 35^{th} day (visit 6; 5^{th} week) was a week waited for adverse reaction report.

Results

In patients receiving Churu-5 tablet, fasting blood glucose was not significantly different (p=0.330) compared to baseline (153±22.1 mg/dl) after 28days of treatment (148±31.2mg/dl). There was a significant difference (p=0.039) in the mean levels of 2

h PPBG between the baseline (221±21.7mg/dl) and at day 28 of Churu-5 tablet treatment (208±36.5mg/dl). Mean level of BMI decreased significantly at day 14,

day 21and day 28 comparing to the baseline. Body weightof patients decreased slightly after the treatment with Churu-5 tablet. Diabetic symptoms were significantly decreased by Churu-5 tablet beginning at 7 days post treatment. Mean levels of waist and hip circumferences were not significantly different between the baseline and after treatment.33.3% of the patients had phlegm dominant and 33.3% had wind dominant body constitutions.

Conclusions

1. The present pilot-study shows that the traditional medicine Churu-5 tablet has improved PPBG level in adults with diabetes mellitus type 2.
2. Churu-5 tablet can be used for reducing diabetic symptoms in adults with type 2 diabetes mellitus.
3. People with wind dominant and phlegm dominant constitution are more susceptible to diabetes.

Keywords: Type 2 Diabetes, traditional medicine, Churu-5

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