

Syzygium cumini (L.) Skeels in the Treatment of Type 2 Diabetes

Results of a randomized, double-blind, double-dummy, controlled trial

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Tea, extracts, solutions, and other preparations from plants with a putative antihyperglycemic effect have a worldwide utilization in the treatment of diabetes (1). Among them, the tea prepared from leaves of jambolan [*Syzygium jambos* (L.) Alst or *Syzygium cumini* (L.) Skeels] is largely used in our city (2) and elsewhere (3). We demonstrated that the tea and extracts from different parts of the plant had no effect in normal rats (4), rats with streptozotocin-induced diabetes (5), and normal volunteers (6). An antihyperglycemic effect in patients with diabetes, however, could not be ruled out, since its mechanism of action could depend on specific abnormalities of diabetes in humans.

In this double-blind, double-dummy clinical trial, we randomized patients with type 2 diabetes to receive a tea prepared from leaves of *Syzygium cumini* (two grams per liter of water, taken as water substitute) plus placebo tablets, placebo tea (prepared with dried leaves of *Imperata braziliensis* Trinius) plus glyburide tablets (5 mg twice a day), or placebo tea plus placebo tablets.

Fasting blood glucose levels decreased significantly in participants treated with glyburide and did not change in those treated with the *Syzygium cumini* tea and in the participants who received placebos from tea and glyburide (Table 1). BMI, creatinine, γ -glutamyl transferase, alkaline phosphatase, SGOT, SGPT, 24-h glycosuria, 24-h proteinuria, triglycerides, and total, LDL, and HDL cholesterol did not vary significantly among the groups.

With this clinical trial, we have completed a cycle of experiments showing that the tea and extracts prepared from leaves of *Syzygium cumini* are pharmacologically inert. Patients and physicians should not rely on the putative antihyperglycemic effect of this tea, and perhaps of other folk medicines, that pretend to have such an effect. The investigation of plants with potential clinical utility could start with a clinical trial testing the effect of folk preparations in order to isolate the active principles of those products that show pharmacological activity in this model.

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Table 1—
Fasting blood glucose levels
in participants treated with
Syzygium cumini tea, glyburide, and placebos from tea and glyburide

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Footnotes

DIABETES CARE

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