

Effect of Fenugreek (Methi) on Blood Pressure, Blood Sugar, Serum Cholesterol and Serum Triglycerides in Known Cases of Mild to Moderate Essential Hypertension.

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Received: 25-10-2022 / Revised: 25-11-2022 / Accepted: 10-12-2022

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Conflict of interest: Nil

Purpose: This study is carried out to assess the effect of Fenugreek (METHI) on blood pressure, blood sugar, serum cholesterol and serum triglycerides in known cases of mild to moderate essential hypertension patient.

Methods: A total of 20 patients of mild to moderate hypertension was taken to study the effect of fenugreek in their blood pressure, blood sugar, serum triglycerides and serum cholesterol level. Initially a detailed clinical examination of patients was carried out and all the drugs were discontinued for 2 weeks (washout period). All the patients were administered 2.5 gm of methi powder twice a day after food with a glass of water daily for 2 months.

Results: Out of 20 patients, 9 patients showed slight increase in systolic and diastolic blood pressure. However, in 11 patients decrease in systolic as well diastolic blood pressure was observed. Thus the administration of fenugreek has no effect on mild to moderate hypertension.

Conclusion: We concluded that patient of mild to moderate hypertension have no significant effect of fenugreek.

Keywords: Blood Sugar, Serum Cholesterol and Serum Triglycerides.

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Introduction

Susruta as early as 700 BC has described the medical use of 700 plants for the treatment of various disorders. [1] Incidentally many of these plants in some form or other are commonly use in Indian diet. Many of them recommended as

disinfected for the intestine, some are known to have important antibiotics properties and tonics. Tulsi, Methi, Haldi, Ginger are considered as outstanding medicines in ancient literature. [2] There is certainly a tenable rationale explaining the

relationship between dietary fat and blood pressure in that lenoleic acid in a potential precursor of prostaglandins, which in turn affect renal sodium excretion and vascular reactivity. [3] Looking to the important medicinal value and extensive use of some of these condiments, the present study has been planned to observe the effect of Fenugreek (METHI) on blood sugar, serum triglycerides, serum cholesterol and blood pressure in known patients of mild to moderate essential hypertension. [4-9]

Material and methods

The study was conducted in 20 patients of mild to moderate essential hypertension. All the patient after their washout period were administered 2.5gm of methi powder twice a day after food with a glass of water daily for 2 months.

The blood samples were collected after overnight fast for blood sugar, cholesterol and triglycerides and 2 hours. These samples were collected before administration of drug, at 4 weeks and at 8

weeks. The blood pressure was measured in ideal resting condition in supine position and standing position before the administration of drug and thereafter at interval of 2 weeks for 8 weeks. The patients were allowed their routine activity and usual diet they were taking.

The blood samples were analysed for:

1. Blood sugar
2. Serum cholesterol and
3. Serum triglycerides

Criteria for the selection of hypertension patients:

1. Adult of either sex between the age group 18-70 years.
2. Patients having established essential hypertension with diastolic pressure above 90 mmHg and below 114mg of Hg.

Results

Effect of Fenugreek (Methi) on Blood Pressure in Essential Hypertensive Patients

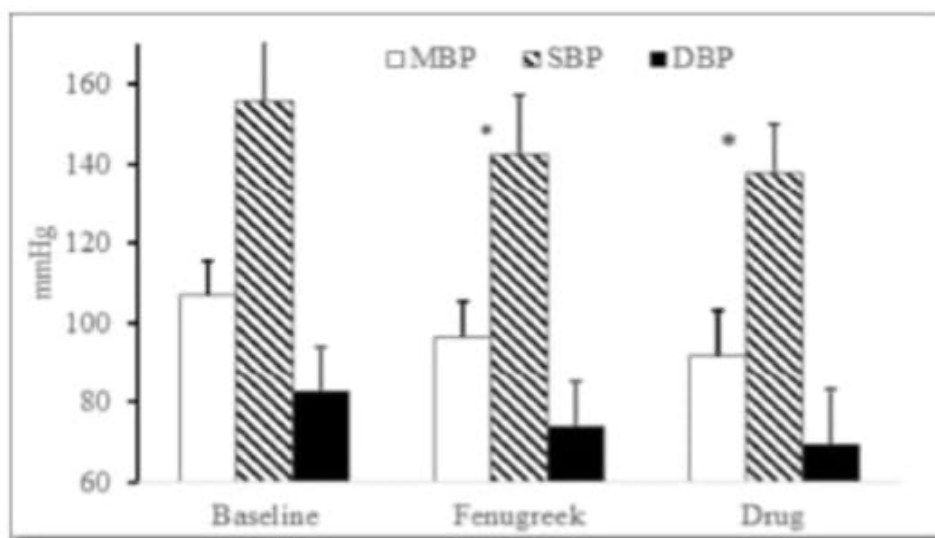


Figure 1: Mean (MBP), Systolic (SBP) and Diastolic (DBP) blood pressure in T2DM patients after successive intake of 2 g of fenugreek and their conventional drugs (significant difference in comparison to baseline at 55%).

As the table shows out of 20 patients,9 patients showed slight increase in systolic and diastolic blood pressure. However, in

11 patients decrease in systolic as well as diastolic blood pressure was observed. Thus the administration of fenugreek has

no effect on mild to moderate hypertension.

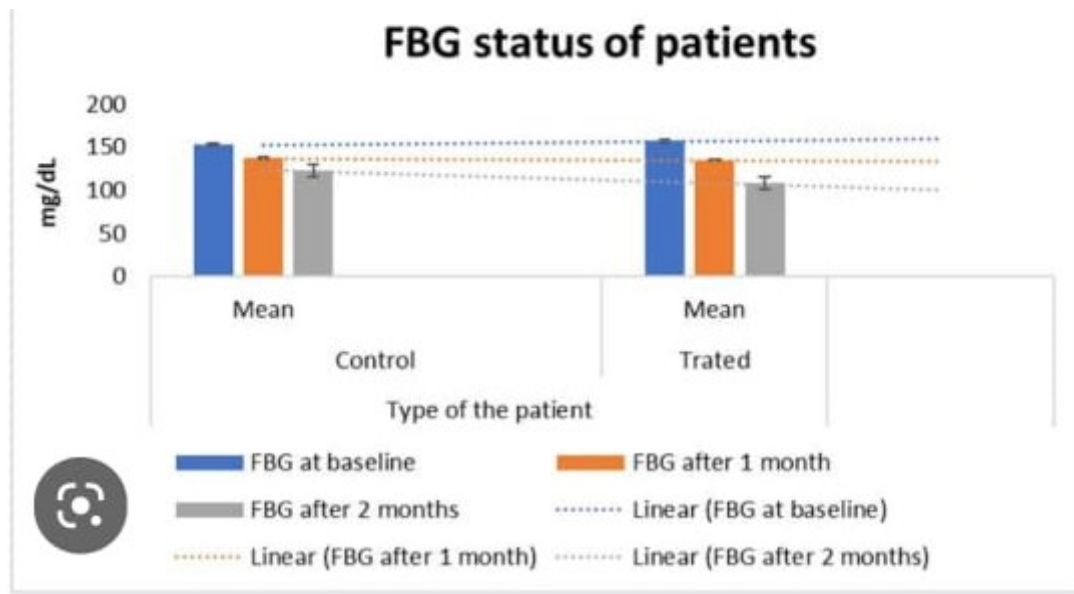


Figure 2: Effect of fenugreek on blood sugar (fasting) in essential hypertension patient

According to above table the mean initial fasting blood sugar level was 122mg/dl

which decrease to 118mg/dl. However, the decrease is statistically not significant.

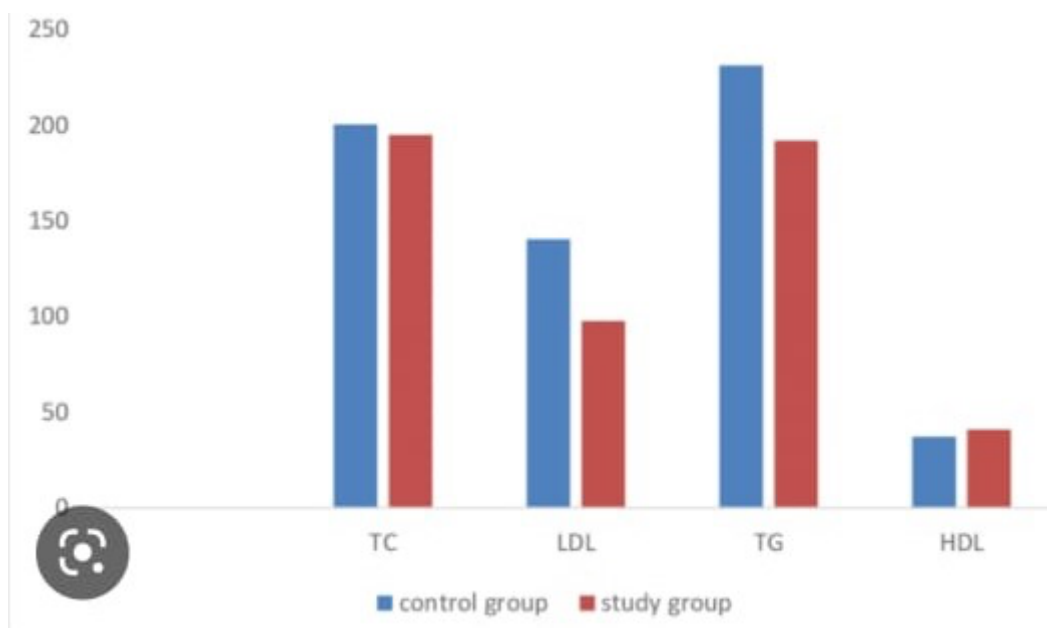


Figure 3: Effect of Fenugreek on Serum Cholesterol and Serum Triglycerides Level in Essential Hypertensive Patient.

As the bar chart shows that administration of fenugreek had no significant effect on serum cholesterol level and serum triglycerides.

Discussion

Fenugreek is widely used all over the world in various forms since ancient time.

In Egypt fenugreek is mixed with wheat flour for making bread, whereas in Switzerland it is used to flavour the cheese and its roasted seeds are used as coffee in Africa. The wide accepted use of this seed world over makes us to think, that there are properties particular in it and this seed world over makes us to think, that there are some properties particular in it and this comes true if we explore ayurvedic literature and its use in India. In north India during the winter season, people eat it as "ladoo" in which fenugreek is soaked in milk, dried, grinded and mixed with ghee, ginger, black piper, carryway, ficus religiosa, and 'kullangen'. Linoleic acid a polyunsaturated fatty acids present in fenugreek is having serum cholesterol-lowering properties because they are preferentially converted in the liver to ketone bodies rather than being incorporated into triglycerides for export into plasma lipoprotein.

Conclusion

The present study was conducted in 20 patients of mild to moderate essential hypertension. These were observed for blood pressure, blood sugar, serum cholesterol and triglycerides before and after 2 months of 2.5 gm of powdered fenugreek for 8 weeks.

Thus from the study it is deduced that fenugreek has no significant effect in patients of mild to moderate hypertension. The mechanism of action was not the field of study in the project, however, it can be postulated that the presence of fibre in

fenugreek and other component like compact amylase, tightly bound carbohydrates, antinutrients like phytates, lectine and enzyme inhibitors may be having hypoglycaemic factor.

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