



EFFECT OF FENUGREEK ON LEVEL OF BLOOD SUGAR AMONG TYPE II DIABETES PATIENTS

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ABSTRACT

An experimental study was conducted to assess the effect of fenugreek on level of blood sugar among type II diabetes patients. The objectives of the study were to assess the effect of fenugreek on level of blood sugar among type II diabetes patients, to find out the association between blood sugar level and selected demographic variables. The study was conducted among 60 samples and the study showed that there is a significant decrease in the fasting blood sugar and post prandial blood sugar level on administration of fenugreek ($p < 0.01$ level). There was no significant association between age, gender, occupation, family history, dietary habits and duration of illness with blood sugar level. The study concluded that the Fenugreek is effective in reducing fasting and post prandial blood sugar level among type II diabetes patients.

KEYWORDS : Effect, fenugreek, blood sugar, type II diabetes

INTRODUCTION

Diabetes is a global problem with a devastating impact on people, both socially and economically. The term diabetes mellitus is derived from the Greek word "diabetes" meaning siphon - to pass through and the Latin word "mellitus" meaning honeyed or sweet.

The World Health Organization has estimated that diabetes will be one of the world's leading causes of death and disability with the next quarter century. The statistics are alarming. 30 million people were diagnosed with diabetes worldwide in 1985, by 1995 the number had risen to 135 million and at the current rate there will be some 300 million by the year 2025 as predicted by the World Health Organization. The burden of diabetes is increasing globally, particularly in developing countries.

India leads the world with the largest number of diabetic subjects earning the dubious distinction of being termed the "diabetes capital of the world". According to International Diabetes Federation 382 million people have diabetes currently. By 2035 this will rise to 592 million. The greatest number of people with diabetes is between 40 and 59 years of age. According to the International Diabetes Foundation India has more diabetics than that of any other country in the world. An estimate shows that nearly 1 million Indians die due to diabetes every year. The estimate of the actual number of diabetes in India is around 40 million.

Kerala is the diabetes capital of India with a prevalence of diabetes as high as 20% which is double the national average of 8%. In a large multi-center study involving nearly 20,000 subjects, the prevalence of diabetes in Thiruvananthapuram was 17% compared to 15% in Hyderabad and New Delhi, 4% in Nagpur and 3% in Dibrugarh.

The earliest multicenter studies on the prevalence of diabetes in India in the early 1970s showed rates of around 2% in urban areas and 1% in rural areas. The latest available data show that these rates have increased to nearly 20% in some urban areas and 10% in the rural areas.

Statement of the problem

An experimental study to assess the effect of fenugreek on level of blood sugar among type II diabetes patients.

METHODOLOGY

Research Approach : quantitative approach.

Research Design: quasi experimental pre test post test

control group design

Variables

Dependent Variable

- Level of blood sugar

Independent variable

- Fenugreek

Setting of the study: The setting chosen for the study Nedumangad Taluk of Thiruvananthapuram district.

Population: Adults between 30 and 60 years

Sample: The samples for the present study consist of 60 type II diabetes patients between 30 and 60 years of age residing in ward VI and ward XXVI of Nedumangad Taluk, Thiruvananthapuram district.

Sampling technique: Non probability purposive sampling technique.

Sample size: A total of 60 samples were selected for the study.

Sample selection criteria

Inclusion Criteria

The present study included the diabetes patients:-

- who have fasting blood sugar level above 126 mg/dl & post prandial blood sugar level above 180 mg/dl
- who are willing to participate in the study
- who are available during the time of data collection
- who are in the age group between 30 and 60 years

Exclusion criteria

- who are not available at the time of data collection
- who are taking alternative modalities of treatment
- who have diabetic complications

Tools and Techniques

- Demographic profile
- Checking FBS and PPBS level using a standardized glucometer.

RESULTS:

In this study:

➤ In pretest the mean difference of fasting blood sugar level in the experimental and control group was 56.4 and 2.0 respectively.

➤ In the post test the mean difference of postprandial blood sugar level in the experimental and control group was 69.8

and 2.6 respectively.

➤ The 'unpaired t' value for fasting blood sugar in the post test was 9.11 ($p=0.000$) and for the postprandial blood sugar was 8.94 ($p=0.000$) which is significant at 0.01 level

Effect of fenugreek on level of blood sugar

Table 1: Comparison between pretest and post test level of fasting blood sugar based on experimental and control group

(n=60)								
Experimental				Control				
FBS	Mean	SD	N	Mean	SD	N	t	p
Pre	188.4	31.0	30	202.6	44.0	30	1.45	0.153
Post1	161.7	27.1	30	198.2	42.9	30	3.94**	0.000
Post2	132.0	20.2	30	204.6	38.7	30	9.11**	0.000

**Significant at 0.01 level

Table 2: Comparison between pretest and post test level of post prandial blood sugar based on experimental and control group

(n=60)								
Experimental				Control				
PBBS	Mean	SD	N	Mean	SD	N	t	p
Pre	263.6	45.3	30	265.5	36.3	30	0.18	0.858
Post1	228.7	37.3	30	265.7	46.7	30	3.39**	0.001
Post2	193.8	34.9	30	278.1	38.1	30	8.94**	0.000

**Significant at 0.01 level

➤ There was no significant association between fasting blood sugar level and selected demographic variables
 ➤ There was no significant association between post prandial blood sugar level and selected demographic

CONCLUSION:

Findings of the study showed that in the post test there was a decline in the level of blood sugar. Highly significant differences were found between pretest and posttest level of blood sugar. Hence it is revealed that administration of Fenugreek was an effective intervention for reducing blood sugar level among diabetes patients.

REFERENCES:

1. Cuerda RC. Diabetes: A worldwide problem | traditional chinese medicine | health | epoch times [Internet]. [cited 2014]an 11]. Available from: <http://www.theepochtimes.com/n2/health/diabetes-a-worldwide-problem-48457.html>
2. Mandal A. History of diabetes [Internet]. [cited 2014 Jan 11]. Available from: <http://www.news-medical.net/health/History-of-Diabetes.aspx>
3. Pandey A, Tripathi P, Goswami S. Alternative therapies useful in the management of diabetes: A systematic review [Internet]. [cited 2014 Mar 7]. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3249697/>
4. Wang Z, Wang J, Chan P. Treating type 2 diabetes mellitus with traditional chinese and Indian medicinal herbs. [Evid Based Complement Alternat Med. 2013] - PubMed - NCBI [Internet]. [cited 2014 Jun 13]. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/23737828>
5. Mohan V, Sandeep S, Deepa R, Shah B, Varghese C. Epidemiology of type 2 diabetes: Indian scenario [Internet]. [cited 2014 Jun 12]. Available from: http://icmr.nic.in/ijmr/2012/october/Most_cited2.pdf
6. Epidemiology of diabetes mellitus - Wikipedia, the free encyclopedia [Internet]. [cited 2014 Jul 3]. Available from: http://en.wikipedia.org/wiki/Epidemiology_of_diabetes_mellitus
7. 26. Diabetes in India [Internet]. [cited 2014 Jul 3]. Available from: <http://www.diabetes.co.uk/global-diabetes/diabetes-in-india.html>
8. 27. Diabetes in Kerala | Cadi [Internet]. [cited 2014 Jul 3]. Available from: <http://www.cadiresearch.org/topic/diabetes-indians/diabetes-kerala/>
9. Unnikrishnan R, Anjana RA, Mohan V. Diabetes in south Asians: Is the phenotype different? [Internet]. [cited 2014 Jun 12]. Available from: <http://diabetes.diabetesjournals.org/content/63/1/53.short?rss=1>