Effect of 12 Weeks Naturopathy Treatment on Diabetes Mellitus Patients

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Abstract

The study was conducted to determine the effect of 12 weeks naturopathy treatment on diabetes mellitus patients. For the purpose of the study 30 middle aged (ag range 40-45 yrs) diabetic mellitus patients were purposely selected from Ojas Nature Cure Centre, NKS Hospital, GulabiBagh, Delhi. The selected patients underwent 12 weeks naturopathy treatment. Glycated Hemoglobin (HbA1C), Fasting Blood Glucose Level (FBS), Post Prandial Glucose Level (PBS), High Density Lipoproteins Cholesterol (HDL) and Low Density Lipoproteins Cholesterol (LDL)were measured through blood test before and after 12 weeks naturopathy treatment. The findings of the study revealed a significant improvement among the diabetes mellitus patients as the Glycated Hemoglobin (HbA1C) was improved by 29.79%, Fasting Blood Glucose Level (FBS) was improved by 50.69%, Post Prandial Glucose Level (PBS) was improved by 61.48%, High Density Lipoproteins Cholesterol (HDL)was improved by 24.40% and Low Density Lipoproteins Cholesterol (LDL)was improved by 23.42%. These improvements in the selected variables were found significant as the paired 't' values obtained were 31.93, 85.77, 114.18, 11.83 & 35.83at $p \leq 0.05$.It may be concluded that naturopathy treatment can be used as one of the treatment method to reduce diabetes mellitus among the middle aged men.

KEYWORDS: Glycated Hemoglobin, Fasting Blood Glucose, Post Prandial Glucose, High Density Lipoproteins Cholesterol and Low Density Lipoproteins Cholesterol.

Introduction

Health is "a state of complete physical, mental, and social well-being and not merely the absence of disease" (WHO, 1948). Health is achieved through a combination of physical, mental, emotional, and social well being, which, together is commonly referred to as the Health Triangle.The term Health, has been derived from word "hoelth" means sound and "hale" means strength. Consequently a person is able to a) Function adequately (can be objectively observed), b) Adapt adequately to the environment and c) Feel well as (subjectively assented) **(Adler, 1999).**

Diabetes is one of the most common non-communicable diseases and one of the most challenging health problems in the twenty-first century. The World Health Organization (WHO) has accredit developmental strategic for interventions. Socio-economic change in society e.g. modernization, including urbanization, westernization of lifestyles, and economic development are transforming the cultural processes uttering to diabetes epidemic. Demographic trends may play a diversifying role (e.g., the increased

number of elderly persons), Diabetes is characterized by frequent urination (polyuria), hunger (polyphagia), weight loss, blurred vision, and skin itchiness. Diabetes is associated with long term damage and dysfunction of the beta cells of pancreas, eyes (retinopathy and diabetic cataracts), kidneys (nephropathy), nerves (neuropathy), heart, and blood vessels. Attention must paid to diabetes because its associated late complications which lead to macro vascular as well as micro vascular complications, drain out the quality of life, along with enormous impact on the economy and productivity of developed and developing nations **(Zimmet, 2001).**Diabetes is often called the silent killer because people who have it are often unaware they are affected. The normal level of blood sugar in a fasting person is between 80-120mg percent. If the fasting level of blood sugar is more than 110mg percent or after meals more than 160mg percent, it is called high blood sugar (Diabetes Mellitus). In diabetic patients, sugar can be detected in the urine also. Patients with diabetes have a higher chance of development of coronary blockages. They also get several other diseases like kidney damages as well as damage to the nerves and eyes **(Imayama, 2011).**

World Health Organization study group on Diabetes Mellitus has recognized two types of diabetes namely Insulin Dependent Diabetes Mellitus (IDDM) and Non Insulin Dependent Diabetes Mellitus (NIDDM). In the recent past, the term Insulin dependent diabetes mellitus (IDDM) has been replaced by Type I diabetic. Type I diabetic patients have 0 cell destruction, which is usually immune mediated the majority of the patient develop absolute insulin deficiency and are ketosis prone. The term non insulin dependent diabetes mellitus (NIDDM) has been replaced by Type II diabetic, which encompasses the most prevalent form of disease. Most patients with type II diabetes 2 mellitus exhibit insulin resistance (IR) and ultimately develop concomitant insulin secretary defect **(Shaw, 1998).**

In the 21st century, diabetes analysts keep on paving the street toward a cure. Today, it is vague what shape the street will take; maybe another sensational revelation like insulin sticks out along the path, or potential specialists should be content with the moderate desire of advancement **(Sately, 2008).**

Insulin resistance is a multifaceted syndrome responsible for the future development of type 2 diabetes, obesity, hypertension, dyslipidemia and atherosclerotic cardiovascular diseases. Insulin resistance present in patients with impaired glucose tolerance and hyperinsulinemia are the two major biochemical manifestations. The factors that contribute to insulin resistance are age, high fat diet, decreased physical activity, increased visceral fat accumulation, smoking and hyperglycemia **(Nesto, 2003).**The world is experiencing 30% increase in mortality due to non-communicable diseases (NCD), from 2, 65, 60, 300 deaths in 2000 to 3, 45, 39, 000 in 2014. Diabetes Mellitus (DM) isthe biggest disorder in this group for Global Burden of Disease (GBD) 2010, which has taken a heavy toll of 12, 81,300 deaths in 2014, 92.7% to rise over 6, 65,000 deaths in 1990.Systemic complications of DM have also shown steep rise like Chronic Kidney Disease (CKD) has caused 91,900 mortality in 1990 as compared to 1, 78,300 in 2014 with 94.1% risein a span of decade.

Nature cure believes that all the diseases arise due to accumulation of morbid matter in the body and if scope is given for its removal, it provides cure or relief. It also

believes that the human body possesses inherent self constructing and self healing powers **(Underwood, 1971).**

Treatment of type 2 diabetes mellitus through Naturopathy modalities like hydrotherapy, mud therapy, massage therapy, diet therapy is aimed to improve circulation to the cells with increased activation of venous and lymphatic system. These modalities work by increasing contraction and then relaxation of muscles and blood vessels to provide sufficient blood supply along with nutrients and oxygen, required for normal vital activity of the cells. The venous circulation and lymphatic system are very important in the process of elimination of waste products from the body. Increased activation of these eliminatory channels through nature cure modalities enhances the transport of waste materials to the heart and then eliminative sites of the body like kidney and skin. This process of increased recycling may therefore promote re-establishing homeostasis resulting in the normal integrity and functioning of the cells and organs with increased synthesis of insulin receptors and reduced insulin receptor blunting. This enhanced homeostatic condition may further lead to increase sensitivity of the cells to respond to normal insulin action (increased insulin sensitivity) with glycemic control (increased glucose tolerance). Besides reestablishing homeostasis, this system of nature cure medicine, at the same time, may strengthen even other body organs to perform their normal functioning in a better manner **(Sasagawa, 2008).**Some studies have even presented few data or too many confounders which make study difficult to generalize; hence the present study was undertaken.

Objectives and Hypothesis

The study was conducted to determine the effectof 12 weeks naturopathy treatment on diabetes mellitusmiddle aged patients. After thoroughly going through the literature it was hypothesized that there would be no significant effect of Naturopathy Training on the selected variables of diabetes mellitus middle aged patients.

Methodology

A total of thirtydiabetes mellitus type II middle aged patients were purposively selected from the list of patients visited Ojas Nature Cure Center, NKS Hospital, Gulabi Bagh,Delhi for the treatment of diabetes mellitus type II through Naturopathy under the experts of Ojas Nature Cure Center. The selected patients were in the age range from 40-45 years. The selected patients underwent 12 weeks of naturopathy training in the Ojas Nature Cure Center, NKS Hospital, Gulabi Bagh,Delhi. Glycated Hemoglobin (HbA1C), Fasting Blood Glucose Level (FBS), Post Prandial Glucose Level (PBS), High Density Lipoproteins Cholesterol (HDL) and Low Density Lipoproteins Cholesterol (LDL)were used to measure condition of the diabetes mellitus patient. The results obtained from the blood test on the selected variables were quantified and further paired ‘t’ test was employed to measure the significance in the effect of the naturopathy treatment on diabetes mellitusmiddle aged patients.

Training Protocol: The training was executed by the scholar himself in the evening from 4:00 PM onwards for 1 to 1.5 hours for three days in a week atOjas Nature Cure Center,

Delhi, i.e.Friday, Saturday and Sunday.The training was continued for 12 weeks. The Naturopathy training included the following treatment protocol:

- Application of Mud Pack (forehead and abdomen)
- Enema (Herbal)
- Hip Bath/ Sauna/ Steam Bath (alternatively)
- Mud Bath.
- The diet was strictly controlled by the patients as per the directions of the expert, during the whole treatment.

Analysis of the Data and Findings

Table – I: Effect of 12 Weeks Naturopathy Treatment on Diabetes Mellitus Patients

S No	Variables	Pre Test	Post Test	Improvement	't'
1	**Glycated Hemoglobin (HbA1C)**	8.19± 0.62	5.75± 0.47	29.79%	31.93*
2	**Fasting Blood Glucose Level (FBS)**	239.37± 11.27	118.03± 6.87	50.69%	85.77*
3	**Post Prandial Glucose Level (PBS)**	342.93± 8.13	132.10± 8.33	61.48%	114.18*
4	**High Density Lipoproteins Cholesterol (HDL)**	37.00± 5.53	46.03± 4.96	24.40%	-11.83*
5	**Low Density Lipoproteins Cholesterol (LDL)**	128.20± 11.29	98.17± 8.68	23.42%	35.83*

N- 30, **Significant at 0.05 level

Table- I clearly reveals that the Glycated Hemoglobin (HbA1C)had lowered down by 29.79% as the Glycated Hemoglobin (HbA1C)before and after the yoga treatment were found as 8.19± 0.62 and 5.75± 0.47. This decrease in the level of HbA1Cwas found significant as the't' values obtained was 31.93 at $p \leq 0.05$. The Fasting Blood Glucose Level (FBS) had lowered down by 50.69% as the Fasting Blood Glucose Level (FBS) before and after the yoga treatment were found as 239.37± 11.27and 118.03± 6.87. This decrease in the level of FBS was found significant as the't' values obtained was 85.77at $p \leq 0.05$.The Post Prandial Glucose Level (PBS) had lowered down by 61.48% as the Post Prandial Glucose Level (PBS) before and after the yoga treatment were found as 342.93± 8.13and 132.10± 8.33. This decrease in the level of PBS was found significant as the't' values obtained was 114.18at $p \leq 0.05$.The High Density Lipoproteins Cholesterol (HDL) had improved by 24.40% as the High Density Lipoproteins Cholesterol (HDL) before and after the yoga treatment were found as 37.00± 5.53 and 46.03± 4.96. This increase in the level of HDL was found significant as the't' values obtained was 11.83 at $p \leq 0.05$ and the Low Density Lipoproteins Cholesterol (HDL) had lowered down by 23.42% as the Low Density Lipoproteins Cholesterol (HDL) before and after the yoga treatment were found as 128.20± 11.29and 98.17± 8.68. This decrease in the level of LDL was found significant as the't' values obtained was 35.83at $p \leq 0.05$.

Discussion and Conclusions

The findings of the study revealed a significant improvement among the diabetes mellitus patients as the Glycated Hemoglobin (HbA1C) was improved by 29.79%, Fasting Blood Glucose Level (FBS) was improved by 50.69%, Post Prandial Glucose Level (PBS) was improved by 61.48%, High Density Lipoproteins Cholesterol (HDL)was improved by 24.40% and Low Density Lipoproteins Cholesterol (LDL)was improved by 23.42%.The Results are supported from a study, which shows that there are lots of chemical agents available to control and to treat diabetic patients, but total recovery from diabetes has not been reported up to this date. In addition to adverse effects, drug treatments are not always satisfactory in maintaining euglycemia and avoiding late stage diabetic complications. Alternative to these synthetic agents, plants provided a potential source of hypoglycemic drugs and are widely used in several traditional systems of medicine to prevent diabetes. Several medicinal plants have been investigated for their beneficial effect in different type of diabetes, other alternative therapies such as dietary supplements, acupuncture, hydrotherapy, and yoga therapies less likely to have the side effects of conventional approaches for diabetes**(Avwanish Pandey, 2011).**

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