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Review Article

Homeopathic Approach In Treating Diabetic Patients: A Comprehensive Review

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ABSTRACT

Diabetes mellitus is a group of metabolic diseases characterized by chronic hyperglycemia resulting from defects in insulin secretion, insulin action, or both. Metabolic abnormalities in carbohydrates, lipids, and proteins result from the importance of insulin as an anabolic hormone. Results from the various studies have demonstrated that homeopathy could be used in treating diabetic patients. Hence; we aim to highlight some of the important aspects of homeopathic treatment of diabetic patients.

Key words: *Diabetes, Homeopathy*

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INTRODUCTION

Diabetes is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both. The chronic hyperglycemia of diabetes is associated with long-term damage, dysfunction, and failure of differentorgans, especially the eyes, kidneys, nerves, heart, and blood vessels.[1]

Definition of Diabetes Mellitus

Diabetes mellitus is a group of metabolic diseases characterized by chronic hyperglycemia resulting from defects in insulin secretion, insulin action, or both. Metabolic abnormalities in carbohydrates, lipids, and proteins result from the importance of insulin as an anabolic hormone. Low levels of insulin to achieve adequate response and/or insulin resistance of target tissues, mainly skeletal muscles, adipose tissue, and to a lesser extent, liver, at the level of insulin receptors, signal transduction system, and/or effector enzymes or genes are responsible for these metabolic abnormalities.[2- 4] The severity of symptoms is due to the type and duration of diabetes. Some of the diabetes patients are asymptomatic especially those with type 2 diabetes during the early years of the disease, others with marked hyperglycemia and especially in children with absolute insulin deficiency may suffer from polyuria, polydipsia, polyphagia, weight loss, and blurred vision. Uncontrolled diabetes may lead to stupor, coma and if not treated death, due to

ketoacidosis or rare from nonketotic hyperosmolar syndrome.[5- 8]

Homeopathic approach in treating diabetic patients

Streptozotocin (STZ)-induced diabetes causes the partial destruction of β-cell of the islets which leads to insufficient release of insulin and there by increased blood glucose levels namely hyperglycemia. Administration of homeopathic remedy S jambolanum to diabetic animals significantly reduced the elevated blood glucose level, may be due to the stimulatory effect of S jambolanum on remaining β-cells of the islets of Langerhans to produce insulin or regeneration of pancreatic β-cells, which is concur with other report in this line.[8] The corrective effect of the S jambolanum was observed from the assessment of the activities of hepatic hexokinase, glucose-6-phosphate dehydrogenase those are significantly increased in mother tincture treated diabetic group, indicate the insulinotropic effect as these enzymes are regulated positively by insulin. Significant decrease in the activity of hepatic glucose-6-phosphatase by this drug indicates insulinotropic effect of the drug as this enzyme is regulated negatively by insulin.[8]

Sampath S et al assessed the effect of homeopathic preparations of Syzygium jambolanum and Cephalandra indica on gastrocnemius muscle of high fat and high fructose-induced type-2 diabetic rats. Homeopathy is a holistic method of treatment that uses microdoses of natural substances originating from plants, minerals, or animal parts. Syzygium jambolanum and Cephalandra indica are used in homeopathy for treatment of type-2 diabetes. However, the molecular mechanisms responsible for such effects are not known. Homeopathic preparations of S. jambolanum and C. indica in mother tincture, 6c and 30c were used to examine the molecular mechanism of antidiabetic effects in the skeletal muscle of rats with high fat and fructose-induced type-2 diabetes mellitus. After 30 days treatment, fasting blood glucose, serum insulin and insulin signaling molecules in the skeletal muscle (gastrocnemius) were measured. Diabetic rats showed a significant decrease in serum insulin and lipid profile as well as low levels of insulin receptor (IR), v-akt murine thymoma viral oncogene homolog (Akt), p-Akt(ser473) and glucose transporter-4 (GLUT4) protein expression ($p < 0.05$) with a significant increase in fasting blood glucose level ($p < 0.05$) compared to the control group. Treatment with homeopathic remedies significantly increased the serum insulin and expression of these proteins ($p < 0.05$) with a significant decrease in fasting blood glucose ($p < 0.05$) compared to diabetic rats. In their study homeopathic preparations of S. jambolanum and C. indica, including ultramolecular dilutions exhibit antidiabetic effects, improving insulin action through activation of insulin signaling molecules in skeletal muscle of type-2 diabetic rats.[9]

To KLA et al investigated the effectiveness of individualized homeopathic treatment in glycaemic control. Twenty-seven adults aged 37-84 years were treated with individualized homeopathic remedies between 2012 and 2015. Published data on 40 T2DM patients under standard conventional treatment in Hong Kong were used as a control. Change in fasting plasma glucose (FPG) and glycated haemoglobin (HbA1c) at 12-month or the last follow-up, whichever is earlier. Compared with the conventional treatment only group, the homeopathy group had higher baseline FPG ($p = 0.044$), and more patients had a long (>20 years) duration of diabetes ($p = 0.006$), and a history of cardiac events ($p = 0.022$). The mean difference in FPG in the homeopathy group was significantly greater than in the control after 12 months: -2.24 mmol/L (95% confidence interval [CI]: -3.47 to -1.01) vs 0.16 mmol/L (95% CI: -1.72 to 2.04), $p = 0.001$. The mean difference in glycated haemoglobin (HbA1c) was also significantly greater, -1.11% (95% CI: -2.17 to -0.05) vs 0.08% (95% CI: -1.37 to 1.53), $p = 0.046$. Poorer baseline glycaemic control was associated with better outcome ($r = -0.750$, $p < 0.001$), but not the duration of diabetes ($r = 0.058$, $p = 0.772$). The improvement was robust to sensitivity analyses. Individualized homeopathic treatment was associated with better glycaemic control compared with standard conventional treatment alone.[9]

CONCLUSION

Results from various animal studies have added to the hypothesis that homeopathic treatment can be successfully by used in diabetic patients. However; further studies are recommended.

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