



A BRIEF REVIEW ON THE THREE MOTHER TINCTURES FREQUENTLY USED IN HOMEOPATHY FOR DIABETES MELLITUS

Homeopathic

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ABSTRACT

Homeopathy is the system of medicine which emphasizes various diluted and potentized medicines for the treatment of different disease conditions. The use of mother tinctures (MT) has long been known for its existence in the regular homeopathic practice. Tincture of *Cephalandra indica*, *Gymnema sylvestre*, *Syzygium jambolanum* are commonly used in Diabetes mellitus (DM). There is a need for an overview of the existing studies on these three MTs. Despite sufficient background data, human trials on DM are lacking using these drug candidates. An open randomized trial is outlined for the additive effect of these three MTs to regular individualized homeopathy in cases of pre-diabetes.

KEYWORDS

Homeopathy; Mother tincture; *Cephalandra indica*; *Gymnema sylvestre*; *Syzygium jambolanum*; Diabetes mellitus; Pre-diabetes

INTRODUCTION:

Homeopathy is a part of the complement and alternative system of medicines. Worldwide it is preferred by millions of people which makes it the second-largest system of medicine prevalent in most of the member states of World Health Organisation.[1] Mother tinctures (MTs) is being prescribed by most of the homeopaths in their day to day clinical practice for various health conditions. Many MTs are described in the pieces of literature, but their possible benefits in most of the cases have not been reviewed thoroughly.

Diabetes mellitus (DM) is a type of metabolic disorder that share the characteristics of hyperglycaemia arising as a consequence of relative or absolute deficiency of insulin secretion, resistance to insulin action, or both.[2] The International Diabetes Federation has estimated that the total number of cases of diabetes would be about 350 million by 2030.[3] Increased glycosylation leads further to biochemical abnormalities due to altered protein structure which leads to diabetic complications such as nephropathy, retinopathy, neuropathy, and cardiomyopathy.[4] Pharmacotherapies for the treatment of diabetics include oral hypoglycaemic agents and insulin. These are, however, not free from side effects and dependence.[5]

The present review is carried out to evaluate the antidiabetic activity of *Cephalandra indica*, *Gymnema sylvestre* and *Syzygium jambolanum*.

Existing Studies:

A comprehensive search was carried out to find studies which evaluated the anti-diabetic activities of the said medicines. Pal A et al.[6] described the effects of *Cephalandra indica* mother tincture and potencies on blood glucose level, cholesterol level, body weight, and beta-cells of pancreatic islets of Langerhans, in streptozotocin (STZ)-induced diabetic Wistar rats. They found a significant antidiabetic effect of *Cephalandra indica* and also recommended its use. Kishore L et al.[7] also reported Mother tincture, 6C and 30 C potencies of *C. indica* produced significant attenuation in the biochemical parameters used to assess diabetic nephropathy. Moreover, oxidative stress and AGE's level in the kidney was also found to be significantly reduced. Another study by Sampath S et al.[8] concluded that 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.

A study was done by Diabetes induction in Wistar strain rat using streptozotocin at the dose of 4 mg/100 gm body weight. It found that the homeopathic drug *S. jambolanum* (mother tincture) has a protective effect on diabetic induced carbohydrate and lipid metabolic disorders in STZ-induced diabetic animal.[9] Some pieces of scattered literature

also recommended the fact of anti-diabetic activity of *Gymnema sylvestre* and its use in other systems of medicine.[10,11]

Evidence Gap In The Literature And Our Stand:

With this comprehensive and scattered background data, it becomes the necessity to run a clinical trial on the effectiveness of these MTs on human beings. Homeopathic dilutions are used on the principle of individualizations which is very time consuming and strenuous procedure. This individualized approach has long been in use for DM in homeopathy. We wanted to evaluate whether these MTs, in addition to individualized homeopathy provides any beneficial effects in DM. Keeping this view in mind, we took up a study on pre-diabetes. Pre-diabetes is the persons at risk of developing diabetes and requires immediate intervention.[12,13] For this, we designed and initiated a trial at Out-patient department of Mahesh Bhattacharyya Homoeopathic Medical College & Hospital. The study is an open randomized trial evaluating the effectiveness of add-on plant extracts used in homeopathy as mother tinctures on patients diagnosed with pre-diabetes was randomized in 1:1 ratio to one of the two interventions-Individualized homeopathy or mother tincture as an add-on to Individualized homeopathy. The outcome measures were used in this study, Fasting Blood Sugar (FBS), Post-Prandial Blood Sugar (PPBS), Glycated Haemoglobin (HbA1C) as primary, and Revised Diabetes Symptom Checklist (DSC-R) as secondary, intended to measure at baseline, after 3 months and 6 months. The planned sample size was 140 patients, keeping in mind 90% power, level of significance at 0.05 and 5% drop-out. The trial was started in Aug 2018 and presently going on; intended to complete it by 2021. Recruitment status is still open and intended to achieve the desired number of sample within the prescribed time frame. The study was registered prospectively in Clinical Trial Registry-India [Reg. No.: CTRI/2018/08/015319] for best practice adherence. A structured protocol is already published.[14] The study is funded by the Department of Science and Technology, Govt. of West Bengal.

CONCLUSION:

The adequate background data on the anti-diabetic effect of three MTs namely, *Cephalandra indica*, *Gymnema sylvestre* and *Syzygium jambolanum* is present in the literature, but it need to be evaluated by clinical trials on humans. Pre-diabetes is a growing concern to arrest the development of diabetes. The clinical trial on the additive effect of the three MTs to the individualized homeopathic treatment for pre-diabetes has been taken up. We are expecting that the result of the trial will open a new avenue, or add some knowledge to the existing evidence, in the therapy of DM in the coming years.

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