

# **Efficacy of the Siddha Medical Preparation “*Mathumeha chooranam*” in Patients with Diabetes Mellitus**

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Free radicals possess the ability to reduce the oxidative damage associated with many diseases such as cancer, cardiovascular disease, cataract, and AIDS. Antioxidants are significant in the prevention of human illness and may function as free radical scavengers, complexes of pro-oxidant metals, reducing agents and as a quencher of single oxygen formation. Diabetes is a chronic disorder in metabolism of carbohydrates, proteins, and fat due to absolute or relative deficiency of insulin secretion with/without varying degree of insulin resistance. It is a disease where the body produces little insulin or ceases to produce insulin, or becomes progressively resistance to its action. During the last twenty years, the prevalence of diabetes has increased dramatically in many parts of the world and the disease is now a worldwide public health problem. In the Siddha system of Medicine there are several chooranams used to cure the Mathumeham (Diabetes mellitus). Among the chooranams, different varieties of Mathumeha chooranam are used in Siddha system. Mathumeha chooranam contains *Terminalia chebula*, *Phyllanthus embelica*, *Murraya keonigii*, and *Gymnema sylvestrae*. This chooranam is widely used in Siddha hospitals and dispensaries of North and Eastern provinces of Sri Lanka. The objective of this study was to determine the hypoglycaemic and antioxidant activity of the Siddha Medical preparation of MMC in patients diagnosed with type II diabetes mellitus. As such, 63 subjects of age range between 40-70 years with fasting plasma glucose (FBS) between 140-300mg/dl were included in the study. Fasting plasma glucose, glycosylated haemoglobin, lipid profile, renal and liver function test were estimated at baseline and at the end of twelfth week. A paired t-test was used to assess the statistical significance between baseline and final measurements. Paired t-test revealed that the fasting (p<0.001) and HbA1c

( $p < 0.001$ ) significantly reduced after *MMC* administration. Renal and liver function test were well within the normal range. The results suggest *MMC* is beneficial for the treatment of type II diabetes.

**Key words:** *Antioxidant activity, Cholesterol, Diabetes mellitus, Mathumeha chooranam, Siddha Medicine.*