

Serum antioxidant activity of *Mathumeha chooranam* (MMC) on Diabetes Mellitus Type II

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Antioxidants have significant role in the prevention of human illness and function as free radical scavengers, complexes of pro-oxidant metals, reducing agents and quencher of single oxygen formation. 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 problems. Mathumeha chooranam has been used as adrug in Siddha Medicine to treat patients with Neerillivu noi (Diabetes), which contains *Terminalia chebula*, *Phyllanthus embelica*, *Murrya keonigii* and *Gymnema sylvestre*. 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 serum antioxidant activity of the Siddha Medical preparation of MMC in patients with diabetes mellitus type II. Sixty three subjects of age range between 40 - 70 years with fasting plasma glucose (FBG) above 140mg/dl were included in this study. A paired t-test was used to assess the statistical significance between baseline and final measurements. Paired t-test revealed that the Ferric Reducing Antioxidant Power (FRAP) of serum in the study participants significantly increased after 12 weeks of MMC administration (P value 0.000). Renal and liver function test indicated that their functions were within normal range. The results indicated that MMC has not only increased the antioxidant level in the serum but also was not toxic to the individuals who consumed it. In addition, it was also observed that Mathumeha chooranam is useful to treat the patients with diabetes mellitus type II.

Keywords: Antioxidant activity, Diabetes mellitus, Mathumeha chooranam, Siddha Medicine.