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Research article

Determination of serum antioxidant activity of *Sinna Sivappu Maathirai* for respiratory symptoms

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Abstract

Siddha medicine is presently practiced by Tamil speaking community in South part of India and North East part of Sri Lanka. Siddha medicine believes herbo-mineral drug to be potent than herbal alone and gradual unavailability of herbals make attention towards utilization of mineral based drugs. But heavy metal toxicity is a major safety issue. *Sinna Sivappu Maathirai (SSM)* is a herbo mineral drug which is prepared and prescribed in Siddha hospitals of Northern Province for respiratory symptoms with the reference literature .Most of Individual ingredients of SSM has the antioxidant property in the previous research works. So far, the antioxidant activity of *SSM* has not been published previously. *SSM* may be safety by antioxidant capacity. The study objected to determine serum antioxidant activity of *SSM* in patients with respiratory symptoms. 50 patients were selected with inclusion and exclusion criteria. All subjects treated for one week as the dose of 260mg bd/pc with 5ml of betel extract as an *Anupanam* (vehicle) and followed to find the serum antioxidant activity. Mean difference between base line and after treatment such as completion of 1st week analyzed by the method of "Ferric Reducing Antioxidant Power assay (FRAP)". Antioxidant power of *SSM* is higher in male (0.45±0.09 to 0.61±0.09) patients than the female (o.43±0.06 to 0.56±0.07). Antioxidant power is higher in the age group of 49years to 58years (0.38±0.10 t0 0.60±0.06) than other age groups. The mean difference of base line and after treatment was the p value of 0.0000. It indicated that the *SSM* has the serum antioxidant capacity significantly (0.44±0.08 to 0.58±0.08). Antioxidant capacity can be checked through the individual materials of *SSM* in the future research prospect. All three oils showed activity against all tested *Candida* sp ZOI from 8.3 ± 0.5 - 30.0 ± 0.0mm. MIC of three oils is similar for all tested *Candida* sp in both methods. The extremely low MIC (0.0045µg/mL) of the oil of *S. aromaticum* for all the tested *Candida* strains is note worthy. However, all the tested oils were active against *Candida* with MICs ranging from 0.0045 –2.5 µg/mL. MBC was the same or differed by only one dilution as the MIC for tested *Candida sp.* suggesting tha*t* the oils are fungicidal. Three oils have ability to inhibit *Candida* sp with low MIC.