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Clinical Paper

A Single case study on the therapeutic effectiveness of *Mukia maderaspatna Linn (Roem)* the management of Bronchial Asthma

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Abstract

Mukia maderaspatna is a well reputed herb of Cucurbitaceae family and it is known as Mosumosukai, and Hin kekiri in Sri Lanka. The Mosumosukai plant is literarily recommended and used in practice for various respiratory disorder treatments. But the effectiveness does not prove scientifically for *Iraippu noai*. This makes the researcher to carry out the present study to scientifically emphasize the therapeutic effectiveness of *Mukia madaraspatana* for the treatment *Iraippu Noai* in the form of fresh leaf sap at a dose of 45ml daily by oral route and it is taken only in the morning. A study was conducted on a 46 years old female patient who was attending to the Siddha teaching Hospital, Konesapuri, Trincomalee. The effectiveness of the leaf sap was measured by subjective and objective clinical parameters by means of changes in the severity of clinical manifestation for consecutive 15 days by using globally recognized Likert (five points) scale and it was statistically analyzed by SPSS/16 software. The diet and other regimens which could aggravate the *Iraippu noai* were well instructed to the patient. The test herbal sap shows statistically significant to markedly reduce the overall clinical manifestation of *Iraippu noai* . It suggests that daily administration of the fresh leaf sap of *Mukia madaraspatana* could be used as an effective treatment for *Iraaipu noi*. It's a commonly available, inexpensive and an efficient pure simple herbal remedy with no adverse effects to the patient.

Key words: *Mukia madaraspatana*, Fresh leaf sap, *Iraaipu noi*, Bronchial asthma, Cotton Pellet Granuloma, Hot tail immersion.

Introduction

Siddha medicine, being an ancient medical science reported to have surfaced more than 10,000 years ago. It was used to treat various diseases including chronic lung conditions.The ancient traditional Siddha system of medicine was formulated on the scientific parameters available at those times. But, in order to establish the significance of Siddha medicine we need a firm scientific evidence to cope up with today‘s standards and Should dispel the prevailing misbelieves and doubts among various people in different parts of the world. Despite the new medical technologies we are still unable to completely treat some of the diseases. Respiratory diseases are well known to cause significant mortality and morbidity.

Material and Methods

This study aims to evaluate the change in severity of selected significant symptoms of bronchial asthma during the administration of *Mosumosukkai* fresh leaf extract under controlled condition. The positive output of this study will be beneficial to people suffering from Bronchial asthma. The study was conducted on a 46 years old female patient who was attending to the Siddha teaching Hospital, Konesapuri, Trincomalee.

The effectiveness of the leaf sap was measured by subjective and objective clinical parameters such as breathing difficulty, level of wheezing, frequency of Cough, general wellbeing of the patient, Respiratory rate, Rhonchi and Peak expiratory flow rate (PEFR). The data obtained by interrogation, clinical examination and investigation with the assistance of my research supervisor by means of changes in the severity of clinical manifestation for consecutive 15 days using globally recognized Likert (five points) scale and it was statistically analyzed by SPSS/16 software. The diet and other regimens which could aggravate the Bronchial asthma were well instructed to the patient.

The criteria for assessment of the patient:

Variable / Score	1	2	3	4	5
Breathing difficulty	Very difficult	Difficult	Neutral	Easy	Very easy
Wheezes	Much worse	about the same	somewhat worse	somewhat better	much better
Cough	Never	Rarely	Sometimes	Often	Always
General well being	Not at all satisfied	Slightly satisfied	Moderately satisfied	very much satisfied	Extremely satisfied

Output of the clinical trial			
Variable	**N**	**Mean**	**Std. Deviation**
Breathing difficulty	15	3.80	1.568
Wheezes	15	4.60	.737
Bouts of cough	15	1.87	1.246
General wellbeing	15	3.53	.915
PEFR	15	213.00	13.862

The test herbal sap shows statistically significant to markedly reduce the overall clinical manifestation of Bronchial asthma as per the mean value of difficulty in breathing 3.80±1.50 ,comparison of wheezing 4.60 ± 0.73 , bouts of cough 1.87±1.24 general well being 3.53±0.91 and the mean of the PEFR was 213± 13.826 also concordance with it. The result of the clinical study suggests that daily administration of the fresh leaf sap of *Mukia madaraspatana* could be used as an effective treatment for Bronchial asthma. It's a commonly available, inexpensive and an efficient pure simple herbal remedy with no adverse effects to the patient

***In-vitro* Anti-inflammatory & analgesic activity**

Because of the unavailability of experimental facility to evaluate the anti-asthmatic property and since the author is a preliminary researcher, decided to evaluate the anti-

inflammatory activity under the Anti-asthmatic activity. It is known that bronchial asthma caused by inflammation of airways caused via various stimuli. Also this study is designed to evaluate the analgesic activity since patients with Bronchial asthma complains of pain may due to cough and chest tightness. Anti inflammatory and analgesic activity which plays certain significant role to relieve pain related symptoms of asthma.

The anti-inflammatory activity of Mukia maderaspatna leaf sap at a dose of 200mg/kg was evaluated against the standard drug of Brufen at a dose of 30mg/kg. Adult albino mice of either sex of two numbers of each group was undertaken for the study and evaluated by cotton pellet granuloma method. In the present study it is quite apparent that leaf extract of *Mukia madaraspatana* possesses better anti inflammatory activity compatible to the standard drug.

Analgesic activity of the Mukia maderaspatna leaf sap at a dose of 200mg/kg was evaluated against the standard drug of Diclofenac at a dose of 30 mg/kg. Adult albino mice of either sex of two numbers of each group was undertaken for study and evaluated by hot tail immersion method. The leaf extract of *Mukia madaraspatana* possesses better anti inflammatory activity compatible to Brufen and significant analgesic effect (P value 0.005) against different stimuli. This is evidenced by significant increase in the reaction time to stimuli in different experimental models.

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