

EFFICACY OF *MADHURIGAI SOMBU CHOORANAM* IN THE TREATMENT OF *SINAIPAI NEERKATTI*.

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ABSTRACT

The occurrence of gynaecology related disorder is on the raise because of many factors which include socio-economic, environmental and cultural conditions. Young women in their reproductive age are more prone for conditions such as Poly Cystic Ovarian Syndrome (PCOS) which affects their quality of life. PCOS is documented as *Sinaipai neerkatti* in traditional siddha literatures. At present, the modern medicine treats *gynecological disorders especially PCOS* with hormone tablets etc., PCOS is the multifaceted problem with reproductive endocrine and metabolic dysfunction. It is also called as Stein-leventhal syndrome. The chemical based drugs induce ovulatory cycle in women, instead of allowing it to restore to its original healthy rhythm. Here we prefer the Siddha medicine "*Madhurigai sombu chooranam*" as it is wholly natural (herbal), non-invasive, non-chemical remedies and has no side effects. It was prepared as per Standard Operative Procedure (SOP). Preliminary Phyto-chemical analytical study was also done for this medicine. The results serve as an eye opener for further studies in order to identify the potential efficacy of *Madhurigai Sombu Chooranam*.

KEYWORDS

Siddha Medicine, Gynecological disorders, *Madhurigai Sombu Chooranam*, PCOS, *Sinaipai Neerkatti*.

INTRODUCTION

The gynecological disorders are infertility, amenorrhea, menorrhoea, Poly Cystic Ovarian Syndrome (PCOS), Pelvic Inflammatory Disease (PID), Leucorrhoea etc., Nowadays, PCOS is the most common among these diseases. The causes for the PCOS are genetic problem and lifestyle changes etc. The effects of the PCOS are infertility, hirsutism and abnormal menstrual cycles. World Health Organization estimates that PCOS has affected 116 million women (3.4%) worldwide in 2012. Globally, prevalence estimates of PCOS are highly variable ranging from 2.2 % to as high as 26%. In India, 10% of women are affected by PCOS and yet no proper published statistical data. In conventional system of medicine, PCOS is treated by oral contraceptive agents, anti androgens, hyperglycemic agents etc. Here we are describing Siddha treatment for PCOS as it is patient friendly and safe. Some of the Siddha medicines now available for the treatment of PCOS are *Ashoka pattai Chooranam*, *Kariyabola mathirai* etc. Our medicine undergoes phyto-chemical analysis and RF values for this are mentioned below.

SINAIPAI NEERKATTI

SIGNS AND SYMPTOMS

- *Madhavidai kolarugal* (Menstrual disorders)
- *Migai mudi* (Hirsutism)
- *Karutharipu iyalamai* (Infertility)
- *Mugaparu* (Acne)
- *Udal paruman* (Obesity)
- *Mana azhutham* (Mental depression)
- *Nalamilla surapigalin samanilaiyinmai* (Hormonal imbalance)
- *Vaiyuru veekam-prathanamaga periya katigal ulla nilaiyil* (Abdominal swelling due to large cyst formation)
- *Siruneerpai, perungudal agiyavatril azhutha arikurigal* (Intra abdominal pressure over the urinary bladder and large intestine)

MEDICINES

- *Kariyabola Mathirai* (325 mg-650 mg)
- *Sambarani poo kuligai* (130 mg for 7 days)
- *Kayamoosambara Mathirai* (325 mg-650 mg)
- *Aatru thumati Mathirai* (130 mg-260 mg)
- *Arumuga Chenduram* (488 mg)

CONVENTIONAL THERAPY FOR PCOS

PCOS (Poly Cystic Ovarian Syndrome) is a syndrome characterized by a hormonal imbalance causes enlarged ovaries with large number of cysts which is filled by fluid.

TYPES OF PCOS

- Type1: Insulin resistant PCOS
- Type2: Non insulin resistant PCOS

INSULIN RESISTANT PCOS

It is associated with classic symptoms of PCOS which include weight gain, facial hair, hair loss etc. It has greater potential for developing diabetes and increased testosterone levels. Inositol has been found to be just as effective in some cases.

NON INSULIN RESISTANT PCOS

They do not have insulin resistant and it has many causes like vitamin D or iodine deficiency, thyroid disease etc. Natural progesterone may be prescribed to balance hormones.

AETIOLOGY OF PCOS

A woman undergoes different food habits and cultures which lead to many hormonal disorders. The main causes are genetic problems, life style changes, obesity, excess insulin, sleep apnea, increased androgen level, cholesterol deposition, increased weight gain.

SYMPTOMS OF PCOS

- Menstrual problems
- Infertility
- Hirsutism
- Non alcoholic- Steato hepatitis
- Acne formation
- Male pattern baldness
- Anxiety and depression
- Weight gain
- Increased androgen level etc.,

CONVENTIONAL TREATMENT FOR PCOS

Medications used in management of PCOS are,

- Oral contraceptive agents (Ex: Medroxy progesterone)
- Anti androgens (Ex: Spironolactone, Cyproterone acetate)
- Hypoglycemic agents (Ex: Metformin, Insulin)
- Selective estrogen receptor modulators (Ex: Clomiphene citrate)
- Tropical hair removal agents
- Tropical acne agents (Ex: Benzoyl peroxide)

SURGICAL METHODS

Surgical methods include ovarian drilling, oophorectomy, hysterectomy, cyst aspiration, laser drilling and multiple biopsies.

SIDDHA HERBS EFFECTIVE IN THE MANAGEMENT OF PCOS

- *Mullangi vithai (Raphnus sativus)*
- *Vellilothiram (Symplocos racemose)*
- *Nochi (Vitex negundo)*
- *Karunjeeragam (Nigella sativa)*
- *Ashogam (Saraca indica)*
- *Thipilli (Piper longum)*
- *Arugampul (Cynadon dactylon)*
- *Vendhayam (Foenum gracaum)*
- *Veeli (Cadaba indica)*

SIDDHA MEDICINE EFFECTIVE AGAINST SINAIPAI NEERKATTI (PCOS)

TABLE NO: 1

S.No	NAME	MAIN INGREDIENTS	DOSAGE	USES
1	<i>Madhurigai Sombu chooranam</i> (Fine powder)	<i>Sombu (Foeniculum vulgariae).</i> <i>Maramanjai (Cosciniun fenestratum).</i> <i>Panai vellam (Borassus flabellifer).</i>	6.022gm	<i>Kuruthisikalai aruthu sool amaiya seiyum</i> (For gynecological disorders and to restore ovulation).
2	<i>Kariyabola mathirai</i> (Pills)	<i>Moosambaram chooranam (Aloe littoralis), Sathikai ennai (Myristica fragrans).</i>	1 tablet(325 mg – 650mg)	<i>Soothagakattu neengum</i> (To regulate menstrual cycles)

3	<i>Aatru thumati Mathirai</i> (Pills)	<i>Kadugurogini</i> (<i>Picrorhiza scrophulariiflora</i>), <i>Kurosani omam</i> (<i>Hyoscyamus niger</i>).	1 tablet(130-260 mg)	<i>Soothagathadai pokkum</i> (To induce menstruation)
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MATERIALS AND METHODS

Madhurigai sombu chooranam

The preparation of *Madhurigai sombu chooranam* has its reference in the siddha text book *Gunapadam Mooligai vaguppu*.

MAIN INGREDIENTS OF MADHURIGAI SOMBU CHOORANAM

- ❖ *Maramanjai* (*Coscinium fenestratum*)
- ❖ *Panai vellam* (*Borassus flabellifer*)
- ❖ *Sombu* (*Foeniculum vulgare*)



1
Maramanjil (*Cosciniun fenestratum*)



Panai vellam (*Borassus flabellifer*)



3
Sombu (*Foeniculum vulgare*)



4
Madhurigai sombu chooranam
(End Product)



1
Maramanjil (*Cosciniun fenestratum*)



Panai vellam (*Borassus flabellifer*)



3
Sombu (*Foeniculum vulgare*)



4
Madhurigai sombu chooranam
(End Product)

Fig1.1 Images of ingredients and end product

PREPARATION

As per the Standard Operative Procedure (SOP), the drugs were purified and taken in a proportional quantity. They were ground using “*ural and idikaruvi*” (*Mortar and Pestle*) and then the powdered substances obtained had undergoes “*vasthiragayam*” (*Fine filtering*) procedure.

This powdered substance was subjected to the basic analytical test for “*chooranum*” (*powder*), phyto-chemical test and Thin Layer Chromatography.

RESULTS AND DISCUSSION

Below table shows basic analytical test for *chooranum* .

1. Organoleptic Characters

Table No: 2

S.No	TEST	RESULTS
1.	Appearance	Powder
2.	Touch	Nice
3.	Smell	Sombu odour
4.	Taste	Sweet.l.pungent
5.	Diethyl ether	NA
6.	Colour in day light	Greenish.l.brown
7.	Colour under UV ray	Brownish yellow
8.	With 50% Hcl under UV	Greenish black
9.	With 10% NaOH under UV	Greenish yellow

2. Physical Chemical Standards

Table No: 3

S.No	TEST	RESULTS
1.	Loss on drying	4.8%
2.	Ash content	1.0%
3.	Acid soluble matter	0.4%

4.	Water soluble matter	89.4%
5.	Alcohol soluble matter	58.1%
6.	Active principal /TLC	Spots ok/graph attached
7.	Nice	Fine powder

3. Microbiological Analysis

Table No: 4

S. No	TEST	ACTUAL	STANDARD
1.	Total viable aerobic count	1.9×10^4 col./g	1×10^5 col./g
2.	Total Enterobacteriaceae	Nil	1×10^3 col./g
3.	Total fungal count	2×10^1 col./g	1×10^2 col./g
4.	Test for specific pathogen		
	I Yeast and mould	Nil	1×10^3 col./g
	II Salmonella sp	Nil	Nil
	III Staphylococcus aureus	Nil	Nil
	IV E. coli	Nil	Nil
	V Pseudomonas aeruginosa	Nil	Nil

2. Thin Layer Chromatography

Thin Layer Chromatography (TLC) is a chromatographic technique used to separate the components of the mixture using a thin stationary phase supported by an inert baking. Retardation Factor (RF) is the fraction of an analyte in the mobile phase of a chromatographic system. RF value represents particular phyto-chemical with respect to the solvent medium used in the TLC procedure is as follows.

Table No: 5

S.NO	RF value	Alkaloids
1.	0.93	Squalene
2.	0.76	Curcumin
3.	0.29	Maltose

- These squalene and curcumin alkaloids have the capability for curing PCOS.
- The organoleptic character for this medicine is nice in touch representing the large surface area and easy absorption.
- Sombu odour and sweet like pungent taste ensures palatability. In physiochemical values, the loss on drying is 4.8%.
- Ash content is 1.0% which represents the edible nature.
- It is highly soluble in water (89.4%) indicating the easy digestion and absorption.
- Alcohol soluble matter in our medicine is 58.1%
- Microbiological analysis report shows that total viable aerobic count of the medicine is within the standard value (1.9×10^4 col./g $< 1 \times 10^5$ col./g) void of Enterobacteriaceae. Total fungal count of the medicine is (2×10^1 col./g $< 1 \times 10^2$ col./g).
- Test for specific pathogen like yeast and mould, salmonella sp, Staphylococcus aureus, E.coli, Pseudomonas aeruginosa all are nil, so that the medicine is not contaminated.
- In TLC, active principles of the medicines are mentioned in RF values, with respect to the medicine used.

CONCLUSION

In the treatment of PCOS, Siddha management stands supreme. In the modern medicine, PCOS cysts are destroyed by laparoscopy, paving the way for pregnancy. This is an invasive and temporary treatment option where the patient seems to be cured for the short period and more prone for recurrence. In Siddha, the medicine not only cures the disease but also the root cause of the disease. Hence it can be concluded “*Mahurigai Sombu chooranum*” could be a scientifically validated and the drug used for many gynecological disorders and this research paves the way for further researches.

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