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Clinical evaluation of Thagarai podi (external) for Padarthamarai (Tinea infection) in children.

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Abstract

In Siddha, skin diseases are collectively known as “Thol Noikal”. Padai and Padarthamarai (dermatophytoses) are common skin diseases grouped under “Kutta Rogam”and probably Dermatophytosis. Symptoms of these diseases are patches, black, white, and red colored skin with watery or dried that spread on the body. The main objective of the study was to evaluate the efficacy of *Thagaraipodi* (external) in the treatment of *Padarthamarai* (Tinea infection) in children and to improve quality of life in children. Clinical study comprises of 10 patients with the condition called Padarthamarai (Tinea infection) were subjected to siddha external therapy thagarai podi and subsequent in-depth evaluation. The entire study was conducted in outpatient, Department of Kuzhanthai Maruthuvam, Ayothidass Pandithar Hospital, National Institute of Siddha, Chennai, Tamilnadu, India. Institutional Ethical Clearance was obtained for this study.All the study participants were comprehensively explained about the objective of this study before requesting them for their voluntary participation in this study. Treatment with siddha formulation Thagarai Podi showcase significant reversal of padarthamarai (Tinea infection). It was concluded based on the data’s of the present clinical investigation is that the siddha herbal formulation thagarai podi offers significant clinical improvement from Padarthamarai(Tinea infection), hence it may be clinically recommended for the management of Padarthamarai(Tinea infection) in future.

Keywords: Siddha, skin diseases, Padai and Padarthamarai, Thagarai Podi.

1. Introduction

Siddha, a traditional system of medicine is being followed by the South Indians especially Tamilians and has drawn a great attention world wild. A number of ancient texts of Siddha perceived treasure to cure various ailments. In Siddha, skin diseases are collectively known as "TholNoikal". Padai and Padarthamarai (dermatophytoses) are common skin diseases grouped under "Kutta Rogam" and probably Dermatophytosis.[1,2]

Padai-differentiated into Erichalpada, Thothupadai, Pithapadai, Megapadai,Themalpadai etc[2]. Padarthamarai (Pundareega Kutam) is another type skin disease caused by Ring worm, Tinea corporis and other species of Tinea. Symptoms of these diseases are patches, black, white, and red colored skin with watery or dried that spread on the body [2].

In Siddha, internal and external medicine was prescribed for various chronic skin disease and reoccurring skin problem such as fungal disease. Tinea corporis (ringworm), dermatophyte infection of the body, trunk, and limbs. Ringworm of the glabrous skin. The clinical manifestations result from invasion and proliferation of the causal fungi in stratum corneum. The site of infection is typically on exposed skin unless the infection represents from a pre-existing infection. The typical lesions start as itchy erythematous macule or papules that spread outward and develop into annular and arciform lesions with sharp, scaling or papulovesicular advancing margin and healing centers. It may be compared to the Padarthamarai in Siddha literature.

Tinea infection is common infection caused by dermatophyte fungi and occurring predominantly in children. It is a contagious disease and can be passed from person to person by contact with infected skin areas or by sharing combs and brushes, other personal care items, or clothing. It is also possible to become infected with ringworm after coming in contact with locker room or pool surfaces.Its clinical manifestations range from mild scaling to large inflammatory and pustular plaques with lichenification.

In NIS OPD a considerable number of patients in paediatric population are recorded with symptoms of Padarthamarai. Children were not aware of this condition. But it may lead to a complex when comparing to others skin complexion in the schools and their surrounding environment. Children may be mentally affected and feel shy which reflects in their academic, attitude and in their performance skill. The simple herbal formulation "*Thagarai Podi* " was given to the children with padarthamarai. The main objective of the study was to evaluate the efficacy of *Thagaraipodi* (external) in the treatment of *Padarthamarai* (Tinea infection) in children and to improve quality of life in children.

2. Materials and Methods

2.1.Ingredients of the Trial Drug

Name of the formulation: *Thagarai Podi*

List of Ingredients:

1. Kondraikozhunthu- *Cassia fistula*
2. Thagaraivithai- *Senna tora*
3. Aavaraivithai- *Senna auriculata*
4. Manjal- *Curcuma longa*
5. Thulasi- *Ocimum tenuiflorum*
6. Kadukkai- *Terminalia chebula*
7. Nellimulli- *Phyllanthus emblica*
8. Iluppaipinnaakku- *Madhuca longifolia*
9. Morr-Butter milk

2.2.Method of Preparation

All the ingredients are taken as equal quantity and powdered. The powder was soaked well in buttermilk and dried.

2.3.Dose and Administration

Dosage: Sufficient quantity *Thagarai Podi* was taken and mixed with lemon juice and applied over the lesion.

Total duration: 48days

Reference : **Theraiyarvagadam, pg no.183**

2.4.Study design

Clinical study comprises of 10 patients with the condition called Padarthamarai (Tinea infection) were subjected to siddha external therapy thagarai podi and subsequent in-depth evaluation. The entire study was conducted in out patient, Department of Kuzhanthai Maruthuvam, Ayothidass Pandithar Hospital, National Institute of Siddha,Chennai,Tamilnadu, India. Institutional Ethical Clearance was obtained for this study.All the study participants were comprehensively explained about the objective of this study before requesting them for their voluntary participation in this study. Participants were also explained that completion and submission of the data's would be taken as consent to participate in this study.Data were dealt with the high level of anonymity and confidentiality.

2.5.Inclusion criteria:

- Age: 5 – 12 years
- Sex: Both male and female children.
- Papules
- Erythema
- Itching
- Marginated annular lesion
- Patients with two are more symptoms that are mentioned above.
- Willing to cooperate for taking photographs whenever required with his\her consent.
- Patients who are willing to stay in IPD Ward or willing to attend OP Dept. as on required.
- Patient's informant / Parent willing to sign the informed consent.

2.6.Exclusion criteria:

- Psoriasis
- Eczema
- Annular Psoriasis
- Atopic dermatitis
- Erythrasma
- Pityriasis rosea
- scabies
- Systemic (cardiac) involvement
- Lesions with secondary infection

2.7.Withdrawal criteria:

- Exacerbation of symptoms and signs
- If any adverse reactions and unwanted symptoms occurred during the drug trial.
- Intolerance to the drug.
- Patient turned unwilling to continue in the course of clinical trial.
- Occurrence of any serious illness.

2.8.Clinical Assessment

Clinical efficacy of the siddha formulation Thagarai Podi was evaluated based on the clinical examination of the patients subjected to the therapy with assessment scale on before and after treatment. The key point of assessment included Erythema, Itching, Dryness, Eruption and Induration.

Assessment of lesion

Erythema: 0-Absent, 1-Mild, 2-Moderate, 3-Deep Brown

Itching : 0-Absent, 1-Mild, 2-Moderate, 3-Severe

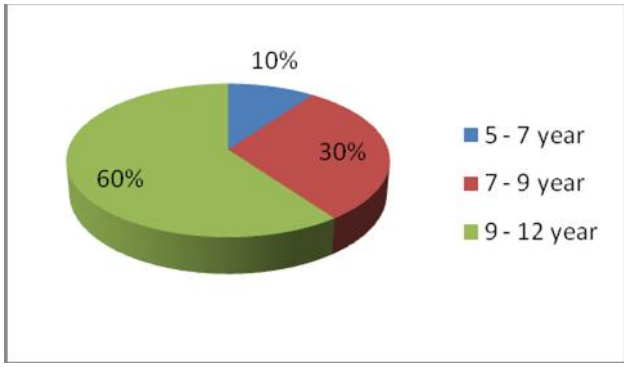
Dryness: 0-Absent, 1-Mild, 2-Moderate, 3-Severe

Induration: 0-Absent, 1-Mild, 2-Moderate, 3-Severe

Eruption: 0-Absent, 1- 1 to 3 eruption, 2- 4 to 7 eruption, 3- above 7 eruption.

3. Results

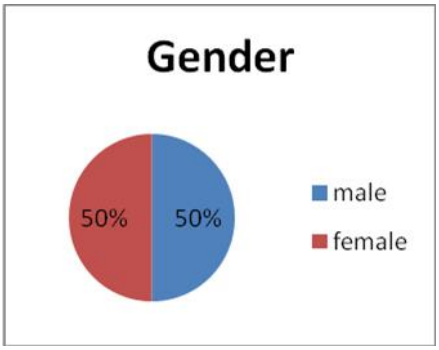
Age



In this study 10% of subject were belong to 5 -7 years, 30% of subject were belong to 7-9 years and 60% of subject belong to 9 -12 years.

Figure 1 Age of the Study Participant

Gender



In this study 50% of the subject were belong to male, 50% of subject were belong to female.

Figure 2 Gender

Erythema:

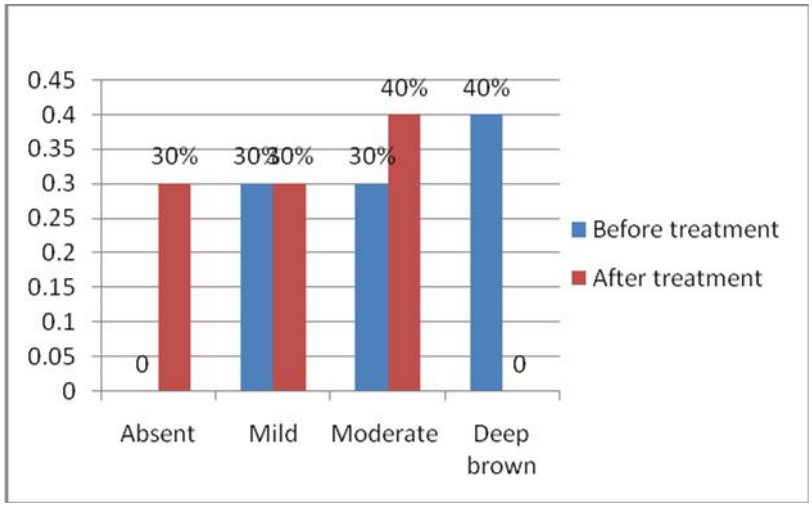


Figure 3 Erythema

In this study before treatment 30% of subject had mild erythematous lesion,30% of subject had moderate erythematous lesion and 40% of subject had deep brown erythematous lesion whereas after treatment 30% of subject had no erythematous lesion, 30% of subject had mild erythematous lesion and 40% of subject had moderate erythematous lesion.

Itching

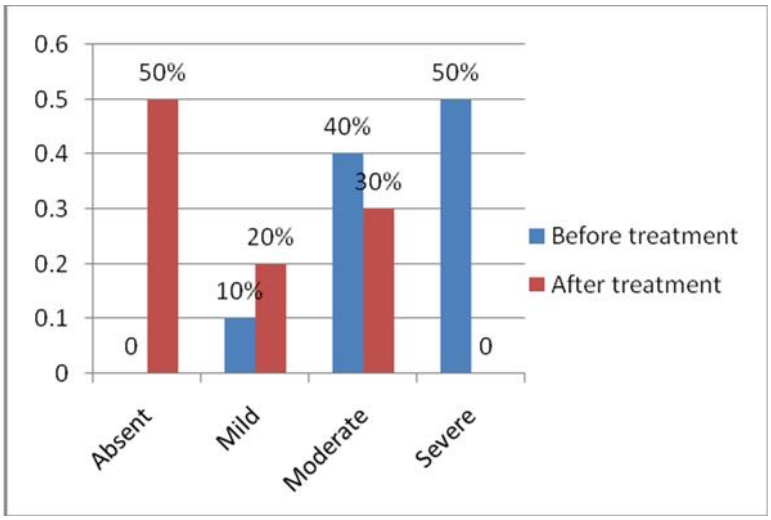


Figure 4 Itching

In this study before treatment 10% of subject had mild iching,40% of subject had moderate itching and 50% of subject had severe itching whereas after treatment 50% of subject had no itching, 20% of subject had mild itching and 30% of subject had moderate itching.

Dryness

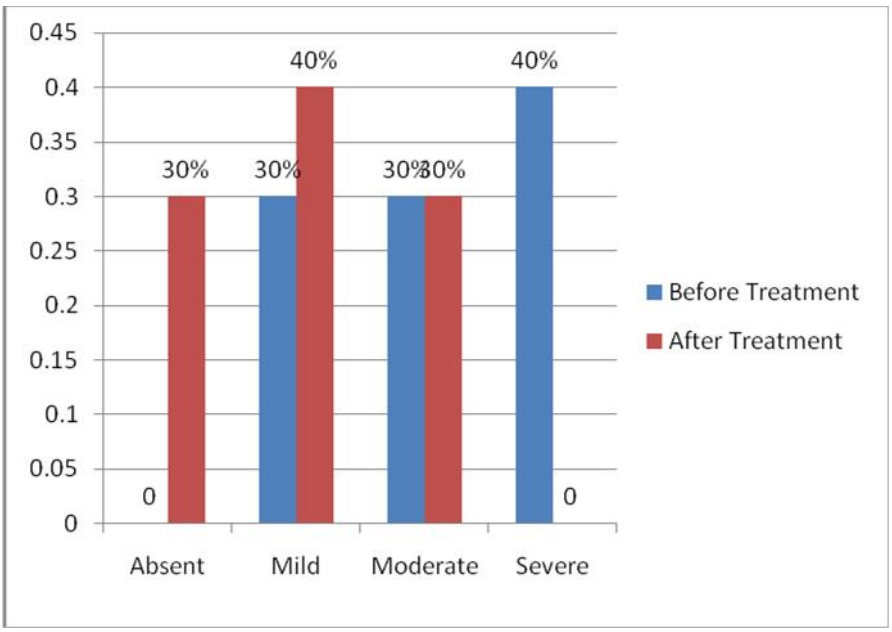


Figure 5 Dryness

In this study before treatment 30% of subject had mild dryness,30% of subject had moderate dryness and 40% of subject had severe dryness whereas after treatment 30% of subject had no dryness, 40% of subject had mild dryness and 30% of subject had moderate dryness.

Eruption

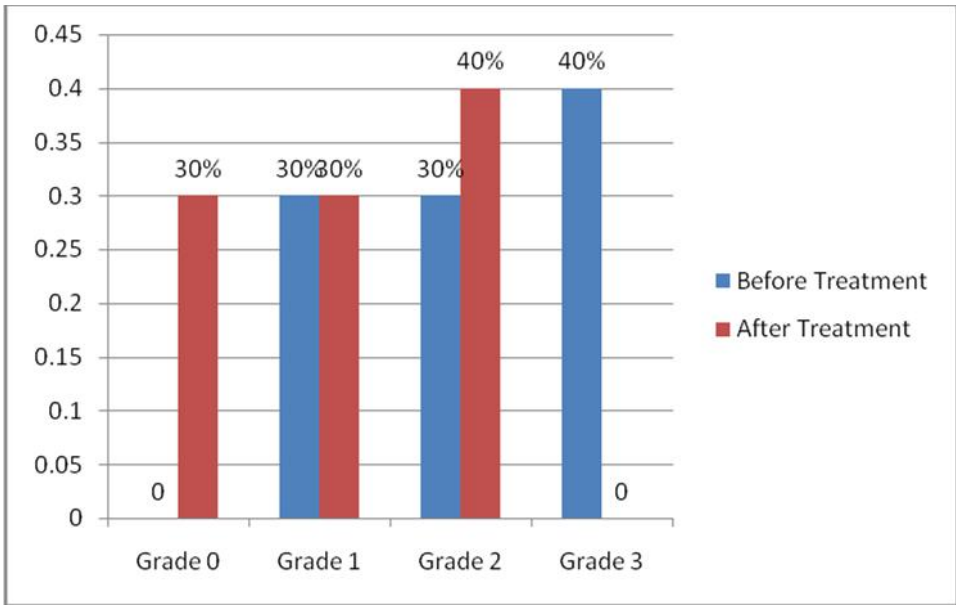


Figure 6 Eruption

In this study before treatment 30% of subject belong to grade 1,30% of subject beong to grade 2 and 40% of subject belong to grade 3 whereas after treatment 30% of subject belong to grade 0, 30% of subject belong to grade 1 and 40% of subject belong to grade 2.

Induration

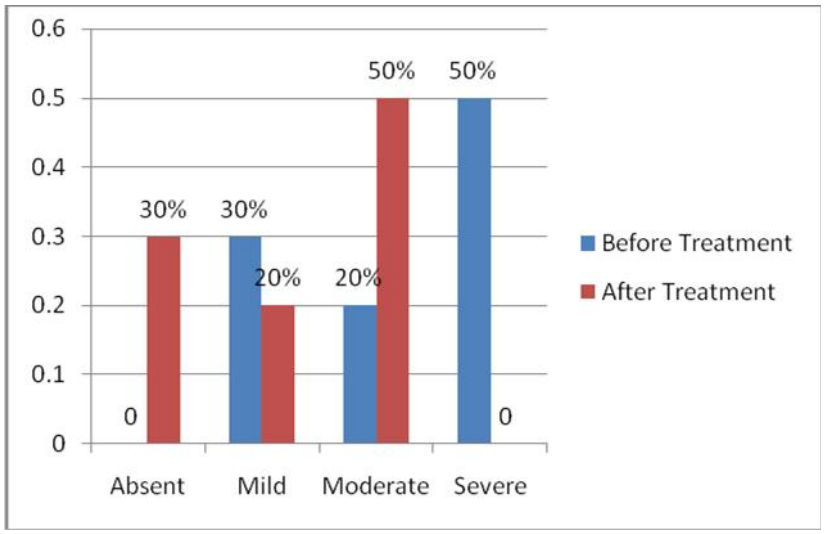


Figure 7 Induration

In this study before treatment 30% of subject had mild induration,20% of subject had moderate induration and 50% of subject had severe induration whereas after treatment 30% of subject had no induration , 20% of subject had mild induration and 50% of subject had moderate induration.

4. Discussion

Dermatophytosis or tinea is a predominance in about 20%–25% of all total world populations.[3,4] Dermatophytes are filamentous fungi naturally living on keratinous materials found in soil.[5] Dermatophytosis or tinea is mainly caused by dermatophytes.[6] Dermatophytosis or tinea can be found on the skin of different parts of the human body which make it takes various names based on the infected area such as tinea pedis on the feet, tinea unguium on the nails, tinea capitis on the scalp, tinea cruris on the groin, and tinea corporis on the body.[7] It is considered prevalent skin disease worldwide.[8] Moisture and warm conditions are the most suitable factors to a wide distribution of dermatophytosis in tropical countries.[3] This epidemiological distribution may change with migration, lifestyle, immunosuppressive state, drug therapy, and socioeconomic conditions.[3,9] The treatment of dermatophytosis needs about 2–4 weeks to be cured in many types and may require many months in cases of tinea capitis and onychomycosis.[10]. The poor medical care will increase the epidemic spread of skin mycoses, including dermatophytosis.[11] Both systemic and topical antifungal drugs are used to treat dermatophytes infection. Different drugs are used today for the topical treatment of dermatophytosis infection. Treatment with siddha formulation Thagarai Podi showcase significant reversal of padarthamarai (Tinea infection). Observation also documented that the before treatment 30% of subject had mild erythematous lesion,30% of subject had moderate erythematous lesion and 40% of subject had deep brown erythematous lesion whereas after treatment there was significant reduction , 30% of subject had no erythematous lesion, 30% of subject had mild erythematous lesion and 40% of subject had moderate erythematous lesion. Before treatment 10% of subject had mild iching, 40% of subject had moderate itching and 50% of subject had severe itching whereas after treatment there was significant reduction ,50% of subject had no itching, 20% of subject had mild itching and 30% of subject had moderate itching. In this study before treatment 30% of subject had mild dryness,30% of subject had moderate dryness and 40% of subject had severe dryness whereas after treatment there was significant reduction ,30% of subject had no dryness, 40% of subject had mild dryness and 30% of subject had moderate dryness. In this study before treatment 30% of subject belong to grade 1, 30% of subject beong to grade 2 and 40% of subject belong to grade 3 whereas after treatment there was significant reduction, 30% of subject belong to grade 0, 30% of subject belong to grade 1 and 40% of subject belong to grade 2. In this study before treatment 30% of subject had mild induration,20% of subject had moderate induration and 50% of subject had severe induration whereas after treatment there was significant reduction , 30% of subject had no induration , 20% of subject had mild induration and 50% of subject had moderate induration.

5. Conclusion

Dermatophytosis or tinea can be increased in the presence of several conditions such as overcrowding, dressing of occlusive clothes, increased urbanization, low socioeconomic status, contact with animals, and poor hygiene. Enzymes produced by dermatophytes play a crucial role in pathogenesis. Due to less antifungal used to treat dermatophytosis, new drugs are demanded. The systemic antifungal drug used to treat dermatophytosis with some reverse effects, while the herbal medication is safe and effective. Traditional herbal remedies are becoming more common in replacing established medication for the treatment of Padarthamarai (Tinea infection). It was concluded based on the data's of the present clinical investigation is that the siddha herbal formulation thagarai podi offers significant clinical improvement from Padarthamarai (Tinea infection),henceit may be clinically recommended for the management of Padarthamarai (Tinea infection) in future.

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