



Role of Homoeopathic Medicines in Cases of Palmoplantar Dermatitis in Adults

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Abstract

Context: An experimental, open-label, non-randomized and non-comparative study, Homoeopathy University, India, to assess the role of Homoeopathic Medicines in cases of Palmoplantar Dermatitis in adults. **Aim:** The aim of the study was to ascertain the role of Homoeopathic Medicines in cases of Palmoplantar Dermatitis in adults. **Methods:** Forty subjects were enrolled. Visual Analogue Scale (for Itching and distress) and Dermatology Life Quality Index score were used as the outcome measures, assessed at baseline and after 3 months of treatment. Medicines prescribed followed homoeopathic principles. Paired t-test was applied to compare the dependent observations. **Results** – Three subjects dropped out and 37 completed the trial. Intention-to-treat sample (n = 40) was analyzed. Maximum participants had significant improvement (mean difference= 6.351, $t(36) = 14.949$, $p < .001$) with 32 (86.4%) cases showed 51 to 75% improvement in DLQI score. Maximum participants responded significant ($p < .001$) improvement in VAS score for itching (mean difference =5.108, $t(36) = 15.780$, $p < .001$) and VAS score for distress (mean difference =4.162, $t(36) = 14.683$, $p < .001$). Medicines *Natrum muriaticum*(9, 24.32%); and *Sepia*(8, 21.62%) were prescribed in maximum number of cases. Psora was found as the predominant underlying miasm in the study. Conclusion: Indicated homeopathic medicines reduced VAS and DLQI scores. Further randomized trials are warranted to establish their long-term efficacy.

Key Word- Palmoplantar Dermatitis, Homoeopathy, Visual analogue scale (VAS), Dermatological Life Quality Index (DLQI).

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INTRODUCTION

The term dermatitis and eczema are regarded as synonyms in the clinical practice. Eczema defines the superficial inflammatory itchy skin problem though eczema may mean different things to different people. 1%-2% of adults and up to 20% of children are believed to have eczema. It can affect people of any age. People with eczema often have a family history of same condition or a family history of other allergic conditions such as hay fever or asthma. Although it can develop on the body at any place, it typically appears on the hands, arms, wrists, face, neck, upper chest, and backs of knees. It is not contagious.¹

Palmoplantar Dermatitis or 'Eczema of the hand and foot' refers to predominant involvement of hands and/or feet in the eczematous process.² The prevalence of Palmoplantar Dermatitis is rising worldwide and it has been estimated that 2-10% of population is likely to develop hand dermatitis at some point of time during life. Females are more commonly involved than males (2:1).³

In a study on patterns of lower leg and foot eczema in south India, the most common age group affected was 31-45 years. Prevalence of Eczema study was 2.5 per 1000 patients attending the Dermatology OPD.⁴

In Rajasthan, the dryness and low humidity with frequent sandstorms makes the skin dry and leathery and prone to dermatitis. Palms and soles being commonly exposed parts of the body to the outer environment, eczematous condition of palms and soles i.e. Palmoplantar Dermatitis is frequently encountered.⁵ As one of the most frequently encountered diagnosis in dermatology practice, it affects performance at work and adds to the morbidity. It is caused by diverse etiological factors, both exogenous and endogenous. Though any part of hand may be involved in any type of eczema, dermatitis affecting the palms are endogenous, that on the dorsal aspect is exogenous.²

Exact etiology of the eczema is difficult to determine. Irrespective of the cause, continued contact with irritant substances and chemicals will make any hand or foot eczema worse. This results in high costs for health care systems and the economy as well as an impairment of the quality of life for the patients.³

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Allopathic management includes topical anti-inflammatory agents, such as topical corticosteroids and calcineurin inhibitors. Furthermore, proactive therapy with twice weekly use of both calcineurin inhibitors and topical corticosteroids in previously affected areas has been found to reduce the time to the next eczematous flare.⁶

Homoeopathic remedies frequently relieve or eradicate eczema. Although the term Palmoplantar Dermatitis and literature availability on the topic is not that broad but there are number of patients, unclassified under other forms of dermatitis, as observed along with senior consultants and research scientists with their shared clinical experience. So this study was conducted to assess the role of Homoeopathic management in cases of Palmoplantar dermatitis in adults. Assessment of clinical condition and general health of the patients was done by using VAS (for itching and distress) and DLQI score. In addition the study assess the effect on dermatitis related quality of life and miasmatic predominance in cases of Palmoplantar dermatitis.

MATERIALS AND METHODS:

Study Design- This open-label, prospective, experimental, non-controlled clinical trial of pre–post comparison.

Study Setting - Participants were selected from the Outpatient departments of the Dr. Madan Pratap Khunteta Homoeopathic Medical College, Hospital & Research Centre Saipura, Sanganer, Jaipur, Rajasthan, Extension O.P.D's of Dr. Madan Pratap Khunteta Homoeopathic Medical College, Hospital & Research Centre, Sindhi Camp, O.P.D Of Dermatology, Collaborated Outpatient Department of Dermatology, CCRH, RRI, Sindhi Camp, Jaipur.

Study Duration: The total period of interventional treatment was of one year duration starting from July 2017 up to June 2018, out of which cases were registered in first 9 months and each case was followed up for a period of minimum 3 months.

Participants - Inclusion criteria were male and female subjects suffering from Palmoplantar Dermatitis, age 18 years and above and willing to participate in the study by giving written consent. Exclusion criteria were the cases of Pregnant and lactating women and participants suffering from Pompholyx and dyshidrotic eczema and treatment with systemic steroids or other immunosuppressive/-modulating drugs, including UV therapy, within the last 3 months.

Discontinuation of treatment in between and cases without proper follow-

up was excluded from the study and be considered as 'dropped out'.

Intervention- Medicine was administered in 6c to CM potencies. Homoeopathic medicines of various potencies will be selected and repeated on the basis of totality of symptoms & individualization as per the guidelines mentioned in the 5th edition of Organon of Medicine. Patients were instructed to take each dose orally on clean tongue. Duration of such therapy was 3 months. Medicines were obtained from good manufacturing practice-certified firms of India. They were advised to be present for regular follow-ups. Single individualized homoeopathic medicine was prescribed on the basis of totality of symptoms on each occasion and Subsequent prescriptions were generated as per Kent's observations and Hering's law. Repertorisation using RADAR[®] software (version 10.0.028 (ck), Archibel 2007, Belgium) when required with due consultation with Materia Medica.

General management of all the participants were given general guidelines for proper cleansing-wash the affected part with clean water and use of coconut oil for soothing, to avoid use of cosmetics, and take diet rich in salads, fruits, and green leafy vegetables and plenty of water. A detailed Case Taking Performa especially designed for the study. Data analysis was

done on the basis of pre and post score of Visual Analogue Scale for (itching and distress) and DLQI (Dermatology Life Quality Index) after minimum 3 months of follow up.

Sample Size- To see the effect of Homoeopathic medicines on Quality Of Life in cases of Palmoplantar Dermatitis in adults, The sample size was calculated to considering standardized effect size 0.7 at 90% power(using Table III), 40 patients was included in the study (including dropped out).⁷

Outcomes- The outcomes were assessed as the percentage change in Dermatology Life Quality Index questionnaire (DLQI) and VAS (itching and distress) score from baseline at the end of three months.

A **VAS score** of 1-10 is considered as mild 0-2, moderate 3-6 and severe 7-10 for itching and distress.⁸

DLQI (Dermatology Life Quality Index) Scale.^{4,5} -Maximum score of DLQI is 30, minimum score is zero. Responses are numbered starting with '3' in descending order (i.e. Very much =3, A lot =2, A little =1, Not at all=0, Not relevant=0, in Question 7, 'prevented work or studying'=3).⁹ Scale scores was filled at the commencement and after 3months of the intervention.

Statistical Methods- Paired sample t-test was conducted of to compare pre and post

VAS (itching and distress) and DLQI scores after treated with homeopathic medicines. SPSS®-IBM® version 20 (IBM Corp., IBM SPSS Statistics for Windows, Armonk, NY: USA) for Windows was used for the analysis of data.

RESULTS

Participant flow-chart

As per the pre-specified inclusion and exclusion criteria, 50 patient (both male and female) suffering from Palmoplantar dermatitis were screened; 10 were excluded on account of various reason; 40 met the eligibility criteria and were enrolled into the trial. Following that, baseline socio-demographic and outcome data were obtained. After 3 months of intervention, outcome data were recorded again. During the course of treatment, three dropped out; 37 completed the trial (Figure 1).

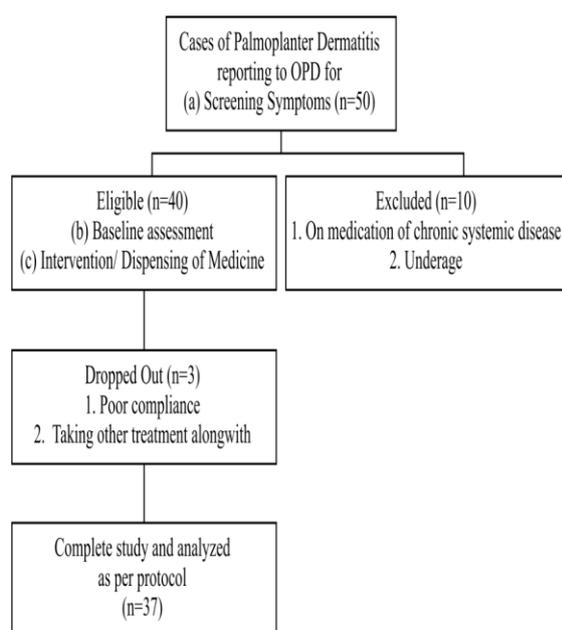


Fig 1: The study flow diagram

Baseline data

Seven variables were studied for the baseline Socio-demographic features of the subjects – age, gender, residence, socioeconomic status, employment status, site and location of hand and foot (Table 1).

Table 1. Baseline characteristics

Baseline Char.	Number (n=37)	%
Age		
18-24	10	27.02
25-31	7	18.91
32-38	15	40.54
39-45	5	13.51
Sex		
Male	18	48.64
Female	19	51.35
Area of Residence		
Urban	17	45.94
Rural	20	54.05
Socioeconomic Status		
Upper class	3	8.1
Middle class	27	72.97
Lower class	7	18.91
Employment Status		
Businessmen	5	13.51
Agriculture	3	8.1
Homemaker	13	35.13
Labourers	5	13.51
Students	5	13.51
Servicemen	6	16.21
Site of Hand and Foot		
Location of lesions	Number(n=37)	%
Palm	11	29.72
Sole	26	70.27

Numbers analyzed

Outcomes from 37 subjects were complete and therefore all these subjects (n=37) entered into the final analyses.

Outcomes and estimation

Based on VAS itching score 76-100% improvement were observed in 20 (54.05%) cases and VAS distress score 51-75% improvement in 21(56.75%) cases were observed in maximum cases. Based on DLQI score 51-75% improvement in 32 (86.48%) cases was observed in maximum cases (fig 2 & 3).

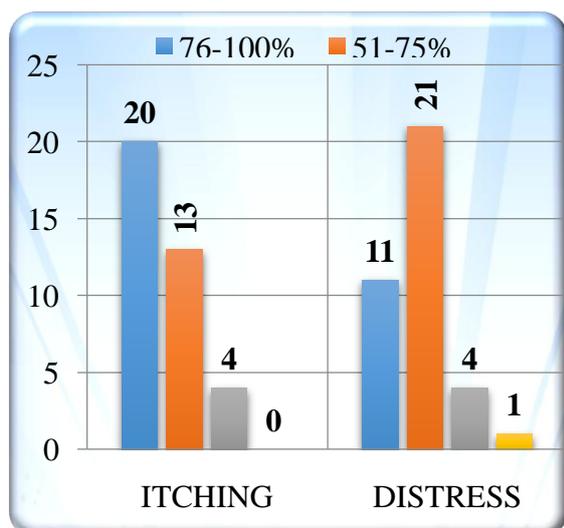


Fig 2: Average improvement status "On the basis of VAS Score"

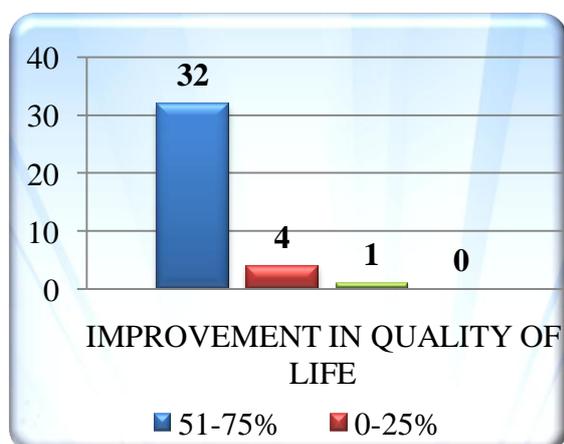


Fig 3: Graphical representation of average improvement status "On the basis of DLQI Score"

Medicines Used

Indicated homeopathic medicines prescribed on the basis of totality of symptoms. Percentages were calculated by dividing the number of prescriptions of each medicine by total number of prescriptions (i.e., 37) multiplied with 100.

Table 2: Distribution of 37 cases of Palmoplantar Dermatitis according to Indicated Medicine

Medicine	No. of Cases	(%)
Natrium Mur	9	24.32
Sepia	8	21.62
Sulphur	5	13.51
Calcarea Carb	4	10.81
Lycopodium	3	8.1
Arsenicum Album	3	8.1
Graphites	2	5.4
Petroleum	2	5.4
Staphysagria	1	2.7
Nux Vomica	1	2.7
Lachesis	1	2.7
Psorinum	1	2.7

Statistical Result - Paired sample t-test was conducted to compare pre and post VAS and DLQI score of Palmoplantar Dermatitis treated with Homoeopathic medicines. Statistically significant

reductions were achieved on VAS score ($P < 0.001$) and improvement on DLQI score ($P < 0.001$). Pre and post scores compared as mean difference of VAS score (Itching) = 5.108, $t(36) = 15.780$, $p < .001$ and mean difference of VAS score (distress) = 4.162, $t(36) = 14.683$, $p < .001$ and mean difference of DLQI score = 6.351, $t(36) = 14.949$, $p < .001$. Specifically this result suggests that when patients of Palmoplantar Dermatitis were treated with Homeopathic medicines, QoL was improved subsequently.

Discussion & Conclusion: A discussion on various aspects observed in the study and the result showed that there is a significance improvement in both the outcomes after giving individualized Homoeopathic medicines in cases of Palmoplantar Dermatitis. Homoeopathic medicines can help in alleviating symptoms of the diseases as well as improve the quality of life of the patients. From this study, it has been observed that the Homoeopathic medicines prescribed on the basis of totality of symptoms in cases of Palmoplantar Dermatitis had shown statistically significant beneficial result as obtained from VAS and DLQI scale and reduction in scores shows increasing QOL and suggesting further studies to investigate the role of Homoeopathic medicines using

Randomized controlled trials with longer duration to further enhance the impact of study in homoeopathy.

Strengths of the Study -

This study indicates that homoeopathic medicines can help in improve the quality of life of patients suffering from Palmoplantar dermatitis. The result showed significant improvement in quality of life as a whole and within the sub areas like symptom, feeling, daily activities and personal relationship. These finding also confirm the utility of VAS and DLQI Scale for demonstrating the role of Homoeopathic medicines in the treatment of Palmoplantar dermatitis. **From this study it can be concluded that Psora is the predominant miasm lying in the background in the patients suffering from Palmoplantar Dermatitis.**

Our study was representative selection of individualized Homoeopathic medicines only based law of on “law of similia” broadly covering the totality of symptoms from homoeopathic point of view. Improvement based on VAS itching score 76-100% improvement were observed and VAS distress score 51-75% improvement and on DLQI score 51-75% improvement were observed in maximum cases after homoeopathic treatment. Statistically significant difference ($P < 0.001$) has been seen in pre and post treatment scores of

VAS and DLQI Scores after given homeopathic medicines. The most indicated medicines were *Natrium muriaticum*, *Sepia* and *Sulphur*.

Weaknesses of the study- This study took place on small scale and Small sample size and there was no control group. So there was no randomization in the study which increases the impact of the study result. The study duration of 1 year with follow up of only for 3 months was too short. 50-millesimal potencies were not used in the present study so the role of different scales of potentiation was not explored.

Although this was a pilot study but it may provide a wide future scope for management of Palmoplantar dermatitis with homoeopathic treatment. Further studies should be conducted at multicentric levels and should include more number of patients. Thus, QOL measurements should become a routine part of clinical management in cases of Palmoplantar dermatitis. This will help to improve knowledge of clinicians and to encourage future researches.

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