Indian Journal of Research in Homoeopathy

Volume 18 | Issue 3 Article 4

27-9-2024

A pragmatic, open-label study to evaluate the response of homoeopathic treatment in vitiligo

Divya Taneja
Central Council for Research in Homoeopathy, Delhi, drdivyataneja@gmail.com

Renu Mittal
Central Council for Research in Homoeopathy, New Delhi, renumittal8@gmail.com

R. Bhuvaneswari
National Homoeopathic Research Institute for Mental Health, Kottayam, Kerala, India, dr.bhuvaneswarir@gmail.com

Akshaya Kumar Prusty
Regional Research Institute for Homoeopathy, Puri, Odisha, prustyakshayakumar@gmail.com

P. S. Chakraborty
Dr Anjali Chatterjee Regional Research Institute for Homoeopathy, Kolkatta, West Bengal, drpsch@yahoo.co.in

See next page for additional authors

How to cite this article

Taneja D, Mittal R, Bhuvaneswari R, Prusty AK, Chakraborty PS, Wadhwa B, et al. A pragmatic, open-label study to evaluate the response of homoeopathic treatment in vitiligo. Indian J Res Homoeopathy 2024;18:180-189.

A pragmatic, open-label study to evaluate the response of homoeopathic treatment in vitiligo

Abstract

Background: Homoeopathy is commonly used by patients suffering from vitiligo. The treatment response needs to be assessed on standardised scales in pragmatic settings. Objective: The study aimed to evaluate response to homoeopathic treatment in vitiligo severity and quality of life using the vitiligo area scoring index (VASI) score, Vitiligo European Task Force (VETF) score and dermatological life quality index (DLQI) score. Materials and Methods: This study was undertaken in dermatology outpatient departments at 11 research institutes of the Central Council for Research in Homoeopathy. Participants, in the age group 18–60 years, any gender, presenting with at least one vitiligo skin patch above the size of 2 cm × 2 cm were included and invited to participate in the study and were regularly followed up over a period of one year. Participants completing one-year follow-up were included in a long-term assessment for another two years. Results: A total of 361 participants were enrolled, 266 completed one-year treatment; 139 continued treatment for additional twelve months, and 62 participants completed three years. Change in VASI and VETF area scores was not significant over one year. Post hoc test identified change in score for the VETF stage as significant at 6 months (p = 0.013), 9 months (p = 0.000), and 12 months (p = 0.000) from baseline. The spread score reduced significantly from baseline (p = 0.000), as also the change in mean scores of DLQI (p = 0.000), patient (p = 0.000) and physician global assessments (p = 0.000). Conclusion: The extent of depigmentation in vitiligo (staging) and spread decreased significantly along with improvement in quality of life with regular homoeopathic treatment.

Acknowledgments and Source of Funding

Acknowledgement: We acknowledge the contribution of Dr Ravi Kumar Sadarla, Assistant Director, for providing all the necessary facilities required to carry out the research trial, at HRID Chennai and CRU(H) Port Blair. We acknowledge the contribution of Dr Kolli Raju, Former Assistant Director, for screening and enrolling the cases at HRID Chennai and Dr Navin Kumar Singh, former investigator at CRUH Port Blair, for data collection and management, monitoring, guidance, and necessary communication. Mr Anurag Bajpai, Statistical Assistant, developed the plan for statistical analysis and assisted in the analysis. We acknowledge the contribution of Dr Deepti Dewan, former Consultant, CCRH in development of the protocol and conducting the literature review for the study. Consultants in the study were Dr Shobhit Caroli at DDPRCRIH Noida, Dr. Krishnasri at RRIH Gudivada, Dr. Veeral Manoj Aliporewala at RRIH Mumbai, Dr Hema Malini at HRID Chennai, and Dr. Nilachal Singh at RRIH Puri. We acknowledge the Research fellows involved in the study including Dr G. R. Jayasri at HRID Chennai, Dr. Aabida, Dr. Harmeet Kaur, Dr. Bindu and Dr. Shradha Kothari, at CRUH Port Blair, Dr Ajay Meena, Dr Jitendra Godara at CRIH Jaipur, and Dr. Pranati saha, Dr. Santi Adhikary at RRIH Puri. Dr Shweta Singh, SRF(H) CCRH headquarters complied the data from all the centres. Mrs. J. Snaha Latha, B.Sc (Botany), D.M.L.T provided logistic support at CRUH Port Blair and Ms. Nisha, Office assistant provided secretarial assistance at CCRH Headquarters. Financial support: The study was funded by the Central Council for Research in Homoeopathy, New Delhi, India.

Authors

Divya Taneja, Renu Mittal, R. Bhuvaneswari, Akshaya Kumar Prusty, P. S. Chakraborty, Bharti Wadhwa, Lipipushpa Debata, Ashish P. Shivadikar, Nidhi Mahajan, Vaishali Shinde, Uttam Singh, Siva Prasad Goli, Renu Bala, Pooja Kumari, Anil Khurana, and Raj Kumar Manchanda

Original Article

A pragmatic, open-label study to evaluate the response of homoeopathic treatment in vitiligo

Divya Taneja[1]*, Renu Mittal[1], R. Bhuvaneswari[2], Akshaya Kumar Prusty[3], P. S. Chakraborty[4], Bharti Wadhwa[5], Lipipushpa Debata[6], Ashish P. Shivadikar[7], Nidhi Mahajan[8], Vaishali Shinde[9], Uttam Singh[10], Siva Prasad Goli[11], Renu Bala[12], Pooja Kumari[1], Anil Khurana[13], Raj Kumar Manchanda[14]

[1]Central Council for Research in Homoeopathy, New Delhi, India, [2]CCRH-National Homoeopathic Research Institute for Mental Health, Kottayam, Kerala, India, [3]CCRH-Regional Research Institute for Homoeopathy, Puri, Odisha, India, [4]CCRH-Dr. Anjali Chatterjee Regional Research Institute for Homoeopathy, Kolkatta, West Bengal, India, [5]Dr. D P Rastogi Central Research Institute for Homoeopathy, Noida, Uttar Pradesh, India, [6]CCRH-Homoeopathic Drug Research Institute, Lucknow, India, [7]Regional Research Institute for Homoeopathy, Gudivada, Andhra Pradesh, India, [8]Central Research Institute for Homoeopathy, Jaipur, Rajasthan, India, [9]Regional Research Institute for Homoeopathy, Mumbai, Maharashtra, India, [10]CCRH-Clinical Research Unit for Homoeopathy, Port Blair, India, [11]CCRH-Clinical Research Unit for Homoeopathy, Chennai, India, [12]CCRH-Regional Research Institute for Homoeopathy, Guwahati, Assam, India, [13]National Commission for Homoeopathy, New Delhi, India, [14]Nehru Homoeopathic Medical College and Hospital, New Delhi, India

Abstract

Background: Homoeopathy is commonly used by patients suffering from vitiligo. The treatment response needs to be assessed on standardised scales in pragmatic settings. **Objective:** The study aimed to evaluate response to homoeopathic treatment in vitiligo severity and quality of life using the vitiligo area scoring index (VASI) score, Vitiligo European Task Force (VETF) score and dermatological life quality index (DLQI) score. **Materials and Methods:** This study was undertaken in dermatology outpatient departments at 11 research institutes of the Central Council for Research in Homoeopathy. Participants, in the age group 18–60 years, any gender, presenting with at least one vitiligo skin patch above the size of 2 cm × 2 cm were included and invited to participate in the study and were regularly followed up over a period of one year. Participants completing one-year follow-up were included in a long-term assessment for another two years. **Results:** A total of 361 participants were enrolled, 266 completed one-year treatment; 139 continued treatment for additional twelve months, and 62 participants completed three years. Change in VASI and VETF area scores was not significant over one year. *Post hoc* test identified change in score for the VETF stage as significant at 6 months ($p = 0.013$), 9 months ($p = 0.000$), and 12 months ($p = 0.000$) from baseline. The spread score reduced significantly from baseline ($p = 0.000$), as also the change in mean scores of DLQI ($p = 0.000$), patient ($p = 0.000$) and physician global assessments ($p = 0.000$). **Conclusion:** The extent of depigmentation in vitiligo (staging) and spread decreased significantly along with improvement in quality of life with regular homoeopathic treatment.

Keywords: Homoeopathy, Pragmatic study, Responders, Vitiligo area scoring index, Vitiligo European Task Force

Introduction

Vitiligo is an autoimmune, depigmenting skin disorder characterised by the selective loss of melanocytes, which leads to pigment dilution in the affected areas of the skin, resulting in a totally amelanotic, non-scaly chalky-white macule with distinct margins.[1] Vitiligo patches can appear anywhere on the skin, but the most commonly affected sites include the area around the orifices, the genitals, or any sun-exposed areas such as the face and hands. The hair and, rarely, the eyes may also be affected.[2,3] The mechanism behind melanocyte destruction can be multifactorial including genetic, and autoimmune responses including both innate and adaptive, oxidative stress, generation of inflammatory mediators, and melanocyte detachment mechanism.[1]

Vitiligo is classified into two primary forms: Non-segmental vitiligo (NSV) and segmental vitiligo (SV) by an international consensus. NSV is the most common form of vitiligo, accounting for 72–95% of the cases. The vitiliginous lesions are usually symmetrically distributed and new patches may

Access this article online	
Quick Response Code: Available in print version only	Website: www.ijrh.org
	DOI: 10.53945/2320-7094.1946

***Address for correspondence:** Dr. Divya Taneja, Central Council for Research in Homoeopathy, New Delhi, India. E-mail: drdivyataneja@gmail.com

Received: 09 September 2023; **Accepted:** 23 August 2024

How to cite this article: Taneja D, Mittal R, Bhuvaneswari R, Prusty AK, Chakraborty PS, Wadhwa B, *et al.* A pragmatic, open-label study to evaluate the response of homoeopathic treatment in vitiligo. Indian J Res Homoeopathy 2024;18:180-189.

appear throughout the patient's life. The disease is progressive with subsequent flare-ups. NSV is frequently associated with auto-immune disorder of personal origin or related to family history. The pathogenesis of SV and NSV shares an overlapping inflammatory pathogenesis, including the initial release of proinflammatory cytokines and neuropeptides elicited by external or internal injury, with subsequent vascular dilatation and immune response.[4]

The worldwide prevalence of vitiligo ranges between 0.4% and 2%.[5] In India, the point prevalence of vitiligo amongst dermatological patients was identified to be 9.98% in outpatients of four hospitals across the country.[6] In vitiligo, the prevalence of family history, consanguinity, and hypothyroid disorders are high.[7] Psychiatric morbidity is identified to be as high as 63.93% in vitiligo patients along with depression, discomfort, social problems, cognitive impairments, embarrassment, and physical limitations being significantly higher than in non-vitiligo persons.[8]

The treatment of vitiligo is considered to be a challenge with camouflage and psychological support being the mainstay of treatment, which can additionally include phototherapy, topical and systemic immunosuppressants, and surgical techniques, to reduce spread and encourage re-pigmentation.[9] These treatments, however, neither provide a permanent effect nor are free from side effects.[10]

Patients frequently approach homoeopathic practitioners for treatment, and positive treatment responses are reported in the literature.[11] A number of case reports[12-16] identify the usefulness of Homoeopathy being used over a long duration. A retrospective study of a series of fourteen cases of vitiligo treated with individualised homoeopathic medicines showed that prolonged periods of psychological stress might be involved in the onset and progression of vitiligo and Homoeopathy can be more successful during the early development of a disease, even before conventional medicine usually begins.[17] Central Council for Research in Homoeopathy (CCRH) developed a vitiligo severity score, combining scores for the type of vitiligo, depigmentation type, colour of hair, number of patches, colour in the patch, the margin of patch and extent of regimentation scale and used it on 432 patients.[18] This novel scale looked promising, but lacked statistical validation. An open-label pilot study on thirty participants analysed that individualised homoeopathic treatment was associated with significant improvement in standardised vitiligo assessment scores after six months of treatment.[19] A double-blind, randomised, placebo-controlled pilot trial showed the efficacy of the individualised homoeopathic medicines in the treatment of sixty cases of vitiligo showed a higher mean reduction in the Homoeopathy group over the placebo.[20]

Long-duration studies on the use of validated scales for the assessment of treatment response are lacking in all systems of medicine.[10,11] Underlining these observations and limitations from past studies, this study was undertaken to identify the extent and type of response to homoeopathic treatments in cases of vitiligo. Vitiligo area scoring index (VASI),[21] Vitiligo European Task Force (VETF)[22] scores, validated scales providing measures of disease severity indexes and treatment evaluation criteria compared to simple clinical photography alone[23] were used and change in the quality of life was measured by using dermatology life quality index (DLQI) on a larger sample.

The study was approved by the Institutional Ethical Committee of the CCRH and retrospectively registered with the Clinical Trial Registry of India under CTRI/2018/01/011611. All procedures were in accordance with the ethical standards of the responsible committee on human experimentation and with the World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects.[24]

This study was planned as an open-label, real-time, observational,[25] pragmatic study. The World Health Organization describes the observational study as collecting findings on a therapeutic or prophylactic treatment under routine conditions. The objective of this study was to assess the effectiveness of homoeopathic treatment in managing vitiligo, with a focus on measuring the reduction in VASI scores, VETF scores, and improvement in quality-of-life scores assessed using DLQI.

Materials and Methods

Study design

This was an open-label, real-time, observational pragmatic study.

Study setting

The study was conducted in the special dermatology outpatient departments (OPDs) clinics operating at eleven research institutes of the CCRH from February 2014 to December 2016. The study was further extended till December 2019 to reach the desired target. The dermatology clinics were managed by trained homoeopathic practitioners with a postgraduate degree in Homoeopathy and more than five years of research and clinical experience. The clinics provided routine OPD care to patients suffering from dermatological disorders using homoeopathic medicines only. The diagnosis was made by trained consulting dermatologists, who were practitioners of modern medicine with a master's degree in dermatology. The participants' case recordings, assessments and follow-ups were made by the homoeopathic practitioners.

Participants

Participants of age group 18–60 years of any gender presenting with at least one vitiligo skin patch above the size of 2 cm by 2 cm were invited to participate in the study. Participants must have had the patch for a minimum period of three months and a maximum period of ten years. Participants using topical/systemic treatments, laser or light-based vitiligo treatments or using immune-modulating oral medications for vitiligo in the past eight weeks were excluded from the study. Those with evidence of skin conditions (like pityriasis versicolor, pityriasis alba or post-inflammatory hypopigmentation) other than

vitiligo that would interfere with evaluations of the effect of study medication on vitiligo were also excluded from the study.

Voluntary written informed consent was obtained from them, and those consenting to participate were included in the study. The details of these participants were recorded at baseline and subsequent follow-ups in a specific format composed of homoeopathic case recording details and assessment questionnaires. Those who refused to participate were provided similar treatment in the OPD, except their case details were recorded in their OPD cards and were not used for study assessments. After the completion of one-year follow-up, the participants were requested to continue treatment in the OPD, as a continuum of care. Retaining the pragmatic design and to assess the real-time clinical experience in homoeopathic dermatological outpatients, the treatment and status of these participants were recorded at each follow-up on the same parameters as in the originally designed study. This was continued for an additional period of two years. A similar methodology has been used in another study being conducted in these dermatological OPDs on psoriasis and is reported elsewhere.[26]

Intervention

Homoeopathic drugs, as detailed in the standard Homoeopathic Materia Medicas and the Homoeopathic Pharmacopoeia (India/US), were used in the study on the basis of symptom similarity (homoeopathic principle). The drugs identified for the trial were procured from a Good Manufacturing Practices compliant pharmaceutical firm. Medicines were dispensed in sugar globules of standard size 30. Only a single medicine was used at a time. The selected medicine was prescribed in 6C potency at the start of treatment, twice a day. During the period of the study, the potency was raised sequentially as per the need of the case in pursuance of the homoeopathic principles.

The investigator was asked to keep a photographic record of the lesions of the cases. Prior permission from the participants was taken for keeping the photographic evidence of the lesions. The identity of the participants was concealed while taking the photographs. The photographs were taken from the same angle and light settings at baseline and subsequent follow-ups. A soft copy of the photographs was maintained. Data were recorded on a pre-designed case recording form and managed on an MS Excel® spreadsheet at each of the study centres. The data were compiled at CCRH headquarters, Delhi, in a single master chart and were analysed.

Outcomes

The primary outcome measures were the vitiligo area severity index (VASI) and VETF scores, evaluated at baseline and every month for the entire follow-up period. VASI is a validated scale measuring the extent and degree of depigmentation estimated as a function of body surface area and present depigmentation. Scores range from 0 (no depigmentation) to 100 (complete depigmentation of the entire body). The VETF evaluates area of vitiligo lesions (based on rule of 9), staging (cutaneous and hair pigmentation in vitiligo patches and the disease is staged as 0–3 on the largest macule in each body region, except hands and feet, which are assessed separately and globally as one unique area, score range is from 0 to 15) and spread of lesions (from −1 indicating regressive Vitiligo to +1 indicating progressive Vitiligo for each of five body regions, thus giving a range from −5 to +5).

Secondary outcome measures included the DLQI[27] and simple digital photography every month. The DLQI index ranges from 0 to 30, with one involving the least and 30 affecting all aspects of life. Subjective assessment was also performed using Patient (PtGA) and Physician (PhyGA) Global Assessments on a Visual Analogue Scale (VAS) of 0–10.

Sample size

Considering this to be an OPD-based pragmatic study at the dermatology OPD, each centre was requested to enrol a minimum of 30 cases for a total of 330 cases. Since the centres have a variable patient inflow, centres with a higher inflow of cases were told to continue enrolment to a maximum of 60 cases. Enrolment was continued from March 2014 to December 2019 but was limited to three years only at each individual centre. The target was to enrol the maximum number of cases during the study period to analyse the treatment effect in all cases rather than on a specific sample.

Statistical methods

The study being pragmatic based on population data had a presumption of normality and so parametric tests were applied. Data are presented as mean ± standard deviation for continuous variables (age, duration of illness, VASI at baseline, VETF for area, staging and spread at baseline and baseline patient and global physician assessments) and as number (percentage) for categorical variables (gender). Repeated measure analysis of variance (ANOVA) was conducted to identify a change in continuous variables, for data recorded at every three months. The improvement of vitiligo for therapy is compared to that of psoriasis in general and is more slow. It is suggested to equate a 50% reduction in VASI score (VASI 50) as a clinical improvement of a 75% reduction in PASI score (PASI 75),[23] according to which improvement was identified. The data was handled as per the Intention to Treat (ITT) approach.

Results

Participant flow

Over a period of three years, 970 participants were screened. Out of these, 609 participants were excluded and 361 participants of vitiligo were enrolled. All participants completed the initial three months of treatment, which reduced to 344 at the end of six months and 297 at nine months. Only 266 participants completed one-year treatment. The number of participants continuing treatment for an additional twelve months was 139. Further follow-ups were reduced to 62 cases at 36 months [Figure 1].

Baseline characteristics

Out of 361 participants, 116 (32%) were between the age of 18–30 years, 90 (25% each) in 31–40 years and 41–50 years

and 65 (18%) in 51–60 years. There were 168 males (47%) and 193 females (53%). The baseline characteristics of the participants enrolled are given in Table 1.

Change in outcome parameters

Change in VASI and VETF Area score was not significant over one year [Table 2]. *Post hoc* test identified change in score for the VETF stage as significant at six months ($p = 0.013$), nine months ($p = 0.000$), and twelve months ($p = 0.000$) from baseline. The VETF Spread score reduced significantly from baseline ($p = 0.000$) to three months onwards, as also change in DLQI, PtGA and PhyGA [Table 2].

Change in scores at 24 months of treatment

Data from 139 participants completing 2-year treatments were analysed. The mean scores of all parameters reduced significantly as compared to the baseline. VETF Area score levelled off after 15 months, stage levelled off after one year, and spread scores after six months [Table 3]. DLQI reduced significantly over two years, whereas PtGA and PhyGA levelled off after one year of treatment.

Change in scores at 36 months of treatment

In 62 participants completing 3-year treatments, additional years of treatment had no significant change in any of the scales [Figures 2 and 3].

Medicines prescribed

A total of 23 medicines were used as the first prescription, out of which seven (7) medicines were used frequently [Table 4]. No adverse events from treatments were identified. The assessments of the participants were made clinically as well as with scales to identify subsequent prescriptions. A few representative cases are presented showing images captured before, during and after treatment [Supplementary Figures 1-4, available online only]. Among the participants completing twelve months of treatment, 14 continued with the same medicine in 6C potency; in 138 the potency was increased progressively and 73 participants, required a change in medicine. The prescriptions following the first prescription, both for the medicine and dosage, were as per the principles of Homoeopathy based on the symptoms of the participants. The symptoms of the participants with more than 50% improvement in the VASI scale are compiled to identify the most referred indications for a prescription from the literature [Supplementary Table 1, available online only].

Discussion

This open-label pragmatic study was conducted on patients reported in the dermatology OPD to evaluate the response of homoeopathic treatment in vitiligo using validated scales for interpreting the outcome on scientific parameters. The results indicated that there was a progressive reduction in the VASI score ($F = 2.385$, $p = 0.112$). The reduction in VETF score for stage ($F = 9.123$, $p = 0.000$) and spread ($F = 103.165$, $p = 0.000$) was statistically significant, whereas there was no change in the VETF area score ($F = 0.617$, $p = 0.473$).

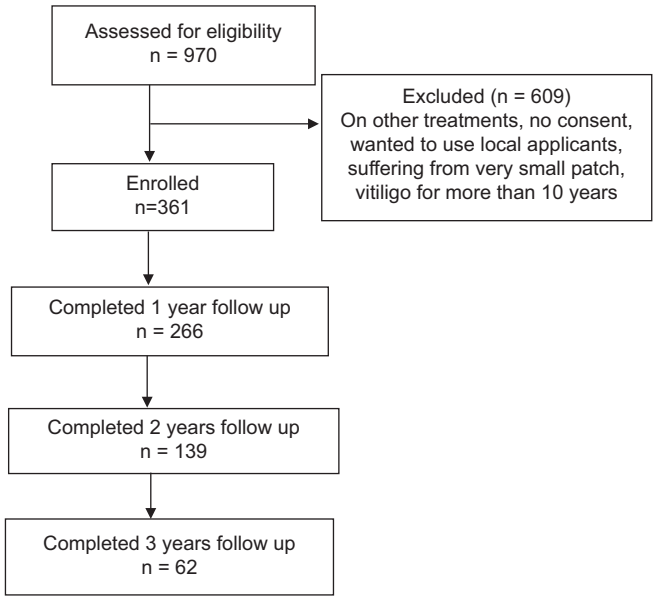

Figure 1: Participant flow

Table 1: Baseline characteristics of participants

Variables	*N*=361
Age (mean±SD)	38.44±12.18
Duration of illness (years)	
Mean±SD	5.71±4.72
Classification of Duration of Illness (years)	
<5	160 (46.9)
5–15	164 (48.0)
More than 15	17 (5)
Missing data	20
Baseline VASI	5.82±8.87
Baseline VETF	
Area	7.57±11.23
Stage	5.17±3.11
Spread	1.67±2.00
Baseline DLQI	5.92±4.36
Baseline PtGA	7.15±2.14
Baseline PhyGA	6.72±2.17

VASI: Vitiligo area severity index, VETF: Vitiligo European Task Force, DLQI: Dermatology life quality index, PtGA: Patient global assessment, PhyGA: Physician global assessment

This study assessed all participants reporting in the OPD with vitiligo on validated scales, who were followed up for a period of one year or subsequently those who continued with the treatment. Out of 361 enrolled participants, 266 participants completed one year of follow-up, 139 participants continued it for 24 months, and only 62 participants continued treatment for 36 months of time. Out of 95 participants, who did not complete one-year follow-up, six had shown improvement with more than a 50% decrease in VASI scores and five had shown marked deterioration with more than a 50% increase in their VASI scores, whereas the remaining 84 % had no change or change <50% (increase or decrease) in scores. No change in vitiligo patches could be a reason for participants to discontinue

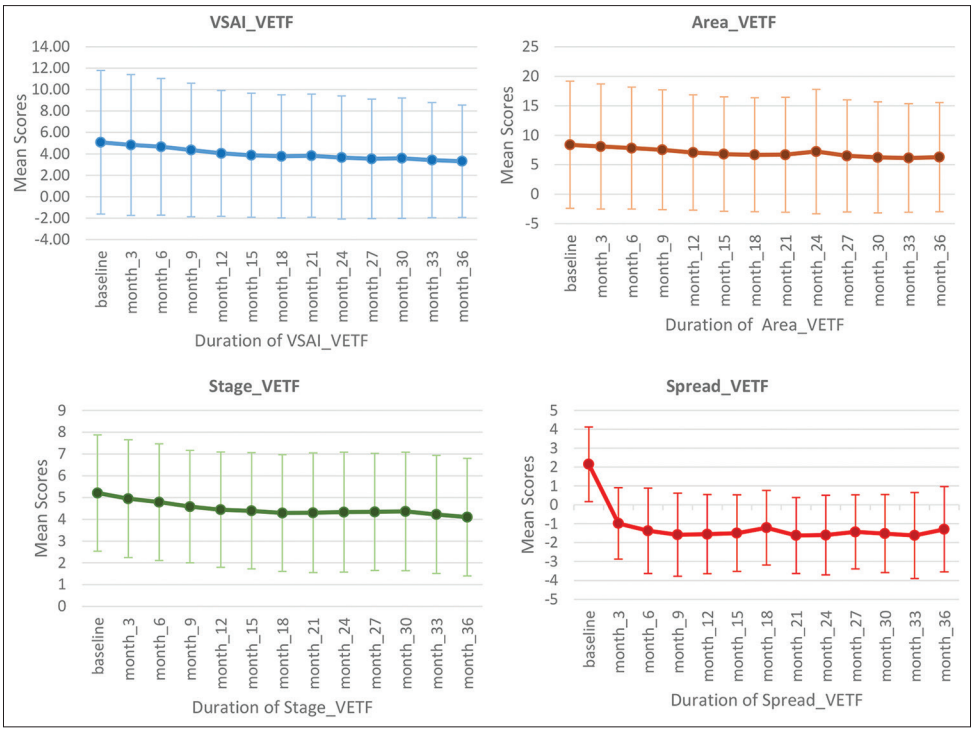

Figure 2: Mean vitiligo area scoring index and area, stage and spread scores over 36 months of treatment

Table 2: Change in mean scores after 1 year of treatment (n=266)

Scales used	Baseline	Follow-up				F value	*p*-value*
		3 months	6 months	9 months	12 months		
VASI	5.82±8.87	5.69±8.85	5.49±8.59	5.49±8.93	5.41±8.87	2.385	0.112
VETF area	7.57±11.23	7.42±11.23	7.84±13.70	7.45±11.53	7.39±11.52	0.617	0.473
VETF stage	5.17±3.11	5.08±3.11	4.95±3.14	4.85±3.00	4.77±2.97	9.123	0.000
VETF spread	1.67±2.00	−0.34±1.83	−0.59±1.73	−0.58±1.83	−0.66±1.66	103.165	0.000
DLQI	5.92±4.36	5.33±4.08	4.89±4.13	4.57±4.21	4.12±4.02	62.143	0.000
PtGA	7.15±2.14	6.79±2.04	6.57±2.13	6.32±2.14	6.17±2.19	43.893	0.000
PhyGA	6.72±2.17	6.38±2.08	6.22±2.11	5.95±2.14	5.85±2.21	38.768	0.000

VASI: Vitiligo area severity index, VETF: Vitiligo European Task Force, DLQI: Dermatology life quality index, PtGA: Patient global assessment, PhyGA: Physician global assessment
*Repeated measure ANOVA; $p<0.05$ is considered as significant; p values are given as exact up to 3 decimal places

the treatment. However, specific causes for attrition could not be ascertained as participants who were not improving and those showing improvement both left the study on their own accord. Assessment of factors leading to loss to follow-up; therefore, should be a factor to be ascertained in future studies with long duration follow-up.

Every participant was treated with individualised Homoeopathy approach. Only centesimal potencies were used in the study and repetition of doses was made as per the protocol and need of the case. Any sign of improvement supported by scores like VASI and VETF was followed by a placebo, and it was allowed to follow the action of the last dose applied from time to time as per the need of the case. It was also observed that improvement in lower potencies, especially in 6C and 30C were sustainable for a longer period than the use of subsequent higher potencies. The prescription versus susceptibility analysis to identify the best-suited potency for each individual case is, however, out of the scope of this paper.

The methodological strength of this study includes the incorporation of the objective parameters for assessing the status of the enrolled cases. Based on the currently available literature, VASI and the VETF tools were proposed to offer more accurate measures of disease severity indexes and treatment evaluation criteria compared to simple clinical photography alone. The study, though conducted by CCRH, did not use the previously developed scale, since the statistical validation of the scale has not been done. Changes in the mean scores of VASI and VETF were assessed as outcome parameters at baseline and at monthly interval during follow-ups, after giving individualised homoeopathic medicines.

Table 3: Change in mean scores after 2 years of treatment ($n=139$)

Scales used	Baseline	Follow up (month wise)							F value	*P*-value
		3	6	9	12	15	18	21	24	
VASI	5.07±6.61	4.78±6.43	4.71±6.29	4.55±6.30	4.38±6.17	4.12±5.96	4.06±5.94	4.09±5.88	4.05±5.91	10.06	0.000
VETF area	7.40±9.81	7.04±9.65	6.85±9.45	6.71±9.52	6.47±9.31	5.97±9.03	6.03±9.01	5.87±8.92	6.27±9.37	4.63	0.010
VETF stage	5.15±2.88	5.01±2.94	4.79±2.91	4.59±2.79	4.49±2.82	4.54±2.83	4.46±2.82	4.46+2.87	4.54±2.88	9.97	0.000
VETF spread	1.78±2.00	−0.56±2.04	−0.90±1.99	−1.061.94	−0.96±1.87	−1.10±1.84	−0.841.84	−1.06±1.79	−1.01±1.81	47.8	0.000
DLQI	5.60±4.022	4.96±3.74	4.62±3.74	4.23±3.59	3.55±3.48	3.52±3.40	3.35±3.429	3.05±3.27	3.00±3.24	43.87	0.000
PtGA	7.35±2.22	7.01±2.13	6.92±2.09	6.62±2.03	6.45±2.03	6.41±2.00	6.33±2.00	6.30±2.08	6.27±2.06	16.64	0.000
PhyGA	7.11±2.36	6.70±2.41	6.57±2.16	6.31±2.13	6.23±2.14	6.16±2.01	6.12±2.05	6.05±2.11	6.07±2.12	14.50	0.000

VASI: Vitiligo area severity index, VETF: Vitiligo European Task Force, DLQI: Dermatology life quality index, PtGA: Patient global assessment, PhyGA: Physician global assessment

*Repeated measure ANOVA; $P<0.05$ considered as significant

Table 4: Medicines most frequently indicated

S. No.	Medicines used	No. of patients	No. of cases improved (> 50%) in 1 year
1	*Sulphur*	70	07
2	*Natrum muriaticum*	65	04
3	*Arsenicum album*	64	08
4	*Phosphorus*	38	07
5	*Calcarea carbonicum*	34	05
6	*Sepia*	20	04
7	*Lycopodium clavatum*	18	02

The VASI scale combines depigmentation area and extent into a unified score, while the VETF score independently gauges area, stage and spread. In cases where the depigmentation area remained largely unchanged, the spread of the depigmentation was reduced, and a reduction in the stage of depigmentation occurred. No change in the area, therefore, reflected itself in a non-significant reduction in the VASI score. The change in stage and spread is likely to have affected the quality-of-life index score and the global assessment scores as well.

However, VASI being a single score was used to assess overall improvement among the participants which was identified as a 50% reduction in the score. Forty-one participants improved by 50% or more at the end of one year. Out of these, 16 dropped out of treatment before completing two years, three cases were aggravated, and in the rest, 22 reported sustained improvement. Fourteen of these 41 participants continued the treatment for three years, all of whom except one, continued to improve. Additional 16 participants improved at the end of two years and another eight improved at the end of 36 months.

Whereas the disease-specific scores levelled off in participants within 15 months of treatment, the DLQI score continued to improve significantly. In participants continuing treatment for three years, whereas the patient global assessment deteriorated, the DLQI score continued to reduce.

In the previous study[18] conducted at CCRH, assessments were made on a nominal scale, where 136 cases were identified to be progressive and 20 were identified to be stationary at baseline. Out of these, at the end of treatment, only 30 cases showed progression, 103 showed a reduction in progression pace, and 33 became stationary. In this study, the progression of vitiligo was assessed on VETF spread score, ranging from −1 to +1 for each location. The mean score reduced from 1.67 ± 2.00 to −0.34 ± 1.83, −0.59 ± 1.73, −0.58 ± 1.83 and −0.66 ± 1.66 at 3, 6, 9 and 12 months, respectively. In the majority of cases, therefore, a complete repigmentation of lesions could not be observed but progression was checked markedly and here it corroborates with the earlier study conducted by CCRH.

Vitiligo patients usually suffer social and emotional consequences including low self-esteem, social anxiety, depression, stigmatisation and, in extreme cases, rejection by those around them.[8,26] An important aspect of the therapeutic

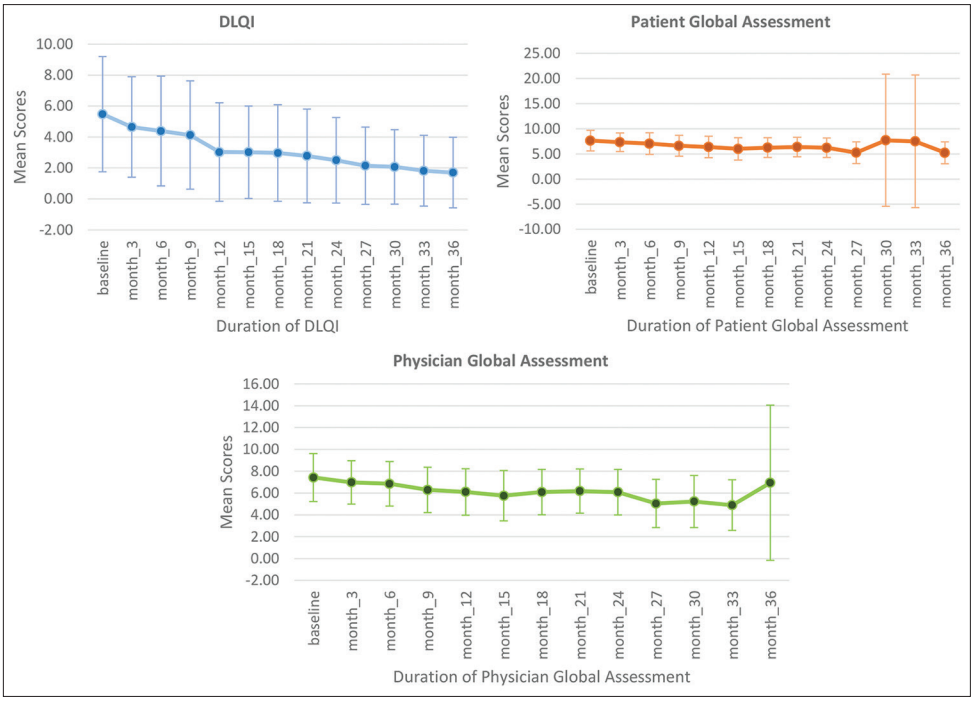

Figure 3: Mean dermatological life quality index, patient global assessment and physician global assessment scales over 36 months of treatment

response is the change in the quality of life of patients after the treatment because of social stigma and psychological stress associated with the disease. Changes in the mean scores assessed for the improvements in quality of life using the DLQI scale were significant, and this was seen in patients continuing treatment over the years. The follow-up assessment was done by a consultant dermatologist along with the study investigator engaged in the project in all the study centres throughout the study to avoid bias.

Sulphur, Natrum muriaticum, Arsenic album, Phosphorus and *Calcarea carbonicum* were found to be the most frequently prescribed medicines in this as well as the previously conducted study.[18]

The high attrition of patients over a period of three years is a limitation of this study. About 73.68% of the enrolled participants completed one year of treatment. Once the study period was over, only 38.50% of the patients completed two years of treatment and only 17.17% completed three years of treatment. Further studies on vitiligo intending to undertake long-term follow-ups need to identify the reasons for patient attrition and also pre-empt measures to ensure the continued participation of the patients. Furthermore, the second and three years were routine OPD care and were not definitive study periods. The participants, however, affirmed that they were following the study guidelines, were on only homoeopathic treatment and were not using any other treatment. However, the possibility of other confounding factors which affect treatment response cannot be completely eliminated. The study lacks a control or a comparator arm and, therefore, lies low in the hierarchy of evidence.

The strengths of the study are the utilisation of multiple assessment scales in spite of being conducted in pragmatic settings and assessment by both homoeopathic physicians and dermatologists. The medicines that can be most useful and their indications are another useful addition to the study. It is expected that this study will help clinicians arrive at better clinical decision-making in terms of diagnosis for vitiligo patients, augmented management of disease using the validated outcome assessment parameters and improvement of the quality of life of patients using DLQI and assessment of the treatment being provided.

It was experienced from the study that there was substantial clinical benefit to the patients enrolled in the study but to identify true efficacy, an RCT study may be undertaken, by calculating the power of the study and considering the strengths and weakness of the biomedical research strategies as possible to be applicable in such disease. Many studies have demonstrated the associations of vitiligo with thyroid disorders and other associated autoimmune diseases, such as alopecia areata, rheumatoid arthritis, adult-onset diabetes mellitus, addison's disease, pernicious anemia, systemic lupus erythematosus, psoriasis and atopic background.[29] The cytological level of melanocyte activity may be measured in the future. These factors may further be elaborated on in further experimental studies and pragmatic trials.

The findings of the present study will further aid in designing more robust designs like RCTs and pragmatic trials for validation of the observations inferenced through the study and will also aid as a reference tool in updating the homoeopathic literature on the subject.

Conclusion

The extent of depigmentation and spread of vitiligo patches decreased significantly along with improvement in quality of life with regular homoeopathic treatment. Several small clinical trials published so far provide positive results consistently with replication, but larger, more definitive trials are necessary.

Supplemental content (Available online)

Supplementary Figure 1

Supplementary Figure 2

Supplementary Figure 3

Supplementary Figure 4

Supplementary Table 1

Financial support and sponsorship

Nil.

Conflicts of interest

None declared.

References

1. Ezzedine K, Lim HW, Suzuki T, Katayama I, Hamzavi I, Lan CC, *et al*. Revised classification/nomenclature of vitiligo and related issues: The Vitiligo Global Issues Consensus Conference. Pigment Cell Melanoma Res 2012;25:e1-13.
2. Karadag R, Esmer O, Karadag AS, Bilgili SG, Cakici O, Demircan YT, *et al*. Evaluation of ocular findings in patients with vitiligo. Int J Dermatol 2016;55:351-5.
3. Soni P, Patidar R, Soni V, Soni S. A review on traditional and alternative for skin disease "vitiligo". Int J Pharm Biol Sci Arch 2010;1:220-7.
4. Van Geel N, Mollet I, Brochez L, Dutre M, De Schepper S, Verhaeghe E, *et al*. New insights in segmental vitiligo: Case report and review of theories. Br J Dermatol 2012;166:240-6.
5. Silverberg NB. The epidemiology of vitiligo. Curr Derm Rep 2015;4:36-43.
6. Kumar S, Nayak CS, Padhi T, Rao G, Rao A, Sharma VK, *et al*. Epidemiological pattern of psoriasis, vitiligo and atopic dermatitis in India: Hospital-based point prevalence. Indian Dermatol Online J 2014;5:S6-8.
7. Sarma N, Chakraborty S, Poojary S, Kumar BM, Gupta LK, Budamakuntla L, *et al*. Nationwide, multicentric case-control study on vitiligo (MEDEC-V) to elicit the magnitude and correlates. Indian J Dermatol 2020;65:473-82.
8. Sarkar S, Sarkar T, Sarkar A, Das S. Vitiligo and psychiatric morbidity: A profile from a vitiligo clinic of a rural-based tertiary care center of Eastern India. Indian J Dermatol 2018;63:281-4.
9. Bergqvist C, Ezzedine K. Vitiligo: A review. Dermatology 2020;236: 571-92.
10. Whitton ME, Pinart M, Batchelor J, Leonardi-Bee J, González U, Jiyad Z, *et al*. Interventions for vitiligo. Cochrane Database Syst Rev 2015;2015:CD003263.
11. Dewan D, Taneja D, Singh U, Mittal R, Khurana A. Homoeopathic research in vitiligo: Current scenario. Indian J Res Homoeopathy 2017;11:226-36.
12. Kumar SR. A case of vitiligo treated with phosphorus. Indian J Res Homoeopathy 2008;2:49-57.
13. Jha DK, Debata L. A case of vitiligo treated by sulphur. Indian J Res Homoeopathy 2009;3:34-40.
14. Pandey S, Pandit RK. Individualized homoeopathic approach in a case of vitiligo with hypothyroidism -a case report. IJACARE 2020;4:125-34.
15. Purkait R, Debnath D, Bhattacharjee B, Choubey G. Homoeopathy in obstinate non-segmental vitiligo: An evidence-based report of two cases. Homœopathic Links 2022;35:181-90.
16. Kukreti A, Kumar P. Effectiveness of treatment with Homeopathic medicine in managing the case of vitiligo- a case report. IJACARE 2022;6:76-81.
17. Mahesh S, Mallappa M, Tsintzas D, Vithoulkas G. Homeopathic treatment of vitiligo: A report of fourteen cases. Am J Case Rep 2017;18:1276-83.
18. Chakraborty PS, Kaushik S, Debata L, Ram B, Kumar R, Shah M, *et al*. A multicentric observational study to evaluate the role of homoeopathic therapy in vitiligo. Indian J Res Homoeopathy 2015;9:167-75.
19. Ganguly S, Saha S, Koley M, Mondal R. Homeopathic treatment of vitiligo: An open observational pilot study. Int J High Dilution Res 2013;12:168-77.
20. Karuppusamy A, Paul S, Chattopadhyay A, Balamurugan D, Malathi M, Kumar A, *et al*. Individualized homeopathic medicines in treatment of vitiligo: Double-blind, randomized, placebo-controlled pilot trial. J Integr Complement Med 2022;28:96-102.
21. Hamzavi I, Jain H, McLean D, Shapiro J, Zeng H, Lui H. Parametric modeling of narrowband UV-B phototherapy for vitiligo, using a novel quantitative tool: The Vitiligo Area Scoring Index. Arch Dermatol 2004;140:677-83.
22. Taieb A, Picardo M. The definition and assessment of vitiligo: A consensus report of the vitiligo European task force. Pigment Cell Res 2007;20:27-35.
23. Kawakami T, Hashimoto T. Disease severity indexes and treatment evaluation criteria in vitiligo. Dermatol Res Pract 2011;2011:750342.
24. World Medical Association. World Medical Association Declaration of Helsinki ethical principles for medical research involving human subjects. JAMA 2013;310:2191-94.
25. WHO. Clinical Research. General Guidelines for Methodologies on Research and Evaluation of Traditional Medicine. Geneva: WHO; 2000. p. 11-6.
26. Taneja D, Sadhukhan M, Rath P, Sarangi MR, Mittal R, Prusty AK, *et al*. Open label study to evaluate the response to homeopathic treatment of psoriasis. OBM Integr Complement Med 2022;7:44.
27. Pattinson RL, Trialonis Suthakharan N, Gupta S, Henry AL, Lavallee JF, Otten M, *et al*. Patient-reported outcome measures in dermatology: A systematic review. Acta Derm Venereol 2021;101:adv00559.
28. Simons RE, Zevy DL, Jafferany M. Psychodermatology of vitiligo: Psychological impact and consequences. Dermatol Ther 2020;33:e13418.
29. Dahir AM, Thomsen SF. Comorbidities in vitiligo: Comprehensive review. Int J Dermatol 2018;57:1157-64.

Une étude pragmatique et ouverte pour évaluer la réponse du traitement homéopathique dans le vitiligo

Contexte: L'homéopathie est couramment utilisée par les patients souffrant de vitiligo. Français La réponse au traitement doit être évaluée sur des échelles standardisées dans des contextes pragmatiques. **Objectif:** L'étude visait à évaluer la réponse au traitement homéopathique sur la gravité du vitiligo et la qualité de vie en utilisant le score de l'indice de notation de la zone du vitiligo (VASI), le score de la Vitiligo European Task Force (VETF) et le score de l'indice de qualité de vie dermatologique (DLQI). **Matériel et méthodes:** Cette étude a été menée dans les services ambulatoires de dermatologie de 11 instituts de recherche du Conseil central de recherche en homéopathie. Les participants, dans la tranche d'âge de 18 à 60 ans, de tout sexe, présentant au moins une plaque cutanée de vitiligo supérieure à 2 cm x 2 cm, ont été inclus et invités à participer à l'étude et ont été régulièrement suivis sur une période d'un an. Les participants ayant terminé un suivi d'un an ont été inclus dans une évaluation à long terme pendant deux années supplémentaires. **Résultats:** Un total de 361 participants ont été inscrits, 266 ont terminé un traitement d'un an ; 139 ont poursuivi le traitement pendant douze mois supplémentaires et 62 participants ont terminé trois ans. Français Le changement des scores de zone VASI et VETF n'était pas significatif sur un an. Le test post-hoc a identifié le changement du score pour le stade VETF comme significatif à 6 mois ($p = 0.013$), 9 mois ($p = 0.000$) et 12 mois ($p = 0.000$) par rapport à la ligne de base. Le score de propagation a diminué de manière significative par rapport à la ligne de base ($p = 0.000$), tout comme le changement des scores moyens du DLQI ($p = 0.000$), des évaluations globales du patient ($p = 0.000$) et du médecin ($p = 0.000$). **Conclusion:** L'étendue de la dépigmentation du vitiligo (stadification) et la propagation ont diminué de manière significative, parallèlement à l'amélioration de la qualité de vie avec un traitement homéopathique régulier.

Eine pragmatische, offene Studie zur Bewertung der Wirkung einer homöopathischen Behandlung bei Vitiligo

Hintergrund: Homöopathie wird häufig von Patienten angewendet, die an Vitiligo leiden. Der Behandlungserfolg muss in pragmatischen Umgebungen anhand standardisierter Skalen bewertet werden. **Ziel:** Ziel der Studie war es, den Erfolg der Behandlung von Vitiligo in Bezug auf Schweregrad und Lebensqualität mithilfe des Vitiligo Area Scoring Index (VASI), des Vitiligo European Task Force (VETF) und des Dermatological Life Quality Index (DLQI) zu bewerten. **Materialien und Methoden:** Diese Studie wurde in dermatologischen Ambulanzen an 11 Forschungsinstituten des Zentralrats für Homöopathieforschung durchgeführt. Teilnehmer im Alter von 18 bis 60 Jahren, jeden Geschlechts, die mindestens einen Vitiligo-Hautfleck über einer Größe von 2 x 2 cm aufwiesen, wurden zur Teilnahme an der Studie eingeladen und über einen Zeitraum von einem Jahr regelmäßig nachbeobachtet. Teilnehmer, die die einjährige Nachbeobachtung abgeschlossen hatten, wurden in eine Langzeituntersuchung für weitere zwei Jahre einbezogen. **Ergebnisse:** Insgesamt wurden 361 Teilnehmer aufgenommen, 266 schlossen die einjährige Behandlung ab; 139 setzten die Behandlung für weitere zwölf Monate fort und 62 Teilnehmer schlossen die Behandlung drei Jahre lang ab. Die Veränderung der VASI- und VETF-Bereichswerte war innerhalb eines Jahres nicht signifikant. Im Post-hoc-Test wurde eine signifikante Veränderung des Wertes für das VETF-Stadium nach 6 Monaten ($p = 0.013$), 9 Monaten ($p = 0.000$) und 12 Monaten ($p = 0.000$) vom Ausgangswert ermittelt. Der Ausbreitungswert verringerte sich vom Ausgangswert signifikant ($p = 0.000$), ebenso wie die Veränderung der Durchschnittswerte des DLQI ($p = 0.000$), der Patienten- ($p = 0.000$) und der Gesamtbeurteilung des Arztes ($p = 0.000$). **Fazit:** Das Ausmaß der Depigmentierung bei Vitiligo (Staging) und die Ausbreitung nahmen signifikant ab, während sich die Lebensqualität bei regelmäßiger homöopathischer Behandlung verbesserte.

विटिलिगो में होम्योपैथिक उपचार की प्रतिक्रिया का मूल्यांकन करने के लिए एक व्यावहारिक, ओपन-लेबल अध्ययन

पृष्ठभूमि:विटिलिगो से पीड़ित रोगियों द्वारा होम्योपैथी का उपयोग आमतौर पर किया जाता है। उपचार की प्रतिक्रिया का मूल्यांकन व्यावहारिक सेटिंग्स में मानकीकृत पैमानों पर किया जाना चाहिए।

उद्देश्य: अध्ययन का उद्देश्य विटिलिगो क्षेत्र स्कोरिंग इंडेक्स (VASI) स्कोर, विटिलिगो यूरोपियन टास्क फोर्स (VETF) स्कोर और त्वचाविज्ञान जीवन गुणवत्ता सूचकांक (DLQI) स्कोर का उपयोग करके विटिलिगो की गंभीरता और जीवन की गुणवत्ता में होम्योपैथिक उपचार की प्रतिक्रिया का मूल्यांकन करना था। **सामग्री और विधियाँ:** यह अध्ययन केंद्रीय होम्योपैथी अनुसंधान परिषद के 11 शोध संस्थानों में त्वचाविज्ञान बाह्य रोगी विभागों में किया गया। 18-60 वर्ष की आयु समूह में, किसी भी लिंग, 2 सेमी x 2 सेमी के आकार से ऊपर कम से कम एक विटिलिगो त्वचा पैच के साथ उपस्थित होने वाले प्रतिभागियों को शामिल किया गया और अध्ययन में भाग लेने के लिए आमंत्रित किया गया और एक वर्ष की अवधि में नियमित रूप से उनका अनुसरण किया गया। एक वर्ष का अनुवर्ती पूरा करने वाले प्रतिभागियों को अन्य दो वर्षों के लिए दीर्घकालिक मूल्यांकन में शामिल किया गया। **परिणाम:** कुल 361 प्रतिभागियों को नामांकित किया गया, 266 ने एक वर्ष का उपचार पूरा किया; 139 ने अतिरिक्त बारह महीनों के लिए उपचार जारी रखा, और 62 प्रतिभागियों ने तीन वर्ष पूरे किए। एक वर्ष में VASI और VETF क्षेत्र के स्कोर में परिवर्तन महत्वपूर्ण नहीं था। पोस्ट हॉक परीक्षण ने आधार रेखा से 6 महीने ($p = 0.013$), 9 महीने ($p = 0.000$) और 12 महीने ($p = 0.000$) में VETF चरण के लिए स्कोर में परिवर्तन को महत्वपूर्ण बताया। स्प्रेड स्कोर आधार रेखा ($p = 0.000$) से काफी कम हो गया, साथ ही DLQI ($p = 0.000$), रोगी ($p = 0.000$) और चिकित्सक वैश्विक मूल्यांकन ($p = 0.000$) के औसत स्कोर में भी परिवर्तन हुआ। **निष्कर्ष:** नियमित होम्योपैथिक उपचार से विटिलिगो में रंजकता की सीमा (चरणबद्धता) और प्रसार में उल्लेखनीय कमी आई तथा जीवन की गुणवत्ता में सुधार हुआ।

Un estudio pragmático, abierto para evaluar la respuesta del tratamiento homeopático en vitíligo

Antecedentes: La homeopatía es comúnmente utilizada por pacientes que sufren de vitíligo. La respuesta al tratamiento debe evaluarse en escalas estandarizadas en entornos pragmáticos. **Objetivo:** El estudio tuvo como objetivo evaluar la respuesta al tratamiento homeopático en la gravedad del vitíligo y la calidad de vida utilizando la puntuación del índice de puntuación del área de vitíligo (VASI), la puntuación del Grupo de trabajo europeo sobre vitíligo (VETF) y la puntuación del índice de calidad de vida dermatológica (DLQI). **Materiales y métodos:** Este estudio se llevó a cabo en departamentos ambulatorios de dermatología en 11 institutos de investigación del Consejo central para la investigación en homeopatía. Se incluyeron participantes, en el grupo de edad de 18 a 60 años, de cualquier género, que presentaban al menos una mancha cutánea de vitíligo de más de 2 cm x 2 cm y se les invitó a participar en el estudio y se les hizo un seguimiento regular durante un período de un año. Los participantes que completaron un año de seguimiento fueron incluidos en una evaluación a largo plazo durante otros dos años. **Resultados:** Se inscribieron un total de 361 participantes, 266 completaron un año de tratamiento; 139 continuaron el tratamiento durante doce meses adicionales y 62 participantes completaron tres años. El cambio en las puntuaciones del área VASI y VETF no fue significativo durante un año. La prueba post hoc identificó el cambio en la puntuación para la etapa VETF como significativo a los 6 meses (p = 0,013), 9 meses (p = 0.000) y 12 meses (p = 0.000) desde el inicio. La puntuación de propagación se redujo significativamente desde el inicio (p = 0.000), como también el cambio en las puntuaciones medias de DLQI (p = 0.000), evaluaciones globales del paciente (p = 0.000) y del médico (p = 0.000). **Conclusión:** La extensión de la despigmentación en el vitíligo (estadificación) y la propagación disminuyeron significativamente junto con la mejora en la calidad de vida con el tratamiento homeopático regular.

一　实用的　放　　研究，用于　估　势　法对白癜　的反

背景：　势　法通常被患有白癜　的患者使用。需要在实　环境中　估治　反　或　准化量表**。目的：**　研究旨在使用白癜　面　　分指数（VASI）　分、白癜　欧洲工作　（VETF）　分和皮肤病生活　量指数（DLQI）　分来　估　势　法治　对白癜　　重程度和生活　量的反　。**材料和方法：**本研究在中央　势　法研究委　会的 11 个研究机构的皮肤科　　行。年　　18-60　、性别不限、至少有一个大于 2 cm x 2 cm 大小的白癜　皮肤斑块的参与者被　入并邀　参加研究，并在一年内定期随　。完成一年随　的参与者将　入另外两年的　期　估。　**果：**共　361 名参与者入　，266 名完成了一年的治　；139 人　　治　十二个月，62 名参与者完成三年治　。一年内 VASI 和 VETF 区域　分　化并不　著。事后　　，与基　相比，6 个月（p = 0.013）、9 个月（p = 0.000）和 12 个月（p = 0.000）时的 VETF　段　分　化　著。　散　分与基　相比　著降低（p = 0.000），DLQI 平均　分（p = 0.000）、患者（p = 0.000）和医生整体　估（p = 0.000）**的　化也　著减少。　　：**通过定期　势　法治　，白癜　的色素脱失程度（分期）和　散程度　著降低，生活　量也得到改善。