



COMPARATIVE STUDY OF INDIVIDUALIZED HOMOEOPATHIC MEDICINES AND *BACILLINUM* IN CASES OF TINEA CRURIS. A RANDOMIZED PARALLEL ARM TRIAL

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Abstract- Totality is the reflection of internal vital force. A prevalence-based study showed 27% people suffering from tinea cruris. The study was undertaken for a period of 12 months. Group A was given homoeopathic medicines based on totality of symptoms and Group B was given *Bacillinum*. DLQI (Dermatology Life Quality Index) scale was used to assess the results. The DLQI consists of ten queries regarding patients' perception of the impact of skin diseases on totally different aspects of their health-related quality of life over the last week. An independent sample 't' test was conducted to compare Individualised Homoeopathic Medicine and *Bacillinum* in cases of Tinea Cruris. There is a significant difference in the DLQI score of Individualised Homoeopathic Medicine (M=8.22, SD=3.52) and *Bacillinum*(M=12.02, SD=5.01). $t = -4.381$, $P = <0.05$, these results suggest that Individualised Homoeopathic Medicine are more effective as compare to *Bacillinum* in lowering the DLQI Score in cases of Tinea Cruris.

Keywords: Homoeopathy, Individualized, *Bacillinum*, Tinea cruris.

INTRODUCTION

Totality as “*outwardly reflected picture of the internal essence of the disease, that is, of the affection of the vital force*” - **Dr. Hahnemann**. **Totality of Symptoms** once Hahnemann talks of he suggests that neither the arithmetic total not the conceptual whole covering the generalised aspects of symptoms however this type of intuitive grasp of the symptoms on their integrity. This intuitive faculty that is that the perceptual school at the higher level doesn't return by itself; data return from perception, gets systematized and clarified through conceptions by a method of study and eventually gets synthesized through this intuitive school to fill the particulars within the general setting.¹⁰ Symptoms are recorded within the language of the patient who solely narrates his perceptual flux of sensations. Therefore, are avoided technical abstract terms-the abstractions created named out of the perceptual flux. alternative mental schools are delivered to play on the sense-data and sensations are generalised and at a similar time particularized or personalised with relevancy character of sensation, *its vicinity, its modalities, and its alternative concomitant factors*.¹

According to **Stuart Close**, *Totality is that the true and solely basis for each homoeopathic prescription.*

Aphorism 6 – *the totality of these available signs or symptoms, represents in its full extend the disease itself; that is, they constitute the true and only form of which the mind is capable of conceiving.*

Stuart Close states that Totality of symptoms means, *initial the totality of every individual symptoms- Location, Sensation, Modality*. Totality of the symptoms means that all the symptoms of the case that are capable of being logically combined into a harmonious and consistent whole, having form, coherency and individuality.²

Tinea cruris, also known as *crotchitch*, *crotch rot*, *eczema marginatum*, *gym itch*, *jock itch*, and *ringworm of the groin* in American English and *dhobi itch* or *scrot rot* in British English, is a dermatophyte fungal infection of the groin, pubic region, and thighs in either sex, though more often seen in males.³ A prevalence based study showed among different tinea conditions, tinea corporis 39.1% followed by tinea cruris 27.0% and *Tinea gladiatorum* 1.35% for culture positivity.⁴ *Trichophyton rubrum*, *T. mentagrophyte* and *Epidermophyton floccosum* are the foremost common reason for dermatophyte infection in humans.⁵ Some predisposing factors are- warm, humid environment, tight clothing worn by men, obesity, chronic topical glucocorticoid application, summer and rainy season (such as from sweating), people who have minor skin and nail injuries, occlusion; use of synthetic clothes, close contact with people having dermatophytes (such as in sports like wrestling), bathroom floors, bathmats, towels, showers and communal bathing, swimming and changing room areas are common sources of infection. Tinea takes months to years, often, history of long-standing athlete's foot and prior history of *Tinea Cruris*.³

Tinea clinically manifests itself by redness and/or itching, burning or stinging, rash that may form blisters or pustules, raw, inflamed or scaly skin, in more severe cases, weeping or oozing areas of skin.⁶

Direct microscopic examination for potassium hydroxide (KOH) test is used for diagnosis. Positive scrapings are characterised by presence of refractile, long, smooth, undulating, branching, and septal hyphal filaments with or while not arthroconidiospores. False negative results are seen in 15% cases. Fluorescent staining with optical brighteners (diaminostilbene) is that the most sensitive methodology to microscopically find fungi in skin scales additionally as in specimens from nails and hair.⁷

DLQI scale has been utilized in many alternative skin conditions in over eighty countries and is over one hundred ten translations. Its use has been delineated in over 3,000 publications, together with several international studies.⁸

The purpose of this study was based on the fact that a vast population is affected by *Tinea Cruris* due to unhygienic conditions as well as hot and humid temperature. Based on this fact, the prime objective of this study is to treat the patients suffering from *Tinea Cruris* in the shortest, most harmless and most reliable way based on easily comprehensible principles of

homoeopathy by the most similar homoeopathic remedy i.e. Individualized Homoeopathic Medicine administered internally and evaluate patient response on the basis of scale. The selection of homoeopathic similimum is based on totality of symptoms of the case. Totality is “outwardly reflected picture of the internal essence of the disease, that is, of the affection of the vital force”.¹

METHODS

Study setting

The present study was conducted at OPD /IPD of M. N. Homoeopathic Medical college & R.I. Bikaner, Rajasthan.

Study duration

The study was carried out for a period of 12 months from August 2018 to July 2019, out of which cases were registered in first nine months and each case. Were followed up for a period of minimum 3 months, each follow up at 15 days interval.

Selection of samples

To see the effect of homoeopathic medicine and *Bacillinum*, one in group A and other in group B. The effective sample size for each group was 50 and total samples taken were 100 cases.

Group A- 50 cases- Individualized homoeopathic medicine.

Group B- 50 cases- *Bacillinum*.

Inclusion / exclusion criteria

Inclusion criteria

- Screening-screening was done on the basis of presenting complaints.
- Patient with age group 20-65years were include in the study.
- All patients irrespective of sex, occupation and socioeconomic status were included in the study.
- Subjects who were diagnosed of tinea based on clinical history, clinical presentation, clinical examination.
- Patients who gave consent for the study.

Exclusion criteria

- Females who wanted to conceive, were pregnant or lactating.
- Tinea with other co-morbidities was not considered.
- The patients who were not willing to follow the guidelines regarding homoeopathic treatment were excluded.
- Intervention model: double group assignment, random allocation masking: single blind pretest-posttest control group design prospective, single blind, randomised, controlled trial

Intervention

Individualized homoeopathic medicines and *bacillinum* for the trial was procured from licensed homoeopathic pharmacy, having GMP certification.

Group A

Individualized homoeopathic medicine

- Potency-selection of potencies was done from 30c, 200c, 1m, 10m according to patient's susceptibility and homoeopathic principles.
- Doses and repetition-according to patient's susceptibility and homoeopathic Principles.
- Manufacturer- medicines were obtained from a GMP certified company.
- Form- globules no. 10.
- Route of administration- oral
- Dispensing- this was done by the college dispensary from a certified pharmacist.
- Co- intervention-physiotherapy was given.

Group B

Bacillinum

- Potency-selection of potencies was done from 30c, 200c, 1m, 10m according to patient's susceptibility and homoeopathic principles.
- Doses and repetition-according to patient's susceptibility and homoeopathic Principles.
- Manufacturer- medicines were obtained from a GMP certified company.
- Form- globules no. 10.
- Route of administration- oral
- Dispensing- this was done by the college dispensary from a certified Pharmacist.

Outcome assessment

According to the before and after scores obtained from the DLQI (Dermatological Life Quality Index) scale scoring method.

Following parameters were used fixed according to the type of response

$$\text{Baseline score} = \frac{\text{After score}}{\text{Baseline score}} \times 100$$

Improvement criteria-

100% -75% - marked improvement.

74% - 50% - moderate improvement.

49% - 25% - mild improvement.

< 25% - non significant.

0% - status quo.

Data collection case taking proforma

Data analysis data analysis was done using SPSS

Statistical technique the statistical technique used 'independent t-test' and 'paired t-test.'

- independent t-test was used to compare two treatment groups.

- paired t-test was used to assess the before and after scores in each patient.

Ethical clearance

Ethical clearance was obtained from the institutional ethics committee

OBSERVATIONS AND RESULTS

Table 1: Baseline Characteristics of patients studied under modified intention-to-treat (n=60)

	Group A (Individualized homoeopathic Medicines) No. of Cases (n = 50)	Group B (<i>Bacillinum</i>) No. of Cases (n = 50)	P value
AGE ± SD			
20-30	22(44%)	21(42%)	0.956
31-40	13(26%)	14(28%)	0.963
41-50	10(20%)	6(12%)	0.510
51-60	5(10%)	9(18%)	0.474
GENDER(%)			
Male	27(54%)	25 (50%)	0.957
Female	23 (46%)	25 (50%)	0.951
SOCIOECONOMIC STATUS (%)			
Lower	30 (60%)	30 (60%)	0.870
Middle	15 (30%)	15 (30%)	0.835
Upper	5(10%)	5(10%)	0.740
OCCUPATION (%)			
Labor	19 (38%)	15 (30%)	0.693
Farmer	6 (12%)	7 (14%)	0.973
Business	3 (6%)	3(6%)	0.674
Carpenter	3 (6%)	3(6%)	0.674
House wife	10(20%)	5(10%)	0.353
Teacher	6(12%)	6(12%)	0.760
Service	3 (6%)	3(6%)	0.674
Shopkeeper	00	7 (14%)	0.030
Student	00	1(2%)	0.992
HYGIENE (%)			
Soap regularly	23 (46%)	26 (52%)	0.860
No soap regularly	27(54%)	24 (48%)	0.865
Wiping regularly	23 (46%)	11 (37%)	0.113
No wiping regularly	27(54%)	24 (48%)	0.865
Bathing once	34 (68%)	33(66%)	0.949
Bathing twice	16 (32%)	17(34%)	0.960
APPROACH TO TREATMENT %			
Direct	30 (60%)	19 (38%)	0.264
Indirect	20 (40%)	31 (62%)	0.278
PREDOMINANT MIASM %			
Psora	45 (90%)	40 (80%)	0.802
Psora syphilis	5(10%)	4(8%)	0.977
Syphilis	00	6(12%)	0.050
AREA OF RESIDENCE %			
RURAL	30(60%)	29(58%)	0.951
URBAN	20(40%)	21(42%)	0.957

Table 2: Distribution of 50 cases of Tinea Cruris According to 'Indicated Medicine and their Result'

Sr. No	Medicine	No.of Patients	Marked improvement	Moderate improvement	Mild improvement	Non - significant	Status Quo
1	<i>Sulphur</i>	6		4	2		
2	<i>Sepia</i>	6	3	3			
3	<i>Nat-Mur</i>	6		3	3		
4	<i>Arsenic Alb</i>	5		4	1		
5	<i>Merc-Sol</i>	5	1	3	1		
6	<i>Psorinum</i>	4	1	2	1		
7	<i>Cal.Carb</i>	3		2	1		
8	<i>Pulsatilla</i>	3		1	1		1
9	<i>Petroleum</i>	2				2	
10	<i>Thuja</i>	2	1			1	
11	<i>Rhustox</i>	3			2	1	
12	<i>Rumex</i>	1				1	
13	<i>NuxVom</i>	3		1	1	1	

14	<i>Belladonna</i>	1					1
	Total	50					

Paired sample t- test result, to assess the effect of *Bacillinum* in Tinea Cruris Post treatment, (M= 12.0200,S.D. = 5.01626), compared to pre-treatment (M = 17.0400, S.D. = 3.53963), by DLQI analysis, lowering the scale score indicate Tinea Cruris is improved by *Bacillinum* with difference of mean = 5.02000, t(34) = 7.941.

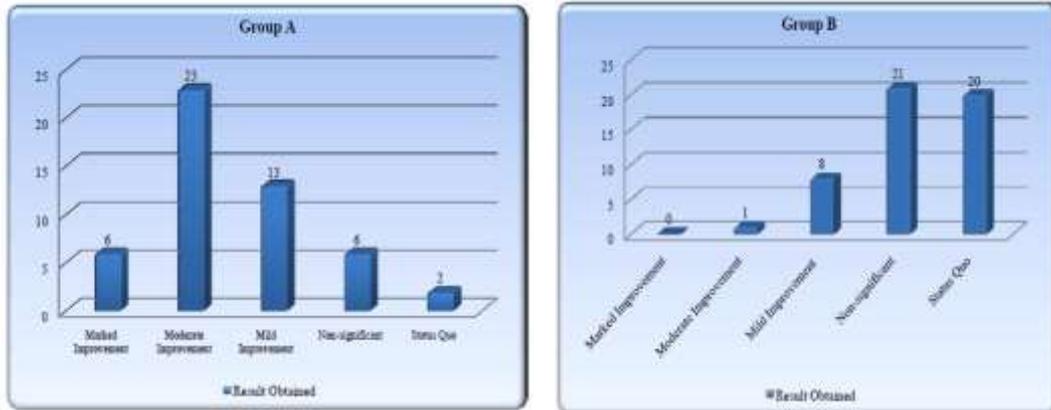


Fig 1: Improvement obtained in both the groups (Group A- Individualized Homoeopathic Medicines, Group B- *Bacillinum*) after treatment.

Table 3: Independent t-test result.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
VAR00001	Equal variances assumed	5.340	.023	-4.381	98	.000	-3.80000	.86745	-5.52143	-2.07857
	Equal variances not assumed			-4.381	87.973	.000	-3.80000	.86745	-5.52389	-2.07611

An independent sample 't' test was conducted to compare Individualised Homoeopathic Medicine and *Bacillinum* in cases of Tinea Cruris. There is a significant difference in the DLQI score of Individualised Homoeopathic Medicine (M=8.22, SD=3.52) and *Bacillinum*(M=12.02, SD=5.01). $t = -4.381$, $P = <0.05$, these results suggest that Individualised Homoeopathic Medicine are more effective as compare to *Bacillinum* in lowering the DLQI Score in cases of Tinea Cruris.

DISCUSSION

The peak incidence in this study was from 20-30years age group. These findings correlate with the previous study conducted by Narasimhalu et al in 2016 where the maximum incidence 26% in age group 21-30years. Highest prevalence in the age group of 21-30 years

(Sarma and Borthakur 2007; Patel et al. 2010) were also seen in these studies.²⁶ Among 100 cases of Tinea Cruris in Group A and Group B, it was observed that 52(52%) were male and 48 (48%) were female. These findings correlate with the previous study done by Bhatia V et

al in 2014 where male predominance was seen.⁴ In the present study, 59 (59%) cases were from rural and 41 (41%) cases were from urban. These findings correlate with previous studies which show that poor hygiene condition increase the incidence rural area as

stated in Peerapur et al study done in 2004.⁹ Findings of socio-economic status correlate with previous study which showed hygiene importance done by Kalyani et al in 2016. Such results related to socioeconomic status.¹⁰ There were 34 (34%) labours, 15 (15%) were housewives, and limited cases belong to service class, business men , shopkeeper etc, which relates with previous study in which predominance is found in construction workers (labour) due to labourious work leading to heavy sweating.¹¹

CONCLUSION

From the study "A clinical utility of Individualized Homoeopathic Medicines and *Bacillinum* in cases of Tinea Cruris" it is evident that *Individualised Homeopathic medicines* are effective in managing the cases of Tinea Cruris as compared to *Bacillinum*. Homeopathic medicines selected on the basis of individualisation are effective in giving symptomatic relief to patient by decreasing the symptoms of Tinea Cruris like itching, burning, redness, circular patches and improving the quality of life of patient assessed by DLQI sores. From this study it can be concluded that Psora is the predominant miasm lying in the background of the patients suffering from Tinea Cruris showing marked improvement with Individualised Homeopathic medicines. The most commonly indicated medicine are *Sulphur, Sepia, Natrum mur., Arsenic, Merc sol, Psorinum, Calcarea carb., Pulsatilla, Rhustox, Nux vomica*. Thus, the improvement in general and disease condition limits the need of external application in Tinea.

Conventional system of medicine has limited scope in treating recurrent Tinea Cruris infections. The result of this prospective, interventional study shows the effectiveness of individualized homoeopathic medicines in treating fungal infection of skin like Tinea Cruris. **Thus, homoeopathic medicines can be useful in treating chronic, recurrent fungal infections of skin, but it will require a sound knowledge of Repertory, Materia Medica and Organon of Medicine, while *Bacillinum* can be best used as intercurrent medicine to clear the symptoms.**

Limitations:

There are also some **limitations** of this study. Since, the sample size was also small in this study, so generalizing the result and conclusions of this study need to be done very cautiously. Globally, there was no specific scale found for the assessment of the treatment outcome in case of Tinea infection. So, the results of this study cannot be generalised to any population. The findings of this study warrant further evaluation using better study designs with large sample size and enhanced methodological rigor. **Hence, further more extensive studies will be required with better statistical tools to establish the outcome results of this study.**

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