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Effect of individualized homoeopathic treatment in influenza like illness: A multicenter, single blind, randomized, placebo controlled study

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ABSTRACT

Background: In the past decade the upsurge of influenza throughout the globe was significant and in recent years this has resurfaced showing failures of all the preventive and therapeutic measures against it. Thus, this study was undertaken to evaluate the effect of homoeopathic medicines in the treatment of Influenza like illness (primary objective) and to compare the complication rate among patients receiving homoeopathic medication as compared to the patients receiving placebo and also to compare the efficacy of LM potency vis-à-vis Centesimal potency (secondary objective). **Material and Methods:** This was a multicenter, prospective, randomized, triple arm placebo controlled trial conducted at nine Institutes and Units of Central Council for Research in Homoeopathy (CCRH) from June 2009 to December 2010. The patients fulfilling the inclusion criteria were randomized to LM, Centesimal and Placebo groups. Homoeopathic interventions were given as per the principles of homoeopathy. Symptoms of Influenza like illness (ILI) were assessed as per validated scales. Data analysis was done using statistical package of SPSS 20.0 version. Each symptom was compared for 10 days among the allocated groups by using Kruskal wallis test and bonferroni correction for the multiple comparisons. **Results:** Out of 739 screened cases, 447 cases were eligible for enrolment comprising of LM (n=152), (n=147) and placebo (n=148) cases. There was a significant difference in temperature from 2nd day onwards in LM and Centesimal groups. The significant improvement was observed in headache and myalgia on 1st day in both the treatment groups. Likewise, significant improvement was noted in malaise on 2nd day in both the groups; sore throat on 1st day in LM and 2nd day in Centesimal; fatigue on 2nd day in LM and on 3rd day in Centesimal group; nasal complaints on 2nd day in LM and 1st day in Centesimal group; chill on 3rd day in LM group and 1st day in Centesimal group and in sweat on 1st day in the treatment groups. Cough improved significantly from 3rd day in both the groups. **Conclusion:** The study revealed the significant effect of individualized homoeopathic treatment in the patients suffering from ILI with no significant difference between LM and Centesimal groups. The complication/sequel rate was also significantly less in the intervention groups.

Keywords: Centesimal potency, Homoeopathy, Influenza like illness, LM potency, Placebo, Randomized trial

INTRODUCTION

Globally, influenza is considered as one of the most important infectious diseases.[1] The World Health Organization (WHO) estimates that the average global burden of interpandemic influenza is approximately 1 billion cases of influenza, 3-5 million cases of severe illness and 300,000-500,000 deaths annually.[2] Complicating the global influenza burden is the recent recognition of a novel quad-reassortment swine-origin influenza A virus which is the agent associated with the WHO declared influenza pandemic.[1]

The first case of P-09-H1N1 (which causes influenza) positive in India was reported on 16th May 2009. In Eastern India, testing for influenza was initiated in June, 2009 and continued through July, 2010 to determine the prevalence and epidemiological character of circulating pandemic H1N1 (pH1N1) strain. Real time Polymerase Chain Reaction (PCR) was carried out on nasal and throat swab samples of patients with influenza like symptoms of those who sought medical care in local government hospitals. Of 2971 patients tested, 382 (12.86%) were positive for influenza A and 103 (3.47%) for influenza B. Of 382 influenza positives, 284 (74.35%) and 98 (25.65%) were subtyped as pH1N1 and seasonal H1N1, and H3N2, respectively.[3] Coincidently, the Council had initiated this study during that time.

Influenza viruses are transmitted through the respiratory route and infections vary from asymptomatic to severe and life threatening.[1] Influenza is also a significant cause of work absenteeism, lost productivity and the resultant cost to employers and employees may be considerable.[4,5]

Two major pharmaceutical interventions for influenza control and prevention are currently in use: Vaccination and antiviral treatment and neither is perfect. Influenza vaccines, which have been in use for a long time, are safe but need to be administered annually and their immunogenicity in high-risk groups, such as very young children, the elderly and severely immunocompromised patients, is lower than in the rest of the population.[6] According to the intervention review of vaccinations, influenza vaccines have a modest effect in reducing influenza symptoms and working days lost. There is no evidence that they affect complications, such as pneumonia, or transmission.[7] Antiviral drugs are in very limited supply and the choices are few, a clear disadvantage if drug resistance develops. Furthermore, their effectiveness when initiated late in severely ill patients has not been clearly established.[6]

In a systematic review and meta-analysis of observational studies for benefits and harms of oseltamivir, zanamivir, amantadine or rimantadine in the treatment of influenza, it was concluded that the therapy with oral oseltamivir and inhaled zanamivir may provide a net benefit over no treatment of influenza. However, as with the randomized trials, the confidence in the estimates of the effects for decision making is low to very low.[2] Strong *et al*., also conducted a study in the context of a school outbreak of 2009 pandemic influenza, in which mass treatment and prophylaxis with oseltamivir was associated with adverse effects in a considerable proportion of pupils and staff.[8]

According to Cooley *et al*., Influenza like illness (ILI) epidemic curves coexist with corresponding past influenza epidemics; consequently, the influenza epidemic curve and the ILI epidemic curve will have the same footprint and shape. Moreover, when epidemic occurs there is resource constraint to diagnose a case of influenza with the laboratory methods, rather most of the cases will be diagnosed clinically (ILI).[9] Canuti M. *et al*., found that among clinically presented cases of ILI 39% were positive to influenza virus.[10]

Homoeopaths had claimed a better success in the previous pandemics especially, pandemic during 1918.[11] A few clinical trials in ILI with homoeopathic intervention were conducted in the past with a positive result.[12,13] However, nowhere individualized homoeopathic treatment was put under a systematic trial (Randomized Controlled Trial). Though certain medicines emerged as most useful during the past pandemics, but as we know the influenza virus has the ability to mutate, so also the severity and clinical presentations. Although, ILI as a disease entity is

commonly used for surveillance of influenza cases, but this study was undertaken to see the effect of individualized homoeopathic treatment in ILI, keeping in view the epidemic/pandemic nature of the disease.

OBJECTIVES

Primary objective of the study was to evaluate the effect of homoeopathic medicines in the treatment of ILI and the secondary objectives were to compare the complication rate among patients receiving homoeopathic medication as compared to the complication rate in patients receiving placebo and to compare the efficacy of LM potency vis-à-vis Centesimal potency.

MATERIAL AND METHODS

Study Design

The study was a multicenter, prospective, randomized, triple arm placebo controlled trial conducted at nine Institutes and Units of Central Council for Research in Homoeopathy (CCRH): Central Research Institute (CRI) (H), Noida; Regional Research Institute (RRI) (H), Puri; Regional Research Institute (H), Imphal; Regional Research Institute (H), Guwahati; Clinical Research Unit (CRU) (H), Chennai; Clinical Research Unit (H), Port Blair; Clinical Research Unit (H), Siliguri, Drug Standardization Unit (DSU), Hyderabad and Dr. Anjali Chatterji Regional Research Institute (DACRRI) (H), Kolkata, India from June 2009 to December 2010. The study was conducted in accordance with the Declaration of Helinsinki's on Human Experimentation.[14] The ethical clearance was obtained from Ethical Committee of CCRH to conduct the study. The trial was registered with Clinical Trial Registry-India (CTRI) retrospectively, registration number being CTRI/2012/04/002590.[15] Patients fulfilling the inclusion criteria were enrolled in the study only after getting the written informed consent. In case of minors, written informed consent was obtained from the parents/guardian before inclusion in the study. A standardized patient case record form (CRF) was used for case taking. The patients were randomly allocated to LM potency (Group I), Centesimal potency (Group II) or placebo (Group III) groups as per the computer generated randomization chart.

Symptoms of ILI viz. fever, headache, myalgias, malaise, sore throat, fatigue, nasal complaints (nasal discharge, obstruction), chill, sweat, and cough were identified. The severity of these were assessed on visual analog scale (VAS) in which the patient or parent/guardian in case of a minor rated each symptom between 0 and 10 depending on the severity. Moreover, 0 indicated no complaint and 10 indicated worse possible complaint. Higher score indicated more severe symptoms.

Oral temperature was recorded in degrees Fahrenheit at 4 hours interval. Cough was assessed with cough score scale adapted from Hsu *et al*.[16]

Randomization

Randomization was carried out by a computer generated random number list to receive from verum (Centesimal or LM potency) or placebo group.[17] Enrolment number of the patient was used for the purpose for randomization and initial randomization was maintained for all follow-up visits. Both intervention groups were assessed on the same parameters.

Inclusion and Exclusion Criteria

Patients of either sex, in the age group 12-60 years, who presented to the investigator within 36 hours of onset of ILI characterized by abrupt onset of fever (≥100.4°F or 38°C body temperature) with at least one respiratory symptom (cough, sore throat, or nasal symptom [discharge, obstruction]) and at least one constitutional symptom (headache, malaise, myalgia, sweats, chills, or fatigue) were included in the study.

The patients who had received any other medication (particularly anti-viral) within the previous 36 hours of his/her presentation, immunization against influenza or ILI for that season, patients suffering from psychiatric, cardiac, pulmonary, renal diseases, hemoglobinopathies, immune compromised or with any other clinically active illness were not included in the study. Similarly, pregnant women, lactating mother, and those with history of drug or alcohol abuse were also excluded from the study.

Treatment Plan

For arriving at the similimum, investigator made an in-depth interview with the patient or parent/guardian in case of a minor, as per the guidelines laid down by Hahnemann in the 5th and 6th edition of Organon of Medicine.[18,19] After a thorough case taking in the CRF, investigator framed the totality of symptoms and repertorized the symptoms using appropriate repertory, as per the presentation

of patients' symptoms, either manually or using a computer-based homoeopathic software. Final selection of medicine was done in consultation with Materia Medica.

Group I: LM potency

The treatment of each patient was initiated with 0/1 potency to be followed-by next higher potency, serially, as per need of the case. One globule (poppy seed size, comprising milk sugar lactose and the homoeopathic medicine prepared as per Homoeopathic Pharmacopoeia of India) of the desired potency was dissolved in 120 mL of distilled water, containing 2.4 mL (2% v/v) of dispensing ethyl alcohol, premixed in it, followed by ten uniformly forceful downward strokes given against the bottom of the phial as per standard guideline of preparation of homoeopathic medicines. This was given to the respective patient. The patient or parent/guardian (in case of a minor) was also instructed to give ten uniformly forceful downward strokes to the phial with the hand on a firm surface, before taking each dose. Then three tea-spoonfuls (15 mL) of this solution were mixed in eight tea-spoonfuls (40 mL) of water in a clean glass and the solution was stirred well. One tea spoonful (5 mL) of this solution constituted one dose and this was to be taken as advised by the investigator. The liquid remaining in the glass after taking the dose was to be discarded. All the homoeopathic medicines were procured from a licensed homoeopathic pharmacy.

Group II: Centesimal potency

The indicated medicine was given in 30C potency. Each dose of the indicated medicine in the Centesimal potency (treatment group) consisted of four homoeopathic globules (size no. 20) in a case of adults and two globules (size no. 20) in the case of children. All medicines of the Centesimal potency were also procured from a licensed homoeopathic pharmacy.

Repetition of doses for both LM and Centesimal scales

The indicated medicines were repeated every few minutes to hours depending upon the requirement of the enrolled cases.

Group III: Placebo group

The patients of the placebo group were given globules impregnated with non-succussed dispensing alcohol.

Adjunct therapy

In the verum group (Group I and II), if the temperature of the patients exceeded 102°F, then at first the patients were treated with homoeopathic medicines as outlined above and observed for 1 hour. If the temperature decreased or remained constant, then he/she was continued with homoeopathic intervention according to the investigation protocol and if temperature showed a tendency to rise further then Paracetamol was given in a similar way as in the placebo group, where Paracetamol was given as and when required.

Follow-up Schedule

Daily follow-up and assessment was carried out for successive 9 days using the assessment form and the VAS. Subsequent follow-ups were done on 17th, 24th, 30th day of illness for any complication/sequel related to ILI.

Outcome Assessment and Statistical Analysis

The patients were assessed for fever, headache, myalgia, malaise, sore throat, fatigue, nasal complaints (nasal discharge, obstruction), chill, sweat, and cough daily at fixed time for 9 days following the baseline assessment as per the study protocol. Thereafter, weekly follow-ups were carried out on 17th, 24th, 30th day of illness for any complication/sequel related to ILI. The data was expressed in terms of Median/inter quartile range (IQR). The demographic details and other relevant results are depicted in Tables and Graphs. Data analysis was carried out using the statistical package of SPSS 20.0 version. Analysis was carried out by using Intention to treat method; missing data of patients withdrawn due to non-reporting, referral and protocol deviation were replaced on the last observation carried forward principle. Each symptom (exact value of temperature for fever and VAS value for other symptoms) was compared for 10 days of the group (LM, Centesimal and placebo) by using the Kruskal wallis test and bonferroni correction was used for the multiple comparisons.

RESULTS

Out of 739 screened cases, 447 cases (Male 217 and Female 230) who fulfilled the eligibility criteria constituting LM (n = 152), Centesimal (n = 147), and placebo (n = 148) groups were enrolled in the study. Flow chart depicting inflow of patients is given in Figure 1. Mean age of the patients was 30.6 years. Mean duration of illness was 20.5 hours with nearly 50% patients reporting within 12-24 hours of onset of complaints [Table 1].

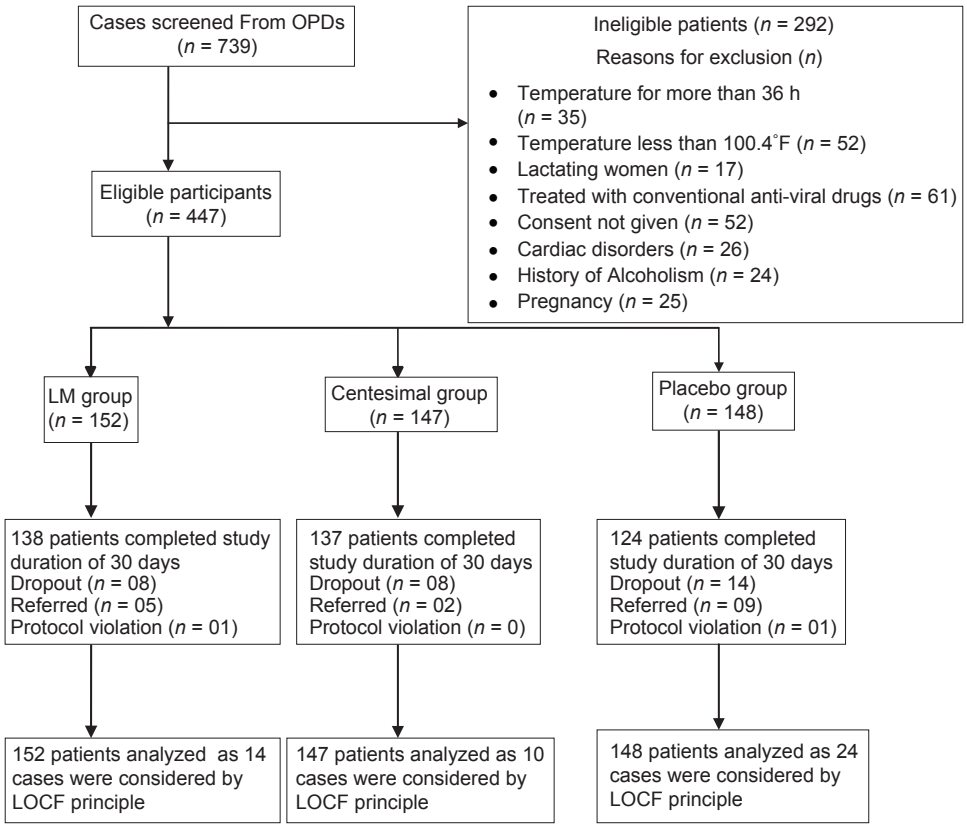

Figure 1: Flow chart depicting inflow of patients

Table 1: Demographical data of the patients

Place of study	Total cases *n* (%)	LM potency group *n* (%)	Centesimal potency group *n* (%)	Placebo group *n* (%)	Mean (SD)	*P* value
CRI (H), Noida	48 (10.7)	16 (10.5)	16 (10.9)	16 (10.8)	-	-
RRI (H), Puri	28 (6.3)	10 (6.6)	9 (6.1)	9 (6.1)		
RRI (H), Imphal	48 (10.7)	16 (10.5)	16 (10.9)	16 (10.8)		
DSU, Hyderabad	41 (9.2)	14 (9.2)	13 (8.8)	14 (9.5)		
RRI (H), Guwahati	48 (10.7)	16 (10.5)	16 (10.9)	16 (10.8)		
CRU (H), Chennai	48 (10.7)	16 (10.5)	16 (10.9)	16 (10.8)		
CRU (H), Portblair	65 (14.5)	21 (13.8)	22 (15.0)	22 (14.9)		
CRU (H), Siliguri	58 (13.0)	21 (13.8)	19 (12.9)	18 (12.2)		
DACRRI (H), Kolkata	63 (14.1)	22 (14.5)	20 (13.6)	21 (14.2)		
Sex						
Male	217 (48.5)	76 (50.0)	70 (47.6)	71 (48.0)	-	0.976
Female	230 (51.5)	76 (50.0)	77 (52.4)	77 (52.4)		
Age group (years)						
12-24	169 (37.8)	59 (38.8)	64 (43.5)	46 (31.1)	17.0 (3.7)	0.258
25-36	151 (33.8)	48 (31.6)	53 (36.1)	50 (33.8)	30.7 (3.3)	
37-48	82 (18.3)	26 (17.1)	19 (12.9)	37 (25.0)	41.9 (3.4)	
49-60	45 (10.1)	19 (12.5)	11 (7.5)	15 (10.1)	54.4 (3.7)	
Duration of illness (hours)						
0-12	33 (7.4)	11 (7.2)	11 (7.5)	11 (7.4)	8.4 (3.4)	0.628
13-24	222 (49.7)	67 (44.1)	80 (54.4)	75 (50.7)	20.5 (3.6)	
25-36	152 (34.0)	60 (39.5)	47 (32.0)	45 (30.4)	32.4 (3.3)	

CRI: Central Research Institute, RRI: Regional Research Institute, DSU: Drug Standardization Unit; CRU: Clinical Research Unit, DACRRI: Dr. Anjali Chatterji Regional Research Institute, LM: Fifty Millesimal Potency, SD: Standard Deviation

Baseline Characteristics

The Median/IQR of fever, headache, myalgia, malaise, sore throat, fatigue, nasal complaints, chill, sweat and cough was similar in LM, Centesimal and placebo groups. *P* values also showed that all the three groups were symptomatically similar at baseline [Table 2].

Treatment Outcome

The three groups were compared as LM versus Centesimal, LM versus placebo and Centesimal versus placebo using the Kruskal wallis test. Significant differences were observed between verum and placebo groups for all the symptoms compared. However, there was no statistically significant difference of treatment outcome between LM and Centesimal treatment groups.

Temperature showed a significant difference from 2nd day onward in LM and Centesimal groups and temperature became normal by 5th day of treatment while it became normal on 7th day in the placebo group. Similarly, statistically significant improvement was observed in headache and myalgia on 1st day (follow-up) in both the treatment groups. Likewise, significant improvement was noted in malaise on 2nd day in both the groups; sore throat on 1st day in LM and 2nd day in Centesimal group; fatigue on 2nd day in LM and on 3rd day in Centesimal group; nasal complaints on 2nd day in LM and 1st day in Centesimal group; chill on 3rd day in LM group and 1st day in Centesimal group and the sweat on 1st day in the treatment groups. Cough improved significantly from 3rd day in both the groups [Table 3]. During the treatment period, the Paracetamol was required by 33 (22%) patients in the LM group, 30 (20%) patients in Centesimal and 89 (60%) cases in the placebo group at varying time periods.

Table 2: Baseline characteristics of the patients

Symptoms present	LM (*N*-152)		Centesimal (*N*-147)		Placebo (*N*-148)		*P* value
	n (%)	Median/IQR	*n* (%)	Median/IQR	*n* (%)	Median/IQR	
Fever*	152 (100)	2/(2-2)	147 (100)	2/(2-2)	148 (100)	2/(2-2)	0.479‡
Headache	94 (61.8)	2/(0-3)	100 (68.0)	2/(0-3)	101 (68.2)	3/(0-4)	0.064‡
Myalgia	123 (80.9)	3/(2-5)	124 (84.3)	3/(2-5)	116 (78.3)	3/(2-5)	0.971‡
Malaise	86 (56.5)	2/(0-3)	75 (51.0)	2/(0-3)	80 (54.0)	2/(0-4)	0.403‡
Sore throat	82 (53.9)	2/(0-3)	92 (62.5)	2/(0-3)	94 (63.5)	2/(0-4)	0.152‡
Fatigue	84 (55.2)	2.5/(0-6)	86 (58.5)	3/(0-5)	83 (56.0)	3/(0-6)	0.901‡
Nasal complaints	128 (84.2)	3/(2-4)	117 (79.5)	3/(1-4)	115 (77.7)	3/(1-5)	0.819‡
Chill	92 (60.5)	2/(0-3)	95 (64.6)	2/(0-3)	89 (60.1)	2/(0-4)	0.893‡
Sweat	61 (40.1)	0/(0-3)	51 (34.6)	0/(0-2)	57 (38.5)	0/(0-3)	0.365‡
Cough	103 (67.7)	1/(0-2)	96 (65.3)	1/(0-2)	90 (60.8)	1/(0-2)	0.718‡

IQR: Inter quartile range, *Degrees Fahrenheit, ‡*P* value not significant by using the bonferroni correction for multiple comparison

Table 3: Comparison between treatment group (LM and Centesimal) with placebo

Symptom	LM versus placebo			Centesimal versus placebo		
	Median/IQR			Median/IQR		
	Baseline	Day of significant improvement	Day of significant improvement/*P* value	Baseline	Day of significant improvement	Day of significant improvement/ *P* value
Fever*	2/(2-2)	1/(0-2)	2/0.023	2/(2-2)	0/(0-1)	2/0.020
Head ache	2/(0-3)	1/(0-3)	1/0.064	2/(0-3)	1/(0-3)	1/0.002
Myalgia	3/(2-5)	2/(0-4)	1/0.089	3/(2-5)	2/(0-4)	1/0.047
Malaise	2/(0-3)	0/(0-2)	2/0.006	2/(0-3)	0/(0-2)	2/0.002
Sore throat	2/(0-3)	1/(0-3)	1/0.008	2/(0-3)	0/(0-3)	2/0.011
Fatigue	2.5/(0-6)	0/(0-4)	2/0.049	3/(0-5)	0/(0-3)	3/0.022
Nasal complaints	3/(2-4)	1/(0-3)	2/0.047	3/(1-4)	2/(0-4)	1/0.133
Chill	2/(0-3)	0/(0-0)	3/0.029	2/(0-3)	0/(0-3)	1/0.034
Sweat	0/(0-3)	0/(0-2)	1/0.040	0/(0-2)	0/(0-2)	1/0.015
Cough	1/(0-2)	1/(0-1)	3/0.058	1/(0-2)	1/(0-1)	3/0.063

* IQR: Inter quartile range, Degrees Fahrenheit

The most commonly indicated medicines were *Arsenic album* (n = 75), followed by *Bryonia* (n = 33) and *Rhus toxicodendron* (n = 32) [Table 4].

Complications were observed only in 23 cases (5%) of the total enrolled cases, out of which placebo group had 16 (70%) cases, LM group had 1 (4%) case and Centesimal group had 6 (26%) cases. The complications noticed were bronchitis (n = 14), sinusitis (n = 5), bronchial asthma (n = 2) and tracheobronchitis (n = 2).

Table 4: Details of the medicines used

Name of medicine	No. of prescription					
	Total	%	LM	%	Centesimal	%
Arsenicum album	75	25.1	39	25.7	36	24.5
Bryonia alba	33	11	16	10.5	17	11.6
Rhus toxicodendron	32	10.7	13	8.6	19	12.9
Belladonna	28	9.4	13	8.6	15	10.2
Nux vomica	18	6	12	7.9	6	4.1
Sepia	14	4.7	7	4.6	7	4.8
Phosphorus	14	4.7	9	5.9	5	3.4
Gelsemium	13	4.4	4	2.6	9	6.1
Sulphur	13	4.4	8	5.3	5	3.4
Natrum muriaticum	10	3.3	6	3.9	4	2.7
Aconitum napellus	10	3.3	5	3.3	5	3.4
Eupatorium perfoliatum	9	3	4	2.6	5	3.4
Pulsatilla	7	2.3	1	0.7	6	4.1
Arsenicum iodum	5	1.7	5	3.3	0	0
Apis mellifica	4	1.3	3	2	1	0.7
Calcarea carbonica	3	1	2	1.3	1	0.7
Arnica montana	2	0.7	0	0	2	1.4
Baptisia tinctoria	2	0.7	1	0.7	1	0.7
Cinchona officinalis	2	0.7	2	1.3	0	0
Hepar sulphuris	2	0.7	0	0	2	1.4
Lycopodium	2	0.7	1	0.7	1	0.7
Dulcamara	1	0.3	1	0.7	0	0

DISCUSSION

The current definition of ILI is a sudden onset of fever, a temperature >38°C and cough or sore throat in the absence of another diagnosis. The sensitivity of the definition is generally about 60%; the specificity is lower, ranging from about 5% when influenza is not prevalent (that is, 5% of people who meet the case definition do actually have influenza) to 60-70% during the influenza season. The usefulness of specific influenza signs and symptoms for detecting influenza has been evaluated in a number of studies.[20] The most important are cough, fever, and myalgia or fatigue. Notably, sore throat has been found in several studies to be a negative indicator of influenza, meaning that people with a sore throat are more likely to have an illness other than influenza.[20] Based on these observations, the new definition proposed is 'An acute respiratory illness with a measured temperature of ≥38°C and cough, with the onset within the past 7 days.' In this study all cases at baseline had fever, 64.6% cases had cough, 59.9% cases had a sore throat, 81.2% cases had myalgia and 56.5% cases had fatigue and 80.5% cases had nasal complaints. Although, the findings corroborate with the proposed definition of ILI, but nasal complaints were present in higher frequency than expected in the study population.

Although, few clinical trials in ILI with homoeopathic intervention had a positive result,[12,13] but none had systematically (RCT) evaluated the individualized homoeopathic treatment in ILI. This trial evaluated the effect of individualized homoeopathic intervention in ILI. The results indicate that the medicinal group (LM and Centesimal) had significant improvement in most of complaints from 2nd day of follow-up, which was significantly earlier than the improvement of symptoms in the placebo group, which showed improvement from 5th day onward in most of the complaints. Temperature showed a significant difference from 2nd day onward in the interventional groups and became normal by 5th day of treatment although it became normal on 7th day in the placebo group. Similarly, statistically significant improvement was observed in headache and myalgia on 1st day (follow-up) in both the treatment groups although these improved on 6th and 5th day respectively in the placebo group. Likewise, significant improvement was noted in malaise on 2nd day in both groups and on 6th day in the placebo group; sore throat on 1st day in LM, 2nd day in Centesimal group and 5th day in the placebo group; fatigue on 2nd day in LM, 3rd day in Centesimal group and 7th day in the placebo group; nasal complaints on 2nd day in LM, 1st day in Centesimal group and 5th day in the placebo group; chill on 3rd day in LM group, 1st day in Centesimal group and 4th day in the placebo group and the sweat on 1st day in the treatment groups and 3rd day in the placebo group. Cough improved significantly from 3rd day in both groups and on 5th day in the placebo group. The incidence of ILI was higher in younger age group - 37.8% in the age group 12-24 years, 33.8% in the age group 25-36 years, 18.3% in the age

group 37-48 years and 10.1% aged 49-60 years. It was also observed that number of drop outs were more in the placebo group. 16 cases were referred due to persistent high fever, the maximum cases being from the placebo group. Overall 5% cases reported complications/sequels, out of which 70% were in the placebo group. Complications/sequels of influenza include pneumonia and exacerbations of underlying pulmonary and cardiac disease.[21] The complications noticed in the study population were bronchitis, sinusitis, bronchial asthma, and tracheobronchitis.

In a recent observational study to determine the characteristics and management of patients in France visiting the allopathic and homoeopathic general practitioners for ILI, it was observed that *Belladonna, Eupatorium perfoliatum, Gelsemium* and *Bryonia* were prescribed and found useful, which is notably in consensus with this study.[22]

There was no significant differences in both the treatment groups viz. LM and Centesimal. Thus, medicines in both the scales are equally useful in treating ILI. Overall, the medicinal group had a quick recovery, required lesser number of *Paracetamol* tablets and had minimal complications as compared with the placebo group. Thus, the individualized homoeopathic intervention is effective in the management of ILI.

It is evident from the study that the individualized homoeopathic intervention could control the disease activity thereby bringing down the temperature to normal on 5th day in the verum group as compared to 7th day in the placebo group along with alleviation of other symptoms of ILI. However, this study had some of the weaknesses e.g., quality of life parameters like sleep disturbances or time to return to normal activities were not recorded. Furthermore, the *Paracetamol* tablets was used in the verum group if the temperature did not come down with the indicated medicine for the safety of patients. Therefore, it cannot be clearly stated that there was a pure effect of homoeopathic treatment on reducing the temperature in ILI. Regarding the complications/sequelae, it also cannot be clearly stated that whether it was developed after ILI or had exacerbated after ILI as the past history of the patients was not recorded.

CONCLUSION

The study revealed the significant effect of individualized homoeopathic treatment in the verum group as compared to placebo group on the symptom complex of ILI. There was no significant difference in both the treatment groups viz., LM and Centesimal. Furthermore, it was observed that the complications/sequel rate was significantly less in the treatment group as compared to the placebo group. Therefore, further studies can be taken up on the laboratory confirmed cases of Influenza with the viral load/viral shedding as one of the outcome parameters to validate the results. However, based on the findings, preventive and interventional trials can be taken up on the clinically diagnosed cases of influenza during the outbreak of an epidemic.

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पृष्ठभूमि: पिछले दशक में, दुनिया भर में इन्फ्लूएंजा का प्रकोप रहा और हाल के वर्षों में यह फिर जाग उठा है, जो इसके खिलाफ सभी निवारक और उपचारात्मक उपायों की विफलताओं को दिखाता है । इस प्रकार, इस अध्ययन से इन्फ्लूएंजा जैसी बीमारी के उपचार (ILI) (प्राथमिक उद्देश्य) में होम्योपैथी औषधियों के प्रभाव और प्रयोगिक औषधियों की तुलना में होम्योपैथी दवा लेने वाले रोगियों के जटिलता दर का मूल्यांकन किया जाता है और इसके साथ ही एलएम पोटेंसी और शतांश पोटेंसी (माध्यमिक उद्देश्य) के प्रभाव की तुलना करने के लिए किया जाता है ।

सामग्री और तरीके: यह एक बहुकेंद्रित, भावी, यादृच्छिक, ट्रिपल आर्म प्लेसिबो नियंत्रित परीक्षण है, जो केन्द्रीय होम्योपैथी अनुसंधान परिषद् के नौ संस्थानों और इकाइयों में जून, 2009 से दिसम्बर, 2010 के बीच आयोजित किया गया था । मानदंडों को पूरा करने वाले रोगियों को एलएम पोटेंसी में यादृच्छिकरण, शतांश और प्लेसिबो समूह के लिए शामिल किया जाता है । होम्योपैथी के सिद्धांतों के अनुसार होम्योपैथिक हस्तक्षेप के रूप में दिया जाता है । ILI के लक्षणों का विधिमान्य स्तर के अनुसार मूल्यांकन किया जाता है । SPSS 20-0 संस्करण के सांख्यिकीय पैकेज का उपयोग करने के पश्चात डाटा विश्लेषण किया जाता है । प्रत्येक लक्षण के विविध तुलनाओं के लिए आवंटित समूहों के बीच 10 दिनों के लिए कृस्कल वाल्लिस जांच और बोंफेर्रोनी सुधार का उपयोग होता है ।

परिणाम: कुल 739 जांच मामलों में से, 447 मामले एलएम (एन = 152), शतांश (एन = 147) और प्लेसिबो (एन = 148) में शामिल करने के लिए नामांकित किये गए । एलएम और शतांश समूहों में दूसरे दिन के पश्चात तापमान में एक महत्वपूर्ण अंतर देखा गया । पहले दिन दोनों समूहों के उपचार में सिरदर्द और मांसलता में पीड़ा में महत्वपूर्ण सुधार देखा गया । जिस प्रकार का सुधार दोनों समूहों में रुग्णता रोग में दूसरे दिन, गले में खराश में एलएम में पहले दिन और शतांश में दूसरे दिन, थकान में एलएम में दूसरे दिन और शतांश में तीसरे दिन, नासिका सम्बन्धी एलएम में दूसरे दिन और शतांश में पहले दिन, सिहरन में एलएम में तीसरे दिन और शतांश में पहले दिन और पसीने में पहले दिन ही महत्वपूर्ण सुधार देखा गया । दोनों समूहों में खांसीमें तीसरे दिन से काफी सुधार होने लगा ।

निष्कर्ष: इस अध्ययन से इन्फ्लूएंजा जैसी बिमारी से पीडति रोगियों में एलएम और शतांश समूहों के बीच बिना किसी महत्वपूर्ण अंतर के साथ होम्योपैथी उपचार का महत्वपूर्ण प्रभाव का पता चलता है । हस्तक्षेप समूहों में जटिलता ध्जोखिम दर भी काफी कम होता है ।

खोजशब्द: शतांश पोटेंसी और प्लेसिबो, होम्योपैथी, इन्फ्लूएंजा, एलएम पोटेंसी, यादृच्छिक परीक्षण ।