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Randomized placebo controlled trial to evaluate the safety and efficacy of homeopathic medicine "Fluheal" in treatment of influenza like illness

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Abstract
Objective: Influenza is a major reason of illness and death each year as it is a serious health problem worldwide. It is not possible to perform virologic or molecular testing for all cases of influenza, that's why it is mostly monitored according to the appearance of influenza-like symptoms. This disease is the major cause of restricted activity, work absenteeism and lost productivity. This study was conducted in Pakistan homeopathic medical college, hospital, research center to evaluate the safety and efficacy of homeopathic medicine "Fluheal" against placebo.
Method: Total 99 patients were enrolled in this study. 50 patients were randomly assigned to treatment group and 49 patients to placebo group. All the patients were enrolled according to predefined inclusion and exclusion criteria. Patient's assessment was done by qualified homeopathic physician. All patients were instructed to visit after every three days.
Result: At baseline, patient's preliminary assessment was performed and basic demographic information was obtained. In this trial total 99 patients were enrolled, out of which 36 were male and 63 were female patients. Patient's marital status, age, occupation, year of schooling, household income and concomitant disease related information were recorded during their preliminary assessment. Overall significant results were obtained in patients who were on homeopathic medicines. While many patients after the use of placebo feel severity in symptoms and overall not good results were obtained in patients of placebo group.
Conclusion: Homeopathic medicine Fluheal is safe and very effective in patients with influenza like illness (ILI). Fluheal is found very effective in reducing severity of symptoms. It also enhanced sleeping pattern of all patients. More importantly it has no adverse effect.

Keywords: Efficacy of homeopathic medicine, influenza like illness

Introduction
Influenza is a major reason of illness and death each year as it is a serious health problem worldwide [1, 5]. Influenza is a viral but contagious disease [6, 7] and every year it affects 5% to 15% of world populations [7, 9]. Common symptoms of influenza or flu are fever, headache, sore throat, sinusitis, body pain and weakness [2, 7, 10, 11]. On the basis of these symptoms, we cannot distinguish influenza from other viral respiratory illness in patients who comes in health care settings [10]. But the fact is that, it is not possible to perform virologic or molecular testing for all cases of influenza, that's why it is mostly monitored according to the appearance of influenza-like symptoms and, therefore, typically recorded as ''influenza-like illness'' [12]. Influenza like illness defined as fever with sore throat or cough, although there is not a single definition of ILI [10, 13].
Mostly patients recovered within one and two week without need of any medical treatment [14]. However very young children, elderly people and immune compromised patients are at risk of ILI complications [9, 14, 16]. This disease is the major cause of restricted activity, work absenteeism and lost productivity [3]. That's why people seek early medical consultation so that as soon as possible they can reduce the severity of symptoms. Influenza like illness also defined as fever, cough, and muscle pain; in the absence of any laboratory diagnosis [17].
Homeopathy is a good way to treat different kinds of diseases, including human flu [14]. Homeopathy is an effective way of treatment which based on principle of "likes be cured like". This science was introduced by Samuel Hahnemann [18, 21].
Each one ml of Fluheal contains: Antipyrinum1D 6% v/v, Aconite Nap 4D 6% v/v, Chamomilla 1D 15% v/v, Eucalyptus Glob 1D 12% v/v, Eupatorium Perf 3D6% v/v, Ephedra Vulg 1D 12% v/v, GelsemiumSemp 3D 6% v/v, Millefelium 1D 12% v/v, Sambucus Nigra 1D

15% v/v with excipients q.s. Thus the main object of this randomized placebo controlled trial was to evaluate the safety and efficacy of homeopathic medicines "fluheal" for the treatment of Influenza- Like- Illness.

Methodology

Case definition

Influenza like illness define as, presence of fever with one or more respiratory symptoms (sore throat, cough) and one or more clinical symptoms like headache, myalgia [10, 22, 23]. Center for disease control and prevention (CDC) defined influenza like illness as, fever plus headache plus cough plus any of the following symptoms runny nose, sore throat, muscle weakness, nasal congestion etc. [15]. Although it has no specific definition [10, 24].

Study design

The Pakistan Homeopathic Medical College, Hospital and Research Center setting was involved for the treatment of patients with influenza like illness. For that purpose institutional ethical approval was obtained from institutional ethical committee before the initiation of study. This was a randomized placebo controlled trial to evaluate the safety and efficacy of homeopathic medicine "Fluheal" for the treatment of influenza like illness. All patients were randomly (2:2) assigned to study medicine and placebo. Both placebo and study medicines was identical in appearance, taste and smell. All patients were assessed according to predefined inclusion and exclusion criteria.

Inclusion and exclusion criteria

At first step, primary assessment of all patients was performed by two qualified homeopathic doctors. After primary screening, final assessment and enrollment in study was made by another homeopathic practitioner according to criteria which was as follows; Patients aged 7 years to 85 years were included in the study. All selected patients were willing and able to provide written informed consent. Patients must have influenza like symptoms and at least two of the following symptoms: headache, runny nose myalgia, cough and sore throat.

Patients were excluded if they were showed no interest for future visit to study site. Pregnant and lactating mothers were also not included. Patients with Known allergic reaction to the study medication were not enrolled in this study. Patients with clinically serious disease or human immunodeficiency (HIV) virus or receiving systemic steroids or others immunosuppressant were also excluded from study. The duration of study was 9 days. Patients were instructed to visit research center after every three days for the assessment of their condition.

Basic symptoms and sleeping pattern of all enrolled patients were observed and recorded on data collection forms. Standard dose of homeopathic medicines "Fluheal" to both group were prescribed and dispensed. Instructions were given to all patients regarding how to use medicines. Adverse events were also monitored during every scheduled visit of patients. Overview of study is shown as in figure 1.

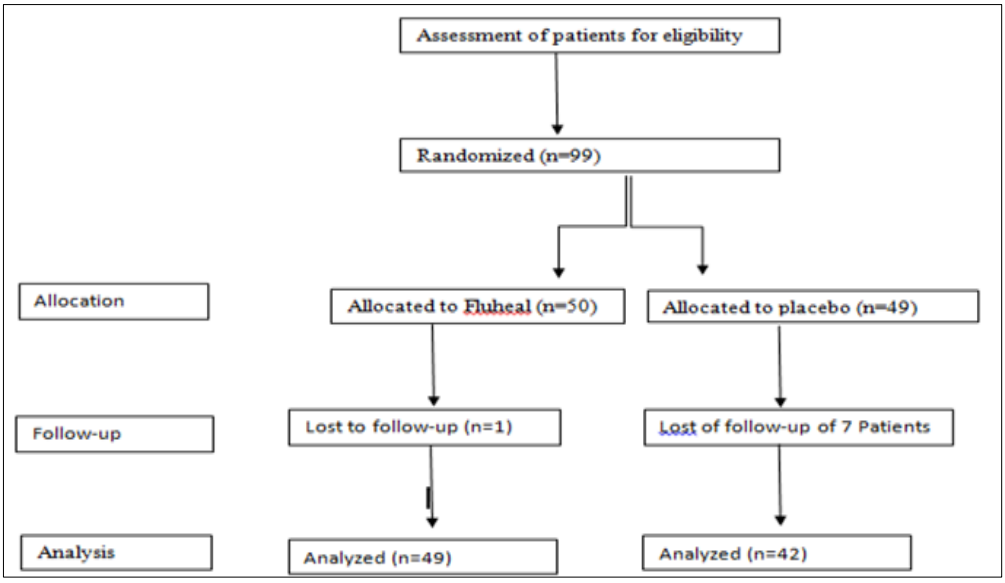

Fig 1: Overview of study

Results

At baseline, patient's preliminary assessment was performed and basic demographic information was obtained, as showed in graphs [2, 3, 4] and table 1. In this trial total 99 patients were enrolled, out of which 36 were male and 63 were female patients. Patient's marital status, age, occupation, year of schooling, household income and concomitant disease related information were recorded during their preliminary assessment. Total 67.7% patients were unmarried, 29.3% were married and 3% were widow. 81.8% patients were unemployed, 9.1% were self-employed and 9.1% were salaried workers. 75.5% patients had household income 10-50 thousand

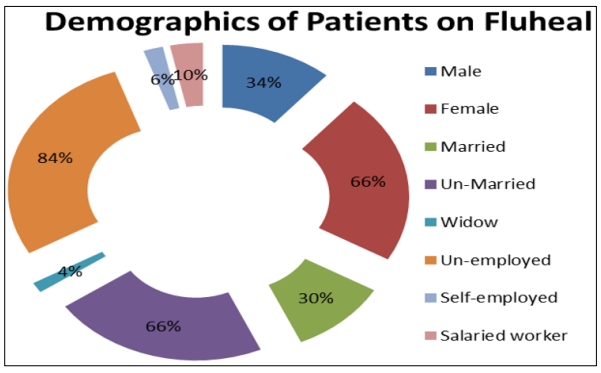

Fig 2: Graphical representation of patients on Fluheal

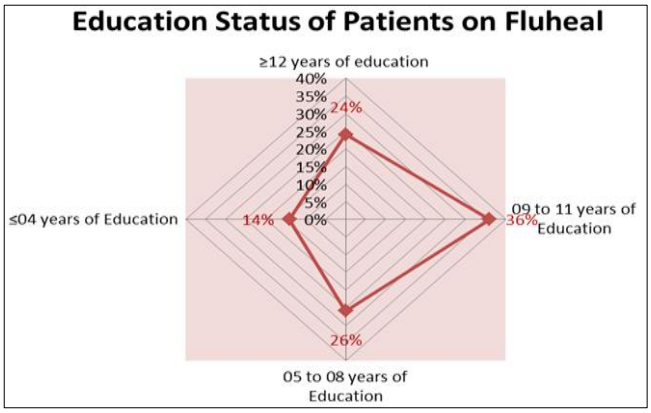

Fig 3: Graphical representation of patients on Fluheal

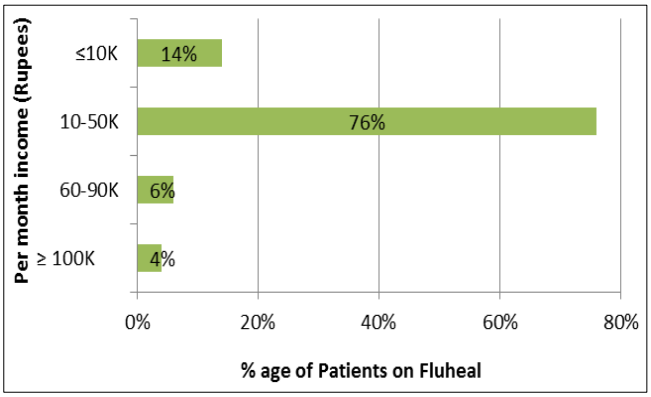

Fig 4: Graphical representation of patients on Fluheal

Table 1: Patients demographics

Parameters	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients at baseline
Total patients	50(50.9%)	49(49.1%)	99(100%)
Males	17(34%)	19(38.8%)	36(36.4%)
Females	33(66%)	30(61.6%)	63(63.6%)
Age			
7 to 14 years	14(28%)	13(26.5%)	27(27.2%)
15 to 50 years	3(62%)	32(65.35)	63(63.6%)
Above 50 years	5(10%)	4(8.1%)	9(9%)
Marital status of patients			
Unmarried	33(66%)	34(25)	67(67.7%)
Married	15(30%)	14(28.6%)	29(29.3%)
Widow	2(4%)	1(2%)	3(3%)
Divorced	0(0%)	0(0%)	0(0%)
Occupation			
Un-employed	42(84%)	39(79.6%)	81(81.8%)
Self-employed	3(6%)	6(12.2%)	9(9.1%)
Salaried worker	5(10%)	4(8.2%)	9(9.1%)
Household income(Rs -K)			
≥ 100K	2(4%)	1(2%)	3(3%)
60-90K	3(6%)	6(12.2%)	9(9.1%)
10-50K	38(76%)	37(75.5%)	75(75.8%)
≤10K	7(14%)	5(10.2%)	12(12.1%)
Years of schooling			
≥12	12(24%)	7(14.3%)	19(19.2%)
9-11	18(36%)	20(40.8%)	38(38.4%)
5-8	13(26%)	12(24.5%)	25(25.3%)
<4	7(14%)	10(20.4%)	17(17.2%)
Concomitant disease			
None	34(68%)	35(71.4%)	69(69.7%)
Diabetes	3(6%)	2(4.1%)	5(5%)
Diabetes, hypertension	1(2%)	1(2%)	2(2%)
Cyst, hypertension	1(2%)	0(0%)	1(1%)
Hypertension	1(2%)	2(4.1%)	3(3%)
Hepatitis	0(0%)	1(2%)	1(1%)
Indigestions	1(2%)	0(0%)	1(1%)
Acne	0(0%)	1(2%)	1(1%)
Alopecia, anorexia	1(2%)	0(0%)	1(1%)
Asthma	0(0%)	1(2%)	1(1%)
Polyps	0(0%)	1(2%)	1(1%)
Scabies	0(0%)	1(2%)	1(1%)
Sinusitis	1(2%)	0(0%)	1(1%)
Tonsillitis	0(0%)	1(2%)	1(1%)
Vertigo	0(0%)	1(2%)	1(1%)
Irregular menstruation	1(2%)	0(0%)	2(2%)
Leucorrhoea	3(6%)	0(0%)	3(3%)
Migraine	1(2%)	0(0%)	1(1%)
GIT disturbance	1(2%)	2(4.1%)	3(3%)

Pharmacological interventions for flu

At baseline, 63 patients were not using any type of medicine out of which 31 patients were on allopathic medicines and 6 were on homeopathic medicines as shown in table 2.

Table 2: Pharmacological interventions for flu

Parameters	Number of patients on Fluheal	Number of patients on Placebo	No of patients at baseline
Allopathic medicines	19(38%)	11(22%)	31(31.3%)
Homeopathic medicines	2(4%)	4(4%)	6(6.1%)
None	29(58%)	34(69.3%)	63(63.6%)

Time between onset of symptoms and enrollment

Below graphical interpretion indicates number of patients at a time between onset of symptoms and enrollement

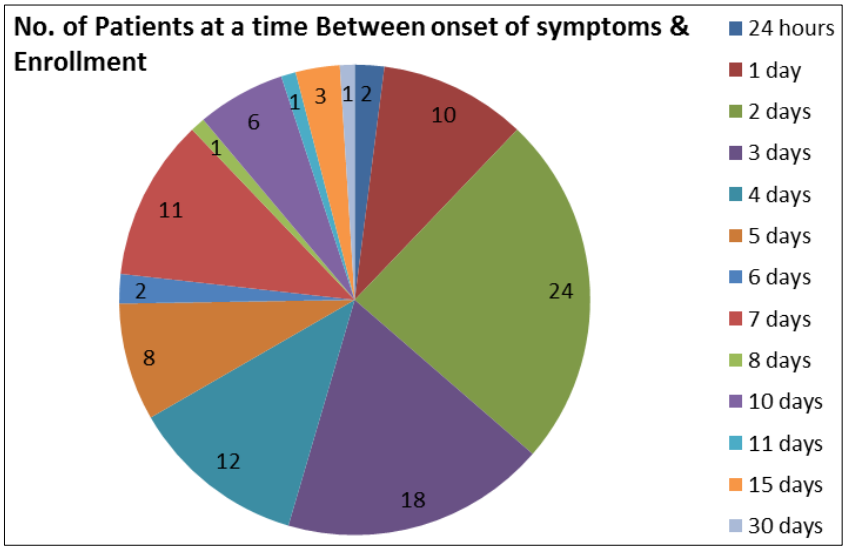

Fig 5: No. of Patients at a time between onset of symptoms & enrollment

Data of All Monitoring Parameters

At baseline total 99 patients were assessed and enrolled. All patients were randomly assigned to study medicine (Fluheal) and placebo group. 50 patients were randomly assigned in study treatment group while 49 patients were randomly assigned in placebo group as shown in table 4. 98% Patients on homeopathic medicine "Fluheal" were showed significant reduction in fever. Only in 71% patient's good reduction was shown.

Table 3: Fever

Fever (Fahrenheit)	Number of patients on Fluheal	Number of patients on Placebo	No of patients at baseline
At baseline			
98.6F	23(46%)	21(42%)	44(44.4%)
99	11(22%)	15(30.6%)	26(26.3%)
99.9	2(4%)	1(1%)	3(3%)
100F	13(26%)	12(24.3%)	25(25.3%)
>100F	1(2%)	0(0%)	1(1%))
3rd day follow-up			
98.6F	47(95%)	27(61%)	74(74.8%)
98.9F	1(2%)	0(0%)	1(1%)
99F	1(2%)	13(26.5%)	14(14.1%)
100F	0(0%)	4(8%)	4(4%)
Loss of follow-up of patients	1(2%)	5(10.2%)	6(6.1%)
On 6th day follow-up			
98.6F	49(98%)	28(57.1%)	77(77%)
98.9F	0(0%)	1(2%)	1(1%)
99	0(0%)	12(24.4%)	12(12.1%)
>99	0(0%)	3(6.1%)	3(3%)
On 9th day follow-up			
98.6F	49(98%)	35(71%)	84(84.8%)
99F	0(0%)	6(6.1%)	6(6.1%)
99.9F	0(0%)	2(4%)	2(2%)
Loss of follow-up of patients	1(2%)	6(12.2%)	7(7.1%)

Sore throat was also monitored in all patients at baseline. After dispensing of medicine (Fluheal and placebo), their responses was monitored on every visit as shown in table 4. Present and absent scale was used to evaluate this parameter. 47(94%) patients had sore throat while 3 patients were not come with this complaint in study treatment. 49 (100%) patients also had sore throat in placebo group. Significant improvement was seen in Fluheal group, while in placebo group patients still had a complaint of sore throat (49%).

Table 4: Sore throat

Sore throat	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Absent	3(6%)	0(0%)	3(3%)
Present	47(94%)	49(100)	96(97%)
On 3rd day follow-up			
Absent	39(78%)	7(14.3%)	46(46.5%)
Present	10(20%)	37(75.5%)	47(47.5%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 6th day follow-up			
Absent	48(96%)	17(34.7%)	65(65.7%)
Present	1(2%)	27(55.1%)	28(28.3%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 9th day follow-up			
Absent	49(98%)	19(38.8%)	68(68.7%)
Present	0(0%)	24(49%)	24(24.2%)
Loss of follow-up	1(2%)	6(6.1%)	7(7.1%)

Headache was also assessed in all patients. 50 patients were on homeopathic medicine “Fluheal” and 49 patients were on placebo. At the end of study 49 patients on “Fluheal” had no headache. While in patients on placebo, 16.3% has mild headache, 10.2% had moderate headache and 4.1% had severe headache. Overall significant improvement was seen in patients after the use of homeopathic medicine "Fluheal".

Table 5: Headache

Headache	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Absent	11(22%)	9(18.4%)	20(20.2%)
Mild	15(30)	18(36.7%)	33(33.3%)
Moderate	14(28%)	15(30.6%)	29(29.3%)
Severe	8(16%)	6(12.2%)	14(14.1%)
Very severe	2(4%)	1(2%)	3(3%)
On 3rd day follow-up			
Absent	36(72%)	15(30.6%)	51(51.5%)
Mild	9(18%)	14(28.6%)	23(23.2%)
Moderate	3(6%)	8(16.3%)	11(23.2%)
Severe	1(2%)	6(12.2%)	7(7.1%)
Very severe	0(0%)	1(2%)	1(1%)
On 6th day follow-up			
Absent	44(55%)	17(34.7%)	61(61.6%)
Mild	4(8%)	16(32.7%)	20(20.2%)
Moderate	1(2%)	6(12.2%)	7(7.1%)
Severe	0(0%)	5(10.2%)	5(5.1%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 9th day follow-up			
Absent	49(98)	28(57.1%)	77(77.8%)
Mild	0(0%)	8(16.3%)	8(8.1%)
Moderate	0(0%)	5(10.2%)	5(5.1%)
Severe	0(0%)	2(4.1%)	2(2%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	6(12.2%)	7(7.1%)

At baseline, Patients were complained about cough. 0-4 scale was use to evaluate cough severity, which was interpreted as 0 means absent, 1 means mild, 2 means moderate, 3 means severe and 4 means very severe. On every follow-up cough severity was monitored in both Fluheal and placebo group. Overall a good response was seen in patients on homeopathic medicine “Fluheal” while patients on placebo still had cough as shown in table 6

Table 6: Cough

Cough	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Absent	2(2%)	2(2%)	4(4%)
Mild	13(26%)	15(30%)	28(28.3%)
Moderate	24(48%)	23(46.9%)	47(47.7%)
Severe	9(18%)	8(16.3%)	17(17.2%)
Very severe	2(4.1%)	1(2%)	3(3%)
O 3rd day follow-up			
Absent	17(34%)	8(18.3%)	25(25.3%)
Mild	27(54%)	11(22.4%)	38(38.3%)
Moderate	3(6%)	16(32.7%)	19(19.2%)
Severe	1(2%)	7(14.3%)	8(8.1%)
Very severe	1(2%)	2(4.1%)	3(3%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 6th day follow-up			
Absent	40(80%)	7(14.3%)	47(47.5%)
Mild	6(12%)	13(26.5%)	19(19.2%)
Moderate	1(2%)	22(44.9%)	23(23.2%)
Severe	2(4.1%)	2(4.1%)	4(4%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 9th day of follow-up			
Absent	46(92%)	8(16.3%)	54(54.5%)
Mild	2(4.1%)	21(42.9%)	23(23.2%)
Moderate	1(2%)	14(28.6%)	15(15.2%)
Severe	0(0%)	0(0%)	0(0%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	6(12.2%)	7(7.1%)

Patients with flu also experienced pain and ache in whole body and this parameter was also evaluate on 0-4 scale (1 for mild, 2 for moderate, 3 for severe and 4 for very severe). Patients on homeopathic medicine "Fluheal" were showed significant improvement (96%) rather than patients on placebo. In placebo group, 22.4% and 16.2% patients still had mild and moderate pain and ache as shown in table 7.

Table 7: Pain and ache

Pain and ache	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Absent	12(24%)	9(18.4%)	21(21.2%)
Mild	12(24%)	13(26%)	25(25.3%)
Moderate	13(26%)	20(40.8%)	33(33.3%)
Severe	10(20%)	6(12.2%)	16(16.2%)
Very severe	3(6%)	1(2%)	4(4%)
O 3rd day follow-up			
Absent	28(56%)	15(30.6%)	43(43.4%)
Mild	16(32%)	8(16.3%)	24(24.2%)
Moderate	3(6%)	16(32.7%)	19(19.2%)
Severe	2(6%)	5(10.2%)	6(7.1%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 6th day follow-up			
Absent	45(90%)	16(32.7%)	61(61.6%)
Mild	3(6%)	14(28.6%)	17(17.2%)
Moderate	1(2%)	11(22.4%)	12(12.1%)
Severe	0(0%)	3(6%)	3(3%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 9th day of follow-up			
Absent	48(96%)	22(44.9%)	70(70.7%)
Mild	2(4.1%)	11(22.4%)	12(12.1%)
Moderate	1(2%)	8(16.2%)	8(8.1%)
Severe	0(0%)	0(0%)	2(2%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	6(12.2%)	7(7.1%)

At baseline, almost all patients were come with myalgia. After the use of Fluheal and placebo, myalgia complaints were monitored on every scheduled visit 9. A significant improvement (96%) was seen in patients on homeopathic medicines "Fluheal" as shown in table.

Table 8: Myalgia

Myalgia	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Absent	11(22%)	8(16.3%)	19(19.2%)
Mild	12(24%)	14(28.6%)	26(26.3%)
Moderate	18(36%)	18(36%)	36(36.4%)
Severe	9(18%)	9(18%)	18(18.2%)
Very severe	0(0%)	0(0%)	0(0%)
O 3rd day follow-up			
Absent	28(56%)	16(32.7%)	44(44.4%)
Mild	16(32.7%)	7(14.3%)	23(23.2%)
Moderate	4(8%)	16(32.7%)	20(20.2%)
Severe	1(2%)	5(10.2%)	6(6.1%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	5(%)	6(6.1%)
On 6th day follow-up			
Absent	44(88%)	17(34.7%)	61(61.6%)
Mild	5(10%)	13(26.5%)	18(18.2%)
Moderate	0(0%)	13(26.5%)	13(13.1%)
Severe	0(0%)	1(2%)	1(1%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	5(10%)	6(6.1%)
On 9th day of follow-up			
Absent	48(96%)	23(46.9%)	71(71.7%)
Mild	1(2%)	12(24.5%)	13(13.1%)
Moderate	0(0%)	8(16.3%)	8(8.1%)
Severe	0(0%)	0(0%)	0(0%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	6(12.2%)	7(7.1%)

Patients on homeopathic medicine “Fluheal” were showed good result as shown in table 9. Only one patient had mild runny nose on 9th day of follow-up. At baseline, 7 patients had mild runny nose, 27 patients had moderate while 12 had severe and 1 had very severe complaint of runny nose. On 9th day of follow-up, 19 patients had mild runny nose while 13 had moderate, 3 had severe and 1 had very severe complaint of runny nose in placebo group

Table 9: Runny nose

Runny nose	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Absent	2(4%)	2(4.1%)	4(4%)
Mild	9(18%)	7(14.3%)	16(16.2%)
Moderate	21(42%)	27(55.1%)	48(48.5%)
Severe	16(32%)	12(24.5%)	28(28.3%)
Very severe	2(4%)	1(2%)	3(3%)
O 3rd day follow-up			
Absent	17(34%)	3(6.1%)	20(20.2%)
Mild	23(46%)	11(22.4%)	34(34.3%)
Moderate	8(16%)	18(36.7%)	26(26.3%)
Severe	1(2%)	12(24.5%)	13(13.1%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 6th day follow-up			
Absent	37(74%)	2(4.1%)	39(39.4%)
Mild	12(24%)	16(32.7%)	28(28.3%)
Moderate	0(0%)	17(34.7%)	17(17.2%)
Severe	0(%)	0(0%)	0(0%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 9th day of follow-up			
Absent	48(96%)	7(14.3%)	55(55.6%)
Mild	1(2%)	19(38.8%)	20(20.2%)
Moderate	0(0%)	13(26.5%)	13(13.1%)
Severe	0(0%)	3(6.1%)	3(3%)
Very severe	0(0%)	1(2%)	1(1%)
Loss of follow-up	1(2%)	6(12.2%)	7(7.1%)

Color of sputum was asked from every patient. At baseline, in 49.5% patients’ color of sputum was absent. 7.1% patients had green color, 4% patients had transparent watery fluid color sputum while 39.4% patient’s had yellowish to watery

fluid color of sputum. Overall a significant improvement was seen in patients on homeopathic medicine "Fluheal" as shown in table 10

Table 10: Color of sputum

Color of sputum	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Absent	21(42%)	28(57.1%)	49(49.5%)
Green	4(8%)	3(6.1%)	7(7.1%)
Transparent Watery fluid	4(8%)	0(0%)	4(4%)
Yellowish to watery fluid	21(42%)	18(36.7%)	39(39.4%)
On 3rdday of follow-up			
Absent	37(74%)	23(%)	60(60%)
Green	2(4%)	3(6.1%)	5(5.1%)
Transparent Watery fluid	0(0%)	0(0%)	0(0%)
Yellowish to watery fluid	10(20%)	18(36.7%)	28(28.2%)
Loss of follow-up	1(2%)	5(10%)	6(6.1%)
On 6th day of follow-up			
Absent	47(94%)	24(49%)	71(71.7%)
Green	1(2%)	3(6.1%)	4(4%)
Transparent Watery fluid	0(0%)	0(0%)	0(0%)
Yellowish to watery fluid	1(%)	17(34.7%)	18(18.2%)
Loss of follow-up	1(2%)	5(10%)	6(6.1%)
On 9th day of follow-up			
Absent	48(96%)	27(55.1%)	75(75.6%)
Green	1(2%)	3(6.1%)	4(4%)
Transparent Watery fluid	0(0%)	0(0%)	0(0%)
Yellowish to watery fluid	0(2%)	13(26.5%)	13(13.1%)
Loss of follow-up	1(2%)	6(12.2%)	7(7.1%)

Total 84.8% patients had a problem of sinusitis while 15.2% patients had no complaint in this regard. After the use of homeopathic medicine a clear improvement was seen regarding sinusitis as shown in table 11. At the end of duration of treatment significant improvement were seen in "Fluheal" group

Table 11: Sinusitis

Sinusitis	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Absent	12(24%)	3(6.1%)	15(15.2%)
Present	38(76%)	46(93.9%)	84(84.8%)
On 3rd day of follow-up			
Absent	39(78%)	15(30.6%)	54(54.5%)
Present	10(20%)	29(59.2%)	39(39.4%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 6th day of follow-up			
Absent	46(92%)	24(49%)	70(70.7%)
Present	3(6.1%)	20(40.8%)	23(23.2%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 9th day of follow-up			
Absent	48(96%)	30(61.2%)	78(78.8%)
Present	1(2%)	13(26.5%)	14(14.1%)
Loss of follow-up	1(2%)	6(12.2%)	7(7.1%)

Sneezing is also associated with flu. So this symptom was also evaluated in all patients. 98% patients on homeopathic medicine "Fluheal: showed significant improvement in this regard. While in placebo group only 59.2% improvement was seen and rest of patients' still had this problem as shown in table 12

Table 12: Sneezing

Sneezing	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Absent	18(36%)	17(34.7%)	35(35.4%)
Mild	16(32%)	17(28.6%)	33(33.3%)
Moderate	9(18%)	12(24.5%)	21(21.2%)
Severe	6(12%)	2(4.1%)	8(8.1%)
Very severe	1(2%)	1(2%)	2(2%)
O 3rd day follow-up			
Absent	39(78%)	17(34.7%)	56(56.6%)
Mild	16(32.7%)	17(34.7%)	26(26.3%)
Moderate	4(8%)	9(18.4%)	10(10.2%)
Severe	0(%)	0(0%)	0(0%)
Very severe	0(0%)	1(2%)	1(1%)
Loss of follow-up	1(2%)	5(%)	6(6.1%)
On 6th day follow-up			
Absent	47(94%)	24(49%)	71(71.7%)
Mild	0(0%)	14(28.6%)	16(16.2%)
Moderate	0(0%)	5(10.2%)	5(5.1%)
Severe	0(0%)	0(0%)	0(0%)
Very severe	0(0%)	1(2%)	1(1%)
Loss of follow-up	1(2%)	5(10%)	6(6.1%)
On 9th day of follow-up			
Absent	49(98%)	29(59.2%)	78(78.8%)
Mild	0(0%)	11(22.2%)	11(11.1%)
Moderate	0(0%)	2(4.1%)	2(2%)
Severe	0(0%)	0(0%)	0(0%)
Very severe	0(0%)	1(2%)	1(1%)
Loss of follow-up	1(2%)	6(12.2%)	7(7.1%)

Due to flu, mostly patient's thirst reduced as shown in table 14. At baseline 68.7% patients had normal thirst while rest of them patients was in the state of being thistles. A good improvement was seen in patients on homeopathic medicine Fluheal. Poor results were seen in placebo group in this regard.

Table 13: Thirstlessness

Thirstlessness	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Absent	33(66%)	35(71.4%)	68(68.7%)
Mild	5(10%)	4(8.2%)	9(9.1%)
Moderate	5(10%)	4(4.2%)	9(9%)
Severe	3(6%)	4(8.2%)	7(7.1%)
Very severe	4(8%)	2(4.1%)	6(6.1%)
O 3rd day follow-up			
Absent	38(76%)	31(69%)	69(69.7%)
Mild	8(16%)	2(4.1%)	10(10.1%)
Moderate	2(4.1%)	5(10.2%)	7(7.1%)
Severe	1(2%)	4(8.2%)	5(5.1%)
Very severe	0(0%)	2(4.1%)	2(2%)
Loss of follow-up	1(2%)	5(%)	6(6.1%)
On 6th day follow-up			
Absent	43(86%)	33(67.3%)	76(76.8%)
Mild	5(10%)	5(10%)	10(10.1%)
Moderate	0(0%)	3(6.1%)	3(3%)
Severe	1(2%)	2(4.1%)	3(3%)
Very severe	0(0%)	1(2%)	1(1%)
Loss of follow-up	1(2%)	5(10%)	6(6.1%)
On 9th day of follow-up			
Absent	48(96%)	33(67.3%)	81(81.8%)
Mild	1(2%)	8(16.3%)	9(9.1%)
Moderate	0(0%)	1(2%)	1(1%)
Severe	0(0%)	0(0%)	0(0%)
Very severe	0(0%)	1(2%)	1(1%)
Loss of follow-up	1(2%)	6(12.2%)	7(7.1%)

Patient with flu usually feel lack of motivation, physical or mental exhaustion. So after the use of Fluheal a clear improvement (98%) was seen. While 36.7% patients showed improvement, rest of them still had this problem. Trends of study were analyzed as shown in table 14.

Table 14: Tiredness

Tiredness	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Absent	9(18%)	13(26.5%)	22(22.2%)
Mild	8(16%)	9(18.4%)	17(17.2%)
Moderate	18(36%)	15(30.6%)	33(33.3%)
Severe	11(22%)	11(22.4%)	22(22.2%)
Very severe	4(8%)	1(2%)	5(5.1%)
O 3rd day follow-up			
Absent	24(48%)	16(32.7%)	40(40.4%)
Mild	20(40%)	5(10.2%)	25(25.3%)
Moderate	3(6%)	13(26.5%)	16(16.2%)
Severe	2(4%)	10(20%)	12(12.1%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 6th day follow-up			
Absent	39(78%)	17(34.7%)	56(56.6%)
Mild	10(20%)	11(22.4%)	21(21.2%)
Moderate	0(0%)	11(22.2%)	11(11.1%)
Severe	0(0%)	5(10.2%)	5(2.1%)
Very severe	(%)	(%)	0(0%)
Loss of follow-up	1(2%)	5(10.2%)	6(6.1%)
On 9th day of follow-up			
Absent	49(98%)	18(36.7%)	67(67.7%)
Mild	0(0%)	16(32.7%)	16(16.2%)
Moderate	0(0%)	8(16.3%)	8(8.1%)
Severe	(00%)	1(2%)	1(1%)
Very severe	0(0%)	0(0%)	0(0%)
Loss of follow-up	1(2%)	6(6.1%)	7(7.1%)

Sleeping pattern of all patients were analyzed as shown in table 16.Total 54.4% patients at baseline had a complaint of disturbed sleep while 45.5% patients had normal sleep. Excellent improvement (44%) were seen in patients on Fluheal. While 2% patients on placebo, showed this result and 15.2% patients still had complaint of disturbed sleep.

Table 15: sleeping pattern

Sleeping pattern	Number of patients on Fluheal	Number of patients on Placebo	Total number of patients
At baseline			
Normal	25(50%)	20(40.8%)	45(45.5%)
Worst	25(50%)	29(59.5%)	54(54.5%)
On 3rd of follow-up			
Normal	25(50%)	18(36.7%)	43(43.4%)
Mild improvement	3(6%)	5(10.2%)	898.1%)
Moderate improvement	9(18%)	1(2%)	10(10.1%)
Excellent improvement	10(20%)	0(0%)	10(10.1%)
Worst	2(4%)	20(20.8%)	22(22.2%)
On 6th day of follow-up			
Normal	25(50%)	18(36.7%)	43(43.4%)
Mild improvement	1(2%)	8(16.3%)	9(9.1%)
Moderate improvement	2(4%)	2(4.1%)	4(4.1%)
Excellent improvement	21(42%)	0(0%)	21(21.2%)
Worst	0(0%)	16(32.7%)	16(16.2%)
On 9th day of follow-up			
Normal	25(50%)	17(34.7%)	42(42.4%)
Mild improvement	0(0%)	7(14.3%)	7(7.1%)
Moderate improvement	2(4%)	3(6.1%)	5(5.1%)
Excellent improvement	22(44%)	1(2%)	23(23.2%)
Worst	0(0%)	15(30.6%)	15(15.2%)

Safety

After the use of homeopathic medicine, no single patient showed any adverse effect. While many patients' complaint severity in symptoms after the use of placebo. Many patients were stop using placebo after feeling not better. Hence after the use of Fluheal patients feel good

Discussion

Flu or influenza is a major cause of morbidity and mortality and it also impose a great burden on public healthcare system worldwide [26, 27]. It is a contagious and acute viral disease [27]. Due to some limitations, patients with influenza like illness were enrolled in this study. Fever with sore throat, headache, myalgia and cough are the typical symptoms of ILI [28]. This was the first study of its nature conducted in Pakistan homeopathic medical college, hospital and research center, to evaluate the safety and efficacy of homeopathic medicine "Fluheal" in comparison to placebo.

Fluheal is a homeopathic medicine prepared by Dr Masood homeopathic pharmaceutical. This medicine is used for influenza like illness. Homeopathy is a popular way of treatment [29]. Although effectiveness of homeopathic medicines is still a controversial topic but there is no concrete evidence that homeopathy medicines are different from placebo [29, 30]. Despite this fact majority of patients are highly satisfied with the use of homeopathic medicines [30]. That's why, a randomized placebo controlled study was conducted to establish the safety and efficacy of homeopathic medicines "Fluheal".

In this study at baseline, patient's basic demographics were obtained and analyzed as listed in table 1. Total 99 patients were enrolled in this study out which 50 patients were in Fluheal group and 49 patients were in placebo group. All patients were randomly allocated to their respective study group. At baseline, on 3rd day, on 6th day and on 9th day, monitoring parameters were assessed in all patients

Total 34% male and 66% female were randomly allocated to Fluheal group, while 38.8% male and 61.6% female were in placebo group. Overall 36 male and 63 female were enrolled in this study. At baseline, 44 patients had normal body temperature, while 55 patients had a fever. After the use of Fluheal and placebo, in both groups a clear difference of improvement was seen. At 3rd day of follow-up, 95% patients had no fever after the use of medicine "Fluheal" while 34.5% patients still had fever after the use of placebo. At 9th day of follow-up, 98% patients after the use of homeopathic medicine "Fluheal" had no fever, but some patients after the use of placebo still had fever. Because in home, school or at work, mostly patients with fever cannot perform routine activity [2, 31].

Presence of fever with cough or sore throat in the absence of any alternative cause is due to ILL [32]. That's why majority of patients were with severity of these symptoms and Fluheal found effective in influenza like illness. In Fluheal group, 94% patients had sore throat while 6% patients had no such complaint. In placebo group, 100% patients had sore throat.49% patients after taking placebo still had this problem. 98% patients had no such problem after the use of Fluheal. Good improvement was seen in patients who are using Fluheal.

After cough, sore throat is the second most reason for seeking treatment [33]. Results of this trial indicate that homeopathic medicine Fluheal is very effective in patients with sore throat. Although in placebo group, not good results were seen. Hence Fluheal is very effective in patients with influenza like illness. At baseline, 20 out of 99 patients was with no headache. But after the use of Fluheal 98% was with no headache while 30.6% patients was with mild, moderate and severe headache. Cough is one of the most common problem for which patient seek medical attention [34] that's why on first day, 94 patients were complained about cough with other associated symptoms of ILI but after the use of Fluheal a good improvement (92%) was seen in this regard. Although after the use of placebo, 71.5% patients were s complained with cough.

Due to influenza like illness mostly patients were complained with pain and ache on their first visit. 98% patients had no pain and ache after the use of Fluheal while many patients of placebo group had pain and ache. Above results indicated that homeopathic medicine Fluheal very effectively gave relief to patients with influenza like illness. Runny nose, sneezing, thirstlessness, tiredness, myalgia and sinusitis were the common symptoms in patients. These symptoms were significantly improved after the use of Fluheal but less improvement was seen in placebo group. Sleeping pattern of all patients was also monitored. At baseline, 54.5% patients were complained about disturbed sleep. After the use of homeopathic medicine "Fluheal" excellent improvement was seen in 44% patients in this regard. 30.6% patients were complaint about worst sleep in placebo group.

Overall excellent results were obtained after the use of Fluheal. Homeopathic medicines "Fluheal" showed significant results in all patients with influenza like illness as compared to placebo. So clinically Fluheal is an effective and safe medicine in influenza like illness. Although many patients of placebo group experienced severity in symptoms but no adverse effect were reported after the use of Fluheal. That's the reason most patients prefer to choose homeopathic medicines due to its perceived safety [35].

Conclusion

Homeopathic medicine Fluheal is safe and very effective in patients with influenza like illness (ILI). Fluheal is found very effective in reducing severity of symptoms. It also enhanced sleeping pattern of all patients. More importantly it has no adverse effect.

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