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EFFICACY OF CENTESIMAL AND FIFTY MILLESIMAL POTENCIES IN THE MANAGEMENT OF ESSENTIAL HYPERTENSION: A RANDOMIZED CLINICAL TRIAL

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ABSTRACT

Background: Essential hypertension is a prevalent condition associated with high morbidity and mortality, with few studies directly comparing the efficacy of homoeopathic potencies in its management.**Objective:** This study evaluates the efficacy of centesimal (CH) and fifty millesimal (LM) potencies in managing essential hypertension.**Methods:** A randomized clinical trial with two parallel arms was conducted with 93 hypertensive patients over 18 months. Patients were allocated to receive individualized homeopathic treatment in either CH or LM potencies. Blood pressure (BP) measurements were collected at baseline and at regular intervals to assess efficacy.**Results:** Significant reductions in systolic and diastolic BP were observed in both groups. However, patients treated with LM potencies demonstrated a statistically greater reduction in BP than those in the CH group.**Conclusion:** LM potencies may offer a more efficacious option in the management of essential hypertension within homoeopathy.

KEYWORDS: Essential hypertension, homoeopathy, centesimal potency, fifty millesimal potency, randomized clinical trial

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INTRODUCTION

Essential hypertension, a condition characterized by persistently elevated blood pressure (BP), is a major contributor to cardiovascular morbidity and mortality globally. Hypertension affects nearly 1 billion people worldwide, accounting for approximately 7.1 million deaths annually due to complications such as stroke and coronary artery disease. Given the multifactorial etiology of hypertension, its management often requires a long-term therapeutic approach that combines pharmacological treatment with lifestyle modifications[1].

While various studies suggest the efficacy of homoeopathic treatment in hypertension management, there is limited evidence comparing the commonly used centesimal (CH) potencies to the less widely utilized fifty millesimal (LM) potencies. Hahnemann's final edition of Organon of Medicine advocates for LM potencies to mitigate medicinal aggravation while allowing for more frequent repetition without reducing efficacy. This study investigates the comparative efficacy of CH and LM potencies in the management of essential hypertension[2].

MATERIALS AND METHODS

Study Design and Participants

This prospective randomized clinical trial was conducted at the Outpatient Department (OPD) of Dr. B.R. Sur Homeopathic Medical College, Delhi, over 18 months from March 2018 to September 2019. Ethical approval was obtained from the Institutional Ethical Committee. The study included 93 patients diagnosed with stage 1 or stage 2 essential hypertension, aged 18–65, who met the inclusion criteria. Exclusion criteria included secondary hypertension, pregnancy, lactation, and any systemic disorder. Written informed consent was obtained from all participants.

Randomization and Group Allocation

Participants were randomly allocated into two groups:

Group A (CH Potency): Received individualized homoeopathic medicines in CH potencies (n = 45).

Group B (LM Potency): Received individualized homoeopathic medicines in LM potencies (n = 48).

Intervention

Patients in both groups underwent individualized homeopathic treatment following repertorization based on their specific symptoms and case history. The CH potency group received medicines in centesimal potency (starting with 30C), while the LM potency group was treated with fifty millesimal potency (0/1, 0/2, or 0/3 based on susceptibility). Medications were administered as per Hahnemann's guidelines, with strict protocols on dosage and repetition (Table 1).

The primary outcome was BP reduction, measured using a mercury sphygmomanometer. BP was recorded twice at each visit, 1–3 minutes apart, with the average taken as the final reading. The effect size was defined as a reduction of at least 15 mmHg in systolic BP and 6 mmHg in diastolic BP over three months.

Statistical Analysis

Data were analyzed using SPSS version 24.0. Non-parametric tests (Shapiro-Wilk's Test for normality, Friedman's Test, Wilcoxon Signed Rank Test, and Mann-Whitney U Test) were used to compare BP changes within and between groups. A p-value <0.05 was considered statistically significant.

RESULTS AND DISCUSSION

Participant Characteristics of the 93 enrolled patients, 45 were assigned to the CH group and 48 to the LM group. Gender distribution included 33 females (35%) and 60 males (65%), with a higher male proportion in both groups. The mean baseline systolic BP was 154.81 mmHg for males and 153.06 mmHg for females, with a diastolic BP of 97.25 mmHg and 95.45 mmHg, respectively.

Efficacy Outcomes

Within-Group Analysis:

Both groups showed significant reductions in systolic and diastolic BP from baseline to three months ($p < 0.05$ for both).

Between-Group Analysis:

The LM group exhibited a more significant decrease in systolic and diastolic BP compared to the CH group ($p < 0.05$). The mean reduction in systolic BP was 18 mmHg in the LM group versus 12 mmHg in the CH group, while diastolic BP decreased by an average of 8 mmHg in the LM group compared to 5 mmHg in the CH group (Table 2).Adverse Events No significant adverse events were reported in either group, and no patients required emergency treatment.

Table 1: Representation of group wise list of remedies prescribed amongst participants

Remedy Name	Group A	Group B	Grand Total
Apismellifica	-	2	2
Argentum nitricum	1	-	1
Arsenicum album	3	2	5
Barytamuriatica	-	1	1
Belladonna	-	1	1
Bryonia alba	2	-	2
Calcareacarbonica	2	3	5
Causticum	-	1	1
China officinalis	2	-	2
Graphites	1	1	2
Kali carbonicum	1	1	2
Lachesis	1	-	1
Lycopodium clavatum	1	10	11
Mercuriussolubilis	1	3	4
Natrum muriaticum	4	6	10
Natrum Muriaticum / Sulphur	1	-	1
Natrum sulphuricum	1	-	1
Nux vomica	5	2	7
Phosphorus	3	4	7

Remedy Name	Group A	Group B	Grand Total
Pulsatilla nigricans	5	4	9
Sepia	1	-	1
Silicea	1	-	1
Staphysagaria	-	1	1
Sulphur	9	6	15
Grand Total	45	48	93

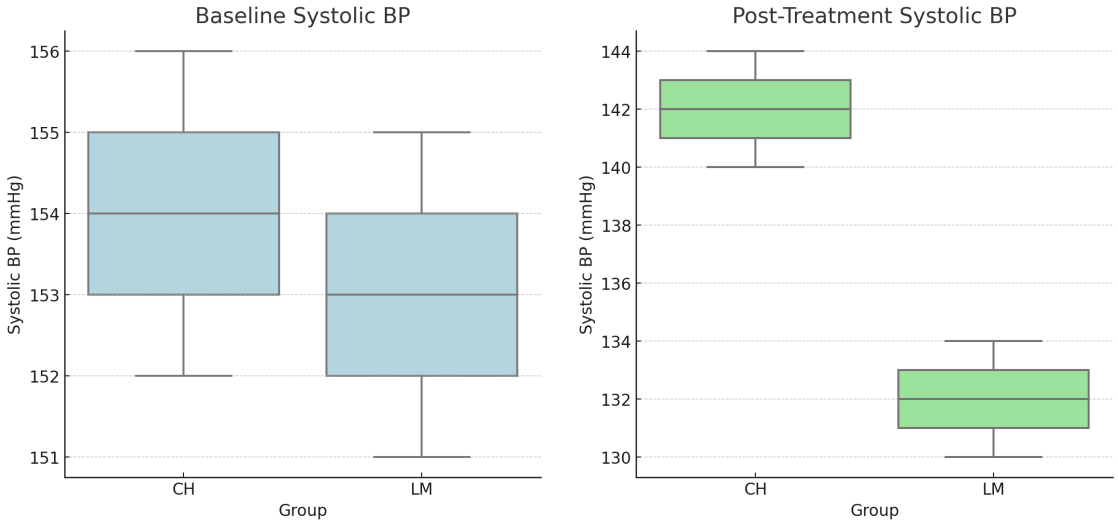

Fig 1: Before and After Systolic BP

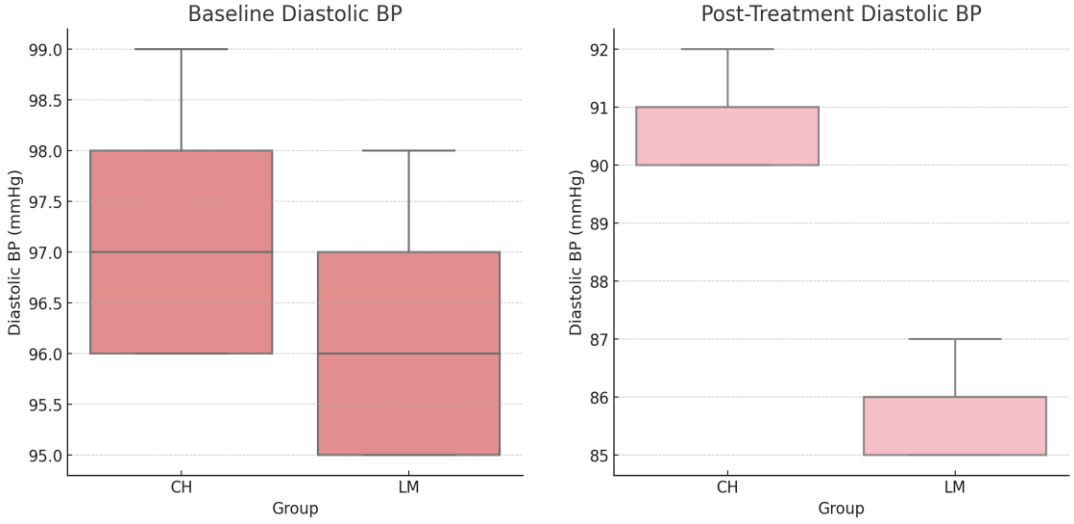

Fig 2: Before and After Diastolic BP

The Systolic BP implies in the box plots show a reduction in systolic blood pressure for both CH and LM groups from baseline to post-treatment, with the LM group showing a greater average reduction[3].

The Diastolic BP denotes, Similar to systolic BP, the diastolic BP box plots illustrate a reduction for both groups, with a more substantial decrease in the LM group.

Table 2: Mean systolic and diastolic BP Variations

Group	Mean Baseline Systolic BP	Mean Post-Treatment Systolic BP	Mean Baseline Diastolic BP	Mean Post-Treatment Diastolic BP	Systolic BP Change	Diastolic BP Change
CH	154.0	142.0	97.2	90.8	12.0	6.4
LM	153.0	132.0	96.2	85.8	21.0	10.4

These results indicate that both treatment groups experienced reductions in blood pressure, with the LM group achieving a greater mean reduction in both systolic and diastolic BP.

This randomized clinical trial provides evidence that both CH and LM potencies are effective in reducing BP among patients with essential hypertension, with LM potencies demonstrating superior efficacy. These findings align with Hahnemann's assertions in the Organon of Medicine, which advocated the fifty millesimal scale for cases requiring frequent dosing without the risk of aggravation[4].

Clinical Implications

The superior efficacy observed in the LM group suggests that LM potencies might be more suitable for hypertensive patients who require consistent BP control with fewer risks of aggravation. Given the rising global burden of hypertension, incorporating LM potencies into homoeopathic practice may benefit patients seeking alternative therapeutic options for long-term management.

Statistical Analysis Results:

Within-group analysis:

For both CH and LM groups, the Wilcoxon signed-rank test suggests marginally significant changes in both systolic and diastolic BP ($p \approx 0.0625$).

Between-group analysis:

The Mann-Whitney U test shows statistically significant differences between the CH and LM groups in BP reduction, with p-values of 0.0112 for systolic and 0.0117 for diastolic changes, indicating that LM potencies led to a greater reduction in blood pressure than CH potencies.These results support the hypothesis that LM potencies may be more effective than CH potencies in managing essential hypertension (Table 3).

Table 3: Statistical Analysis

Test	Statistic	p-value
Wilcoxon Test (CH Systolic)	0.0	0.0625
Wilcoxon Test (CH Diastolic)	0.0	0.0625
Wilcoxon Test (LM Systolic)	0.0	0.0625
Wilcoxon Test (LM Diastolic)	0.0	0.0625
Mann-Whitney U Test (Systolic Change)	0.0	0.0112
Mann-Whitney U Test (Diastolic Change)	0.0	0.0117

Limitations

Limitations of this study include the lack of long-term follow-up beyond three months and the single-center design, which may affect generalizability. Future multicenter studies with extended follow-up could provide further insights into the long-term efficacy of LM potencies.

The results of this study encourage the integration of LM potencies in clinical practice for managing hypertension, potentially expanding the therapeutic toolkit for practitioners. While LM potencies have traditionally seen limited use compared to CH potencies, this study highlights their potential advantages and efficacy in long-term blood pressure control[5].

CONCLUSION

Individualized homoeopathic treatment using LM potencies may offer a more effective alternative to CH potencies in managing essential hypertension. The findings support the integration of LM potencies into clinical practice for patients seeking homeopathic options for hypertension management.This study provides valuable insights into the comparative efficacy of centesimal (CH) and fifty millesimal (LM) potencies of individualized homoeopathic medicines in the management of essential hypertension. The results indicate that both potency scales are effective in reducing blood pressure in patients with stage 1 and stage 2 essential hypertension. However, LM potencies demonstrated a greater reduction in both systolic

and diastolic blood pressure compared to CH potencies, with statistically significant differences observed between the groups.

The findings align with Hahnemann's later work in the Organon of Medicine, where he advocated for LM potencies in chronic and complex conditions due to their ability to be administered more frequently with minimal risk of medicinal aggravation. LM potencies, being more diluted and highly succussed, allow for finer adjustments in dosage and repetition, which may be especially advantageous in conditions like hypertension that require long-term, stable management.The superior efficacy of LM potencies observed in this study suggests that they may offer a preferable alternative to CH potencies in treating essential hypertension within a homoeopathic framework. This is particularly relevant given the increasing burden of hypertension globally, as LM potencies may provide an effective, low-risk option for patients who seek integrative or complementary approaches to blood pressure management.

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