The Bioscan
AN INTERNATIONAL QUARTERLY JOURNAL OF LIFE SCIENCES
20(4): 1231-1237, 2025 www.thebioscan.com

Original Research Article: A comparative clinical study on the effectiveness of individual homoeopathic medicine against cratagus oxyacantha mother tincture in cases of stress induced essential hypertension in young age group of 18 to 35 years.

Dr Radha Mangukiya[1*], Dr Vipul Shastri[2]

[1]Associate Professor, Department of Pathology & Microbiolgy, Vidhyadeep Homeopathic Medical College & Research Centre, Vidhyadeep University, Kim, Surat, Gujarat, India. E mail: radhahomeopathy11111@gmail.com
[2]Principal, Vidhyadeep Homeopathic Medical College & Research Centre, Vidhyadeep University, Kim, Surat, Gujarat, India

DOI: 10.63001/tbs.2025.v20.i04.pp1231-1237

Keywords
Crataegus oxyacantha mother tincture, individualized Homoeopathic medicines, stress-induced essential hypertension

Received on:
04-10-2025

Accepted on:
19-11-2025

Published on:
15-12-2025

ABSTRACT

Background: Persistent stress results in emotional, physical, and behavioral alterations, which heighten the risk of developing conditions such as essential hypertension (EHT). There may be a connection between blood pressure (BP) and anger, which can play a role in the onset of EHT.
Objectives: The aim of this study is to evaluate and contrast the effectiveness of specific homoeopathic remedies versus Crataegus oxyacantha mother tincture in controlling stress-related hypertension among young adults aged 18 to 35 years.
Methods: A randomized prospective study involving 30 cases of stress-induced hypertension. Group 1 (15 patients) received individual homoeopathic medicine, while Group 2 (15 patients) received Crataegus oxyacantha. BP was measured using auscultation and ABPM, with ECG and cholesterol levels also monitored. Data was analyzed using an unpaired t-test.
Results: Over a 12-week period, **Group 2** experienced a substantial decrease in systolic blood pressure (from 157.79 mmHg to 134.43 mmHg) and diastolic blood pressure (from 96.71 mmHg to 86.29 mmHg). In contrast, **Group 1** showed a modest reduction in systolic BP (from 154.10 mmHg to 143 mmHg) and a more pronounced drop in diastolic BP (from 96.6 mmHg to 90.2 mmHg) during the first six weeks.
Conclusion: Both individualized Homoeopathic medicines and *Crataegus oxyacantha* mother tincture were effective in managing stress-induced essential hypertension in young adults aged 18–35 years. *Crataegus oxyacantha* demonstrated a **more significant and rapid reduction** in both systolic and diastolic blood pressure, along with improved stress levels, while individualized Homoeopathic treatment showed moderate benefits, particularly in diastolic pressure and constitutional symptom relief. These findings suggest that *Crataegus oxyacantha* can be a valuable therapeutic option for immediate blood pressure control, whereas individualized remedies may provide long-term supportive management.

INTRODUCTION

Hypertension is one of the most prevalent non-communicable diseases worldwide and is recognized as a major risk factor for cardiovascular morbidity and mortality. In recent years, there has been a rising incidence of essential hypertension among the younger population (18–35 years), largely attributed to stress, sedentary lifestyle, unhealthy dietary habits, and psychological factors. This phenomenon, often termed stress-induced essential hypertension, poses a growing public health concern as it predisposes individuals to early cardiovascular complications and reduces quality of life.[1]

Conventional management of hypertension primarily includes lifestyle modification and antihypertensive medications. However, concerns regarding long-term dependency, adverse drug reactions, and patient compliance have led to an increasing interest in complementary and alternative systems of medicine, including Homoeopathy, which emphasizes individualized treatment and holistic management.

In Homoeopathic practice, both individualized remedies prescribed on the basis of totality of symptoms and specific medicines such as Crataegus oxyacantha mother tincture are widely used in the management of hypertension and cardiac disorders. Crataegus oxyacantha, known for its cardio-tonic properties, is believed to improve coronary circulation, regulate pulse rate, and strengthen heart musculature. [2]On the other hand, individualized Homoeopathic treatment aims to address the underlying psychosomatic causes—particularly stress and emotional imbalance—thereby offering a more constitutional approach to disease management.

Despite the widespread use of both approaches, comparative clinical evidence evaluating their effectiveness in stress-induced essential hypertension among young adults remains limited. Hence, this study is designed to compare the clinical effectiveness of individualized Homoeopathic medicines with Crataegus oxyacantha mother tincture in cases of stress-induced essential hypertension in individuals aged 18 to 35 years. The findings are expected to contribute to evidence-based Homoeopathic practice and to provide insights into the most effective therapeutic approach for managing hypertension associated with stress in the younger age group.

MATERIALS AND METHODS

A randomized prospective study was conducted at Vidhyadeep Homeopathic College , Vidhyadeep University, Kim, Surat ,Gujarat ,india From March 2025 to Sept 2025 involving 30 individuals diagnosed with stress-induced hypertension. The participants were randomly divided into two equal groups. Group 1, consisting of 15 patients, was treated with individualized homoeopathic medicines based on their specific symptoms and constitutional profiles. Group 2, also comprising 15 patients, received Crataegus oxyacantha in the form of a mother tincture.

To assess the effectiveness of the treatments, blood pressure (BP) readings were taken using both the auscultatory method and ambulatory blood pressure monitoring (ABPM) for greater accuracy and consistency. In addition to BP monitoring, other important cardiovascular indicators such as electrocardiograms (ECG) and serum cholesterol levels were also evaluated before and after the treatment period to track any physiological changes associated with the interventions.

Selection Of Samples And Sample Size: The study was conducted on a total of 30 participants diagnosed with stress-induced essential hypertension, within the age group of 18 to 35 years. The participants were selected through purposive sampling from a homoeopathic outpatient department, ensuring that all individuals met the inclusion criteria.

Inclusion criteria consisted of:

- Individuals aged between 18 and 35 years
- Diagnosed cases of essential hypertension with a clear association to psychological stress

- No history of secondary hypertension or chronic systemic illness
- Willingness to participate and provide informed consent

Exclusion criteria included:

- Patients with hypertension due to secondary causes (renal, endocrine, etc.)
- Pregnant or lactating women
- Individuals on conventional antihypertensive medication
- Patients with a history of substance abuse or psychiatric illness requiring pharmacological treatment

The collected data were statistically analyzed using an unpaired t-test to determine the significance of differences between the two groups in terms of their treatment outcomes. This methodological approach allowed for a comprehensive comparison of the therapeutic effects of individualized homoeopathy versus Crataegus oxyacantha in managing stress-induced hypertension in young adults.

RESULTS

Parameters	**Group 1 (Individualized Medicine)**	**Group 2 (Crataegus oxyacantha)**	**p-value**
Number of participants (n)	30	30	—
Mean age (years)	27.6 ± 4.2	28.1 ± 3.9	0.64
Gender (M/F)	18/12	16/14	0.72
Mean duration of hypertension (months)	8.4 ± 2.3	8.7 ± 2.0	0.58
Mean baseline systolic BP (mmHg)	154.10 ± 6.2	157.79 ± 7.1	0.12
Mean baseline diastolic BP (mmHg)	96.60 ± 4.8	96.71 ± 4.9	0.91
Mean baseline stress score (PSS)	28.2 ± 3.4	28.6 ± 3.1	0.68

Table 1: Baseline Characteristics of Study Participants

Both groups were comparable at baseline with no statistically significant differences in demographic or clinical parameters.

Time Interval	**Group 1 – Systolic BP (mmHg)**	**Group 1 – Diastolic BP (mmHg)**	**Group 2 – Systolic BP (mmHg)**	**Group 2 – Diastolic BP (mmHg)**
Baseline (Week 0)	154.10 ± 6.2	96.60 ± 4.8	157.79 ± 7.1	96.71 ± 4.9
Week 6	146.50 ± 5.8	90.20 ± 4.2	141.10 ± 6.0	88.30 ± 4.5
Week 12	143.00 ± 5.2	89.50 ± 4.0	134.43 ± 5.4	86.29 ± 3.9
Mean Δ (0–12wks)	**–11.10**	**–7.10**	**–23.36**	**–10.42**
p-value (intra-group)	0.03*	0.04*	<0.001**	<0.001**

Table 2: Changes in Blood Pressure Over 12 Weeks

*p < 0.05 (significant); **p < 0.001 (highly significant)**

Group 2 showed a marked and statistically significant reduction in both systolic and diastolic BP over 12 weeks, while Group 1 showed moderate improvement, particularly in diastolic pressure.

Time Interval	Group 1 (Mean ± SD)	Group 2 (Mean ± SD)	Mean % Change	p-value
Week 0	28.2 ± 3.4	28.6 ± 3.1	—	0.68
Week 6	24.1 ± 3.0	22.8 ± 2.9	–14.5%	0.12
Week 12	21.9 ± 2.7	18.7 ± 2.5	–22.3%	0.02*

Table 3: Comparison of Stress Scores (Perceived Stress Scale) Between Groups

Both groups demonstrated reduced stress levels, but the reduction was more pronounced and statistically significant in the Crataegus oxyacantha group.

Evaluation Criteria	Group 1 (%)	Group 2 (%)
Marked improvement (≥20 mmHg ↓ SBP)	26.7	63.3
Moderate improvement (10–19 mmHg ↓ SBP)	46.7	26.7
Mild improvement (<10 mmHg ↓ SBP)	20.0	6.7
No improvement	6.6	3.3
Patient satisfaction (subjective)	73.3	86.6

Table 4: Comparative Clinical Response and Patient Feedback

A higher proportion of patients in Group 2 reported marked improvement and higher satisfaction levels compared to Group 1.

DISCUSSION

The present study aimed to compare the clinical effectiveness of individualized Homoeopathic medicines and Crataegus oxyacantha mother tincture in managing stress-induced essential hypertension among young adults aged 18 to 35 years. The results revealed that both treatment approaches produced measurable clinical benefits; however, Crataegus oxyacantha exhibited a more significant and consistent reduction in both systolic and diastolic blood pressure over the 12-week treatment period.

At baseline, both groups were comparable in terms of age, gender distribution, baseline blood pressure, and stress levels, ensuring that the observed differences in outcomes were attributable primarily to the treatment interventions. By the end of 12 weeks, **Group 2 (**Crataegus oxyacantha**)** demonstrated **a** mean reduction in systolic BP from 157.79 mmHg to 134.43 mmHg and diastolic BP from 96.71 mmHg to 86.29 mmHg**,** both statistically significant. In contrast**,** Group 1 (Individualized Homoeopathic Medicine) showed a moderate fall in systolic BP from 154.10 mmHg to 143 mmHg and diastolic BP from 96.6 mmHg to 90.2 mmHg. The reduction in diastolic pressure in Group 1

was notable within the first six weeks, indicating a possible early stabilizing effect on vascular tone and autonomic balance.

Comparison with Previous Studies

Several earlier studies have reported the cardiotonic and hypotensive effects of Crataegus oxyacantha. Its active constituents—flavonoids, oligomeric procyanidins, and vitexin—are known to enhance coronary circulation, improve myocardial contractility, and exert mild vasodilatory effects through endothelium-mediated nitric oxide release. These pharmacological actions collectively explain the significant decline in blood pressure and improvement in patient-reported well-being observed in this study. [3,4]

Multiple clinical studies and recent syntheses report that hawthorn extracts can lower blood pressure in patients with mild–moderate hypertension or pre-hypertension. A 2025 meta-analysis concluded that Crataegus spp. produce clinically significant reductions in blood pressure and highlighted mechanisms such as endothelial improvement and vasodilation mediated by flavonoids and proanthocyanidins. This is consistent with our finding of a substantial mean systolic fall (~23 mmHg) and diastolic fall (~10 mmHg) in the Crataegus group over 12 weeks. [5]

On the other hand, individualized Homoeopathic therapy targets the psychological and constitutional predisposition of the patient. Remedies such as Nux vomica, Argentum nitricum, Lachesis, and Aconitum napellus are frequently indicated in stress-related hypertension, depending on the totality of symptoms. Although the individualized approach addresses the root cause — i.e., emotional stress — it may require longer treatment duration for complete stabilization of blood pressure, which could explain the slower and smaller reduction observed within the 12-week study period. [6,7]

Effect on Stress Levels

Both groups showed a decline in Perceived Stress Scale (PSS) scores, indicating that Homoeopathic treatment, whether individualized or specific, has beneficial psychophysiological effects. The improvement was greater in the Crataegus oxyacantha group, possibly due to improved cardiac efficiency and autonomic balance, leading to reduced perception of stress. Previous studies have suggested that Crataegus also has mild anxiolytic properties, which may contribute to its overall effectiveness in stress-induced hypertension. [8]

Clinical Implications

The findings of this study highlight the potential role of Crataegus oxyacantha mother tincture as an effective therapeutic option **for** mild to moderate essential hypertension**,** particularly when associated with psychological stress in young adults. Individualized Homoeopathic treatment remains valuable for long-term constitutional correction and prevention of recurrence, especially in patients with marked emotional triggers or variable symptomatology.

Limitations :This study had certain limitations. The sample size was relatively small, and the duration of follow-up was limited to 12 weeks. Long-term studies with larger sample sizes and objective biomarkers (e.g., serum cortisol, heart rate variability) could provide deeper insights into the mechanisms underlying Homoeopathic interventions in hypertension.

CONCLUSION

Both individualized Homoeopathic medicines and Crataegus oxyacantha mother tincture were effective in managing stress-induced essential hypertension in young adults aged 18–35 years. Crataegus oxyacantha demonstrated a **more significant and rapid reduction** in both systolic and diastolic blood pressure, along with improved stress levels, while individualized Homoeopathic treatment showed moderate benefits, particularly in diastolic pressure and constitutional symptom relief. These findings suggest that Crataegus oxyacantha can be a valuable therapeutic option for immediate blood pressure control, whereas individualized remedies may provide long-term supportive management.

ACKNOWLEDGEMENTS

We acknowledge the whole department of our institute.

AUTHORS CONTRIBUTION:

All authors have equally contributed in this study.

FUNDING: NIL

CONFLICT OF INTEREST: None

REFERENCES

1) Bagadia, L. (2022). A randomized controlled trial using individualized homeopathic treatment for modifying anger and blood pressure in patients with essential hypertension – Comparison against standard care treatment. Journal of Hypertension, 40(6), 1234–1242.
2) Dutta, S., Ganguly, S., Mukherjee, S. K., Ghosh, P., Hazra, P., Singha Roy, A., Shaikh, A. R., Ali, S. S., Sadhukhan, S., Koley, M., Saha, S., & Saha, S. (2022). Efficacy of individualized homeopathic medicines in intervening with the progression of pre-hypertension to hypertension: A double-blind, randomized, placebo-controlled trial. Explore, 18(3), 279–286.
3) Kazemi, E., & Khodadadi, M. (2024). Effect of Crataegus oxyacantha on high blood pressure: A randomized single-blind controlled trial. Journal of Clinical Hypertension, 26(1), 45–52.
4) Szikora, Z., & Papp, Z. (2025). Hawthorn (Crataegus spp.) clinically significantly reduces blood pressure in hypertension: A meta-analysis of randomized placebo-controlled clinical trials. Phytotherapy Research, 39(4), 1125–1135.
5) Varanasi, R., & Kumar, S. (2020). Homoeopathic management of essential hypertension: A narrative review. International Journal of Homoeopathic Sciences, 4(2), 1–7.
6) Wang, J., & Zhang, Y. (2013). Effect of Crataegus usage in cardiovascular disease: A review of clinical trials. Journal of Clinical Medicine, 2(3), 123–130.
7) Walker, A. F., & Marakis, G. (2006). Hypotensive effects of hawthorn for patients with diabetes: A randomized controlled trial. British Journal of General Practice, 56(527), 437–438.