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COMPARATIVE PUBLIC HEALTH OUTCOMES OF HOMEOPATHIC AND CONVENTIONAL CARE FOR DIABETES-RELATED WOUNDS IN HYPERTENSIVE PATIENTS IN KARACHI, PAKISTAN

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Abstract

Diabetic wounds may develop from minor skin injuries and become difficult to heal in patients with diabetes and hypertension because of impaired immunity, sensation, vascular function, and tissue repair. Patients may use conventional or complementary approaches such as homeopathy, although evidence supporting homeopathy for diabetic wounds remains limited. To compare blood-pressure control, clinical wound improvement, pain reduction, treatment-related adverse effects, and patient satisfaction among hypertensive patients with diabetic wounds receiving homeopathic or allopathic treatment. A cross-sectional comparative study was conducted in private hospitals in Karachi over six months using purposive sampling. Of 100 participants, 40 received homeopathic treatment and 60 received allopathic treatment. Data were collected through a structured questionnaire covering clinical history, wound status, treatment, and patient-reported outcomes. Blood pressure was measured using a standardized sphygmomanometer. Data were analyzed using SPSS version 26. Chi-square tests and an independent-samples t-test were applied. Blood-pressure control was observed in 40.0% of the homeopathy group versus 66.7% of the allopathy group ($p=0.008$). Clinical improvement occurred in 52.5% versus 100.0% ($p<0.001$), while pain reduction was reported by 40.0% versus 65.0% ($p=0.014$), respectively. Adverse effects were reported by 0% of homeopathy participants compared with 61.7% receiving allopathy ($p<0.001$). Mean satisfaction was higher in the allopathy group (7.53±1.16 vs. 6.30±1.09; $p<0.001$). Allopathic treatment showed higher observed rates of blood-pressure control, wound improvement, pain reduction, and satisfaction, while homeopathy was associated with fewer reported adverse effects. Due to the non-randomized cross-sectional design, findings indicate associations rather than causation. Evidence-based management should remain central to diabetic wound and hypertension care.

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Volume 4 • Issue 4 • August 2026

INTRODUCTION

A wound on the foot of a person with diabetes is never simply a wound.

For an otherwise healthy person, a minor injury may trigger a familiar sequence: inflammation, formation of new tissue, blood-vessel growth, contraction of the wound and remodeling of tissue. In diabetes, that sequence can become disorganized. Neuropathy may prevent the patient from recognizing injury, vascular disease can reduce tissue perfusion, infection can interfere with repair, and persistent metabolic disturbance can prolong inflammation. The result is a wound that may remain open long after the original injury has been forgotten.

The World Health Organization recognizes diabetes as a major chronic disease that can damage the cardiovascular system, kidneys, eyes and nerves. Diabetes-related nerve damage and poor blood flow can contribute to foot ulcers and, in severe cases, amputation.

The challenge becomes greater when diabetes exists alongside hypertension. Hypertension is highly prevalent worldwide and is particularly important among people with diabetes because it contributes to cardiovascular and microvascular complications. WHO estimated that approximately 1.4 billion adults aged 30–79 years were living with hypertension in 2024. Current diabetes standards recommend careful blood-pressure assessment and individualized treatment among people with diabetes and hypertension.

Diabetic wounds therefore require more than the treatment of the visible lesion. They require attention to glucose control, blood pressure, vascular status, neuropathy, infection, mechanical pressure and wound-bed conditions. Contemporary guidelines emphasize multidisciplinary care and objective assessment of wound severity. Yet the patient's experience of chronic illness is not defined by clinical guidelines alone.

In Karachi, as in many other communities, people may move between conventional medicine and complementary approaches according to personal beliefs, previous experiences, accessibility, cost and perceptions of safety. Homeopathy remains one such approach. However, the scientific evidence surrounding homeopathy is controversial. The U.S. National Center for Complementary and Integrative Health reports that there is little evidence supporting homeopathy as an effective treatment for any specific health condition and cautions that some products labeled homeopathic may contain active ingredients capable of causing adverse effects or interactions.

This creates an important research question. Rather than beginning with the assumption that one system is superior, the present study examines what was observed among patients receiving the two approaches in a real-world Karachi setting.

2.1. Background

2.1.1. Diabetes Mellitus and Wound Healing

Diabetes mellitus is a chronic metabolic disorder characterized by persistent abnormalities in blood glucose regulation. Long-term diabetes can affect nerves, blood vessels, kidneys, eyes and other organs. Foot complications represent one of the most clinically significant consequences because neuropathy and peripheral arterial disease can combine with mechanical pressure and infection to produce ulcers.

The diabetic wound is biologically different from an uncomplicated acute wound. Hyperglycemia is associated with oxidative stress, impaired inflammatory regulation, abnormal angiogenesis and altered tissue remodeling. These abnormalities may prevent the wound from progressing normally through the stages of repair.

A diabetic wound may therefore become a cycle:

metabolic disturbance → neuropathy/vascular impairment → tissue injury → delayed healing → infection → further tissue damage.

Breaking this cycle requires early recognition and coordinated management.

JOURNAL FOR SOCIAL SCIENCE STUDIES
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ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 4 • August 2026

2.1.2. Hypertension and Diabetes

Hypertension is common among individuals with diabetes and represents an important cardiovascular and microvascular risk factor. The American Diabetes Association's 2026 Standards of Care define hypertension in people with diabetes using contemporary blood-pressure criteria and emphasize individualized treatment, regular measurement and appropriate pharmacological therapy.

The relationship between hypertension and diabetic wound healing is complex. Hypertension does not simply act as a single switch that turns healing on or off. Instead, it forms part of a broader vascular environment involving endothelial dysfunction, arterial disease, microvascular abnormalities and other cardiovascular risk factors.

Research on diabetic foot disease has identified hypertension, dyslipidemia and smoking among the pathological processes associated with vascular and microvascular disease.

For this reason, blood-pressure control is clinically relevant when assessing patients with diabetic wounds.

2.2. DIABETIC WOUNDS: A CLINICAL CHALLENGE

Diabetic foot ulcers are among the most difficult chronic wounds to manage. Earlier research estimated that foot ulcers affect a substantial proportion of people with diabetes during their lifetime and that persistent non-healing ulcers are strongly associated with infection, hospitalization and amputation.

Modern diabetic-foot care therefore does not depend upon a single medication.

The International Working Group on the Diabetic Foot recommends evidence-based wound management incorporating established aspects of multidisciplinary care. Its 2023 guideline emphasizes wound-bed preparation and appropriate interventions supported by evidence.

Similarly, NICE recommends assessment and documentation of ulcer size, depth and position and identifies offloading, infection control, ischemia management, debridement and wound dressings as components of standard diabetic-foot-ulcer care.

The American Diabetes Association's 2026 guidance also recommends comprehensive foot evaluation, including inspection, neurological assessment and vascular assessment. Individuals with open ulceration or concerning changes require appropriate specialist or multidisciplinary assessment.

These recommendations provide an important context for interpreting the present study.

2.3. Homeopathy and Allopathic Medicine

The word "allopathy" is commonly used in South Asian settings to describe conventional biomedical medicine. In this article, the term is retained because it corresponds to the terminology used in the original study; however, **conventional medicine** is the more appropriate scientific terminology.

Conventional management of a patient with diabetes, hypertension and a diabetic wound may involve several components: glucose-lowering therapy, antihypertensive medication, wound dressings, offloading, debridement, infection management and vascular intervention where required.

Homeopathy is a distinct complementary medical system based historically on principles including "like cures like" and highly diluted preparations. Many preparations are diluted to the point at which the original substance may no longer be measurable.

It is important not to equate homeopathy automatically with herbal medicine. Herbal medicine involves biologically active plant-derived substances, whereas homeopathic preparations follow a different system of preparation and dilution.

The distinction is particularly important in diabetic wounds. A patient with an infected or ischemic diabetic ulcer may require urgent conventional medical assessment.

Complementary treatment should therefore never delay appropriate treatment for infection, ischemia, uncontrolled diabetes or other potentially limb-threatening complications.

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Volume 4 • Issue 4 • August 2026

2.4. Research Gap

Although substantial literature exists on diabetic wound healing, fewer studies from Karachi have directly compared patients using different therapeutic approaches while simultaneously examining blood-pressure control, wound improvement, pain, adverse effects and patient satisfaction.

The literature also reveals an important methodological gap. Studies of diabetic wounds often involve heterogeneous populations, differing definitions of healing and varying treatment protocols. The 2023 IWGDF evidence review found that although evidence has improved, substantial uncertainty and heterogeneity remain, supporting the need for better-quality trials.

The present study contributes local observational data from Karachi and examines several outcomes within the same patient population.

2.5. Objectives

2.5.1 Primary Objective

To compare selected clinical and patient-reported outcomes among hypertensive patients with diabetic wounds receiving homeopathic or conventional allopathic treatment.

2.5.2. Secondary Objectives

1. To compare blood-pressure control between the two treatment groups.
2. To compare observed clinical wound improvement.
3. To compare reported pain reduction.
4. To compare treatment-related adverse effects.
5. To compare patient satisfaction.
6. To explore the potential influence of blood-pressure control and glycemic management on wound-related outcomes.
7. To generate locally relevant evidence for future prospective research in Karachi.

2.5.3. Hypotheses

H1

There is a significant association between treatment modality and blood-pressure control among hypertensive patients with diabetic wounds.

H2

There is a significant association between treatment modality and clinical wound improvement.

H3

There is a significant association between treatment modality and pain reduction.

H4

There is a significant association between treatment modality and reported treatment-related adverse effects.

H5

There is a significant difference in patient satisfaction between participants receiving homeopathic and conventional treatment.

Because this study is cross-sectional and non-randomized, these hypotheses should be interpreted as hypotheses concerning **associations**, not causal treatment effects.

2.5.4. Conceptual Framework

The original conceptual model described hypertension as a mediator. However, because all participants in the study were hypertensive, hypertension cannot be meaningfully tested as a mediator between treatment and outcome in the conventional statistical sense.

A more defensible conceptual framework is:

Treatment Modality
Homeopathic vs Conventional/Allopathic Treatment
↓
Blood-Pressure Control + Glycemic Control + Wound-Care Processes
↓
Wound-Related Outcomes
Clinical improvement | Pain reduction | Healing trajectory

The relationship may be influenced by:

- Age
- Duration of diabetes
- Duration of hypertension
- Baseline wound severity
- Peripheral neuropathy
- Peripheral arterial disease
- Infection

JOURNAL FOR SOCIAL SCIENCE STUDIES
An International Peer-Reviewed Open Access Journal
ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 4 • August 2026

- Glycemic status
- Treatment adherence
- Access to healthcare

This framework better reflects the multifactorial nature of diabetic wound healing.

2.5.5. Methods

1 Study Design

A cross-sectional descriptive comparative study was conducted.

2 Study Setting

The study was conducted in selected private hospitals and outpatient settings in Karachi, Pakistan.

3 Study Duration

The study was planned over a period of six months.

4 Study Population

The target population consisted of adult patients diagnosed with both diabetes mellitus and hypertension who had an active diabetic wound.

5 Sampling Technique

Non-probability purposive sampling was used.

6 Sample Size

The initial research plan proposed 126 participants, with 63 participants in each comparison group. During the actual data collection process, 126 individuals were approached. After application of eligibility criteria and participant willingness, 100 complete cases were available for final analysis. The final sample consisted of:

- **Homeopathy group:** 40 participants
- **Allopathy group:** 60 participants
- **Total:** 100 participants

The difference between the planned and final sample should be transparently reported rather than presented as though 126 participants were analyzed.

2.6. Inclusion Criteria

Participants were eligible if they:

1. Had diabetes mellitus.
2. Had a diagnosis of hypertension.
3. Had an active diabetic wound.
4. Were willing to participate.
5. Provided informed consent.

2.7. Exclusion Criteria

Participants were excluded if they:

1. Declined participation.
2. Had major additional conditions that substantially affected wound healing.
3. Were receiving multiple alternative therapies that prevented classification into a treatment group.
4. Had incomplete outcome information.

2.8. Data Collection Instrument

A structured questionnaire was developed around four domains:

Domain I: Clinical History

- Age
- Sex
- Duration of diabetes
- Duration of hypertension
- Relevant medical history
- Treatment history

Domain II: Wound Assessment

- Presence of active wound
- Wound size
- Tissue characteristics
- Exudate
- Signs of infection
- Clinical wound trajectory

Domain III: Treatment Details

- Treatment category
- Relevant medications or therapies
- Duration of treatment
- Reported treatment-related adverse effects

Domain IV: Patient-Reported Outcomes

- Pain reduction
- Satisfaction with treatment
- Perceived improvement

2.9. Blood Pressure Measurement

Blood pressure was measured after the participant had remained seated for approximately five minutes. Two readings were obtained with an interval between measurements, and the mean was used for analysis.

The study classified blood pressure as controlled when readings remained below 130/80 mmHg during the evaluation period.

JOURNAL FOR SOCIAL SCIENCE STUDIES
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ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 4 • August 2026

This threshold is consistent with the treatment goal used in contemporary diabetes guidance when safely attainable, although blood-pressure targets should ultimately be individualized.

2.10. Wound Assessment

Wound assessment included consideration of:

- Wound area
- Tissue characteristics
- Exudate
- Infection indicators
- Overall clinical improvement

Current guidelines emphasize objective documentation of diabetic-foot-ulcer size, depth and location and standardized assessment of severity.

2.11. Data Management

Data were entered into a pre-coded Microsoft Excel spreadsheet. Approximately 20% of records underwent double-entry verification. The anonymized dataset was subsequently imported into SPSS version 26 for analysis.

2.12. Statistical Analysis

Categorical variables were summarized using frequencies and percentages.

Associations between treatment group and categorical outcomes were assessed using Pearson's chi-square test. Fisher's exact test was considered where appropriate.

The independent-samples t-test was used to compare mean patient satisfaction scores between groups.

Statistical significance was established at:

$p < 0.05$.

3. Ethical Considerations

Participation was voluntary. Participants were informed about the purpose of the research and their right to decline participation. Informed consent was obtained.

Participant information was treated confidentially and personal identifiers were removed from the analytical dataset.

Ethical approval should be documented using the exact name and approval/reference number of the responsible institutional review board or ethics committee. If formal ethical approval was not obtained, the manuscript should not state that it was obtained.

3.1. Results

Participant Characteristics

A total of 100 complete cases were analyzed.

Characteristic	Homeopathy (n=40)	Allopathy (n=60)	Total (n=100)
Male	18 (45.0%)	32 (53.3%)	50 (50.0%)
Female	22 (55.0%)	28 (46.7%)	50 (50.0%)
Mean age ± SD	54.3 ± 9.7	56.1 ± 10.2	55.4 ± 10.0
Mean diabetes duration ± SD	8.6 ± 4.2	9.1 ± 4.8	8.9 ± 4.5
Mean hypertension duration ± SD	6.4 ± 3.1	7.2 ± 3.9	6.9 ± 3.6
Active diabetic wound	40 (100%)	60 (100%)	100 (100%)

The two groups were broadly comparable in age, sex distribution and duration of diabetes and hypertension, although formal baseline statistical testing would be required before claiming equivalence.

3.2. Blood-Pressure Control

Blood-pressure control differed significantly between the two treatment groups.

Treatment group	Controlled	Not controlled	Total
Homeopathy	16 (40.0%)	24 (60.0%)	40
Allopathy	40 (66.7%)	20 (33.3%)	60

JOURNAL FOR SOCIAL SCIENCE STUDIES
An International Peer-Reviewed Open Access Journal
ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 4 • August 2026

Total	**56 (56.0%)**	**44 (44.0%)**	**100**

χ^2 = 6.93, df = 1, p = 0.008

Blood-pressure control was observed more frequently among participants in the allopathy group. The difference was 26.7 percentage points.

This finding is consistent with the established role of pharmacological antihypertensive treatment in diabetes and hypertension. Contemporary diabetes standards recommend pharmacological treatment when indicated and emphasize individualized blood-pressure targets.

However, the present study cannot determine whether treatment modality itself caused the observed difference because treatment assignment was not randomized.

3.3. Clinical Improvement

Clinical improvement was observed in:

- 21 of 40 participants (52.5%) in the homeopathy group.
- 60 of 60 participants (100.0%) in the allopathy group.

Treatment group	Improved	Not improved	Total
Homeopathy	21 (52.5%)	19 (47.5%)	40
Allopathy	60 (100.0%)	0 (0.0%)	60
Total	**81 (81.0%)**	**19 (19.0%)**	**100**

χ^2 = 35.19, df = 1, p < 0.001

The association between treatment category and clinical improvement was statistically significant. The magnitude of the observed difference is substantial. Nevertheless, the finding requires cautious interpretation because the study did not randomly allocate participants to treatment, and the clinical-improvement definition was based on a composite clinical assessment rather than a standardized blinded measurement of wound-area reduction or complete epithelialization.

3.4. Pain Reduction

Pain reduction was reported by:

- 16 participants (40.0%) in the homeopathy group.
- 39 participants (65.0%) in the allopathy group.

Treatment group	Pain reduced	Pain not reduced	Total
Homeopathy	16 (40.0%)	24 (60.0%)	40
Allopathy	39 (65.0%)	21 (35.0%)	60
Total	**55 (55.0%)**	**45 (45.0%)**	**100**

χ^2 = 6.06, df = 1, p = 0.014

The observed difference was statistically significant.

Pain in diabetic wounds may have multiple components, including nociceptive pain caused by tissue injury and neuropathic pain associated with diabetic nerve damage. Therefore, pain should be interpreted alongside neuropathy, infection, and ischemia and wound severity rather than as a standalone marker of healing.

3.5. Treatment-Related Adverse Effects

Adverse effects represented the outcome in which the homeopathy group showed the more favorable observed profile.

No participant in the homeopathy group reported a treatment-related adverse effect,

JOURNAL FOR SOCIAL SCIENCE STUDIES
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Volume 4 • Issue 4 • August 2026

whereas 37 participants in the allopathy group reported at least one adverse effect

Treatment group	Side effects present	No side effects	Total
Homeopathy	0 (0.0%)	40 (100.0%)	40
Allopathy	37 (61.7%)	23 (38.3%)	60
Total	**37 (37.0%)**	**63 (63.0%)**	**100**

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$\chi^2 = 39.15$, df = 1, $p < 0.001$

This result should not be interpreted as evidence that homeopathic medicines are universally free from adverse effects. The NCCIH notes that some products labeled homeopathic can contain active ingredients and can cause adverse effects or drug interactions. The result may instead reflect differences in the therapies used, medication burden, reporting, exposure and the characteristics of the two groups.

3.6. Patient Satisfaction

Patient satisfaction was measured on a 0–10 scale.

Treatment group	n	Mean ± SD
Homeopathy	40	6.30 ± 1.09
Allopathy	60	7.53 ± 1.16

$t = -5.34$, df = 98, $p < 0.001$
Cohen's d = 1.091

The allopathy group reported higher mean satisfaction. The effect size was large according to conventional interpretation.

This result suggests that patient satisfaction in this sample was associated with perceived clinical benefit, including wound improvement, pain reduction and blood-pressure control. However, satisfaction is influenced by many factors, including communication, treatment expectations, cost, accessibility, cultural beliefs and previous experiences.

3.7. Overall Results

Outcome	Homeopathy	Allopathy	Statistical result
BP controlled	40.0%	66.7%	$\chi^2 = 6.93$, $p = 0.008$
Clinical improvement	52.5%	100.0%	$\chi^2 = 35.19$, $p < 0.001$
Pain reduction	40.0%	65.0%	$\chi^2 = 6.06$, $p = 0.014$
Side effects present	0.0%	61.7%	$\chi^2 = 39.15$, $p < 0.001$
Satisfaction mean ± SD	6.30 ± 1.09	7.53 ± 1.16	$t = -5.34$, $p < 0.001$

The overall pattern was remarkably consistent: conventional treatment was associated with higher observed clinical outcome measures, whereas the homeopathy group reported fewer adverse effects.

The results should therefore be understood as a comparison of observed outcomes, not as definitive proof of therapeutic superiority.

3.8. Discussion

The central story emerging from this study is not simply a contest between two medical systems. It is the story of a difficult disease occurring at the intersection of metabolism, vascular health, wound biology and patient choice. The participants were not merely choosing a tablet or a remedy. They were living with diabetes, hypertension and an open wound, a combination that can alter mobility, independence, sleep, finances and psychological well-being.

The present findings showed significantly higher observed blood-pressure control in the allopathy group. This finding is clinically

JOURNAL FOR SOCIAL SCIENCE STUDIES
An International Peer-Reviewed Open Access Journal
ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 4 • August 2026

plausible because conventional hypertension management includes therapies with established effects on blood pressure and cardiovascular risk. The 2026 ADA Standards emphasize pharmacological treatment for appropriately diagnosed hypertension among people with diabetes and recommend individualized blood-pressure targets.

The difference in clinical improvement was even larger. All participants in the allopathy group were classified as clinically improved compared with 52.5% in the homeopathy group. Such a large difference should not automatically be interpreted as proof that conventional treatment is universally effective or that homeopathy universally fails. Instead, it should prompt examination of the study design, baseline wound severity, treatment intensity, infection status, glycemic control, vascular status and other confounders.

This is particularly important because modern diabetic-wound care is multifactorial. Guidelines emphasize offloading, infection management, ischemia management, debridement and wound dressings rather than dependence on one intervention.

The observed difference in pain reduction also favored conventional treatment. Pain relief may have been influenced by differences in analgesic treatment, neuropathy management and wound status. Because pain was measured as a patient-reported outcome, psychological expectations and treatment beliefs may also have contributed.

The most striking finding in favor of the homeopathy group concerned adverse effects. None of the 40 participants in the homeopathy group reported treatment-related adverse effects, whereas 61.7% of the allopathy group did. At first glance, this appears straightforward. But clinical research rarely rewards simple conclusions.

The absence of reported adverse events does not establish that homeopathy is intrinsically safer. Product composition, treatment exposure, reporting practices and duration of follow-up all influence adverse-event estimates. The NCCIH specifically notes that some products marketed as homeopathic can contain measurable active ingredients and may cause adverse effects or interactions.

The satisfaction results offer another perspective. Despite the higher rate of reported adverse effects, the allopathy group had a higher satisfaction score. This may suggest that patients placed substantial value on tangible clinical improvement.

For a patient with an open wound, the priorities may be remarkably simple: less pain, less discharge, better mobility, a smaller wound and confidence that the condition is improving.

Safety matters, but effectiveness matters too.

5. Clinical Implications

The findings have several implications for clinical practice.

First, diabetic wounds should be approached as potentially complex medical conditions rather than ordinary skin lesions. Assessment of neuropathy, vascular status, infection and wound severity is essential. Current guidelines recommend systematic foot evaluation and appropriate specialist involvement for active diabetic-foot problems.

Second, blood-pressure management remains an important part of diabetes care. Hypertension should be actively identified and managed according to evidence-based recommendations.

Third, wound care should remain multidisciplinary. Contemporary evidence supports established wound-care principles and carefully selected adjunctive therapies rather than relying on unproven alternatives as substitutes for standard care.

Fourth, patient preferences should be respected while maintaining clinical safety. A patient who uses complementary medicine should be encouraged to disclose this to the treating healthcare team so that potential interactions, delays in care or contraindications can be identified.

5.1. Limitations

Several limitations should be considered.

1. Cross-Sectional Design

JOURNAL FOR SOCIAL SCIENCE STUDIES
An International Peer-Reviewed Open Access Journal
ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 4 • August 2026

The cross-sectional design identifies associations but cannot establish causality or demonstrate that treatment modality caused the observed outcomes.

2. Non-Randomized Treatment Groups

Participants were not randomly assigned to homeopathy or allopathy. Treatment choice may therefore have been associated with socioeconomic, cultural, clinical or behavioral characteristics.

3. Unequal Group Sizes

The final groups consisted of 40 homeopathy participants and 60 allopathy participants. This imbalance may influence statistical precision.

4. Purposive Sampling

Because purposive sampling was used, the findings cannot automatically be generalized to all hypertensive diabetic patients in Karachi or Pakistan.

5. Limited Objective Wound Measurements

The study did not provide serial photographic measurement, blinded wound-area measurement, HbA1c trajectories, inflammatory biomarkers or vascular measurements. These would strengthen future research.

6. Potential Reporting Bias

Pain, satisfaction and adverse effects were partly dependent on participant reporting and may therefore have been affected by recall or social-desirability bias.

7. Treatment Heterogeneity

"Homeopathy" and "allopathy" are broad categories rather than single standardized treatments. Different practitioners may have used different regimens, doses, durations and combinations.

8. Potential Confounding

Important variables such as baseline wound severity, HbA1c, peripheral arterial disease, neuropathy, infection grade, renal disease, smoking, and obesity and medication adherence were not fully incorporated into the reported analysis.

6. Recommendations

1. Prospective Randomized Studies

Future research should use randomized controlled designs where ethically and clinically appropriate. Participants should receive clearly defined treatment protocols.

2. Larger Samples

Future studies should recruit substantially larger samples from multiple hospitals across Karachi and other regions of Pakistan.

3. Standardized Wound Assessment

Researchers should use validated systems such as SINBAD or other internationally recognized wound-classification approaches. NICE specifically recommends standardized documentation of diabetic-foot-ulcer severity.

4. Objective Outcomes

Future studies should measure:

- Wound area in cm^2
- Percentage wound closure
- Time to complete epithelialization
- HbA1c
- Fasting glucose
- Blood pressure
- Peripheral pulses
- Ankle-brachial index or other vascular assessment where appropriate
- Infection status
- Hospitalization
- Amputation
- Recurrence

5. Longer Follow-Up

A longer follow-up period would provide more meaningful information about complete healing, recurrence and long-term complications.

6. Treatment Standardization

The exact homeopathic preparations and conventional treatments should be recorded so that future studies compare reproducible interventions.

7. Patient Education

Patients should be educated that complementary treatment should not delay urgent treatment for infected, ischemic or rapidly deteriorating diabetic wounds.

8. Health-Economic Evaluation

Future studies should compare:

- Direct treatment costs
- Medication costs
- Dressing costs

JOURNAL FOR SOCIAL SCIENCE STUDIES
An International Peer-Reviewed Open Access Journal
ISSN (Online): 3006-2071 | ISSN (Print): 3006-2063
Volume 4 • Issue 4 • August 2026

- Hospital admissions
- Travel expenses
- Lost working days
- Out-of-pocket expenditure
- Cost per successfully healed wound

7. Future Research Direction

The next generation of research should move beyond the simple question:

"Which treatment is better?"

A more useful question may be:

"For which patient, with which wound, under which circumstances, and with which combination of evidence-based interventions, can the best outcome be achieved?"

Future research could develop a multicenter Pakistani registry of diabetic wounds, allowing investigators to examine how diabetes duration, blood pressure, glycemic control, vascular disease, wound severity, treatment adherence and socioeconomic factors interact.

Randomized trials of complementary therapies could also be conducted, but only with appropriate ethical safeguards and without withholding proven standard care from patients who require it.

The 2023 IWGDF guideline itself emphasizes the need for better-quality trials and stronger health-economic evidence in diabetic wound-healing interventions.

8. Conclusion

A diabetic wound can begin with something deceptively small. A blister. A pressure point. A cut. A wound that refuses to close.

When diabetes and hypertension coexist, that small wound can become a much larger clinical challenge.

This study compared 100 hypertensive patients with diabetic wounds who were categorized according to homeopathic or conventional allopathic treatment. The findings showed statistically significant differences across all five measured outcomes.

Participants in the allopathy group had higher observed rates of blood-pressure control, clinical improvement and pain reduction. They also reported higher satisfaction with treatment. Conversely, the homeopathy group reported fewer treatment-related adverse effects.

The results therefore present a nuanced picture. Conventional treatment was associated with stronger observed clinical outcomes in this dataset, while the homeopathy group had a more favorable reported adverse-effect profile.

However, these findings should not be transformed into a claim that one medical system is universally superior. The study was cross-sectional, non-randomized, based on purposive sampling and included relatively small and unequal treatment groups. Consequently, causal conclusions cannot be drawn.

The most important clinical message is one of safety and evidence.

Patients with diabetic wounds require appropriate assessment and evidence-based wound care. Diabetes, blood pressure, vascular status, infection, neuropathy and wound severity all need attention. Contemporary guidelines support multidisciplinary management rather than reliance on an isolated treatment modality.

Homeopathy may continue to be used by some patients because of personal preference, cultural beliefs or perceived tolerability. However, current evidence does not establish homeopathy as an effective substitute for evidence-based management of diabetic wounds.

For Karachi and Pakistan, the next step is not simply to choose sides. It is to produce stronger evidence. Better-designed studies, larger samples, standardized treatments, objective wound measurements and longer follow-up can provide a clearer answer.

Ultimately, the patient should remain at the center of the discussion.

The wound needs to heal.

The blood pressure needs to be controlled.

The infection needs to be recognized early.

The patient's safety needs to come first.

And every treatment—conventional or complementary—should be judged by the quality of evidence supporting it.

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Volume 4 • Issue 4 • August 2026

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