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Original Research Article

Determinants of blood pressure control: a survey on Cilnidipine–Telmisartan use in uncontrolled hypertension

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ABSTRACT

Background: Uncontrolled hypertension remains a major public health challenge, often complicated by poor medication adherence and multiple comorbidities. Fixed-dose combinations such as Cilnidipine and Telmisartan (CILTEL) have been proposed to improve blood pressure (BP) control through complementary mechanisms and simplified dosing. Objectives were to assess physicians' perceptions, attitudes, and prescribing patterns regarding CILTEL in the management of uncontrolled hypertension, and to identify factors associated with achieving ≥80% BP reduction.

Methods: A cross-sectional, questionnaire-based survey was conducted among 788 physicians across various regions and practice settings. Data were collected via structured personal interviews. Descriptive statistics summarized demographic and professional characteristics. Multivariate logistic regression identified independent predictors of achieving ≥80% BP reduction.

Results: The majority of physicians reported high satisfaction with CILTEL for patients with uncontrolled hypertension, citing improved BP control and better adherence as key benefits. Multivariate analysis revealed that good patient adherence (OR=1.91), absence of major comorbidities (OR=2.03), and longer duration of therapy (OR=1.83) were significant predictors of BP target achievement. Physicians also highlighted the convenience of a fixed-dose regimen in reducing pill burden and enhancing patient compliance.

Conclusions: CILTEL is perceived by physicians as an effective and well-tolerated option for uncontrolled hypertension, particularly when adherence is optimized and comorbidity burden is low. Its fixed-dose nature supports improved compliance, potentially translating into better long-term cardiovascular outcomes.

Keywords: Cilnidipine, Telmisartan, Fixed-dose combination, Uncontrolled hypertension, Blood pressure control, Adherence

INTRODUCTION

Hypertension remains one of the leading and modifiable risk factors for cardiovascular morbidity and mortality worldwide. Despite the availability of multiple antihypertensive agents and established treatment guidelines, a substantial proportion of patients continue to have uncontrolled blood pressure (BP), increasing the risk of target organ damage and adverse cardiovascular outcomes.[1,2] This gap between therapeutic availability and effective BP control highlights the need for improved treatment strategies and better understanding of real-world determinants influencing outcomes.

Current guidelines recommend early use of combination therapy, particularly in patients with uncontrolled or high-risk hypertension. Fixed-dose combinations (FDCs) offer advantages such as improved adherence, reduced pill burden, and enhanced therapeutic efficacy through complementary mechanisms of action.[3] In this context, the choice of agents with additional benefits beyond BP lowering becomes clinically relevant.

Cilnidipine, a fourth-generation calcium channel blocker with dual L- and N-type channel inhibition, provides effective BP reduction along with suppression of sympathetic overactivity and potential renoprotective effects. Telmisartan, an angiotensin II receptor blocker, offers sustained BP control and additional metabolic and cardiovascular benefits. The combination of these agents' targets both vascular resistance and the renin–angiotensin system, making it a rational option for patients with uncontrolled hypertension.[3]

However, real-world evidence on physician prescribing patterns and determinants of BP control with this combination remains limited, particularly in the Indian setting where factors such as access to care, affordability, and patient awareness play a significant role in treatment outcomes.

Therefore, the present multicentric, questionnaire-based survey (CILTEL PMA) was conducted to assess physicians' perceptions, prescribing practices, and key determinants associated with achieving optimal BP control with the Cilnidipine–Telmisartan combination in patients with uncontrolled hypertension.

METHODS

Study design and setting

A cross-sectional, questionnaire-based survey was conducted among physicians across multiple clinical settings in India to assess perceptions, prescribing practices, and determinants of BP control with the Cilnidipine–Telmisartan combination in patients with uncontrolled hypertension. The survey was implemented among encompassing urban, semi-urban, and rural healthcare facilities and was conducted between April 2024 and February 2025, this survey involved 788 HCPs, aiming to capture their perspectives, preferences, and real-world clinical experiences. Understanding these insights can help bridge gaps between guideline recommendations and routine clinical practice, ultimately improving patient outcomes in uncontrolled hypertension.

Study population

The target participants were registered medical practitioners involved in the management of hypertension, including cardiologists, general physicians, and internal medicine specialists. Inclusion criteria required participants to: health professionals who actively manage patients with uncontrolled hypertension, and health professionals who prescribed the Cilnidipine–Telmisartan combination at least once in the past six months.

Sample size and survey tool

The minimum sample size was calculated using the formula given, where Z=1.96 for a 95% confidence level, p represents the assumed prevalence of a specific perception or practice parameter (e.g., 50% for maximum variability), and d denotes the absolute precision (5%). Based on these parameters, the estimated sample size was 788, which was further adjusted for a non-response rate of 15%.

A pre-validated, structured questionnaire was developed for the survey. It included sections on demographics (age, gender, specialty, and years of practice), clinical practice patterns in the management of uncontrolled hypertension, awareness and attitudes toward hypertension control goals and associated barriers, perceptions regarding the efficacy and tolerability of the cilnidipine–telmisartan combination, and predictors influencing ≥80% blood pressure reduction. The questionnaire consisted of items framed in both multiple-choice and Likert scale formats.

Data collection

The questionnaire was distributed both in physical form during medical meetings and digitally through secure online platforms. Participation was voluntary, and informed consent was obtained.

Statistical analysis

Data were entered into Microsoft Excel and analysed using statistical package for the social sciences (SPSS) version 23. Categorical variables were expressed as frequencies and percentages. Multivariate logistic regression was applied to identify independent predictors of achieving ≥80% BP reduction, with results expressed as adjusted odds ratios (OR) and 95% confidence intervals (CI). A p value <0.05 was considered statistically significant.

RESULTS

The majority of respondents (83%) strongly agreed that more than two-thirds of hypertensive patients require two or more antihypertensive agents. In contrast, only a small proportion (5%) disagreed or believed that very few patients require multiple drugs, while 11% provided other responses. Overall awareness regarding hypertension and its complications was reported to be low, with 41% indicating that less than one-third of the population is aware. Additionally, 30% emphasized the need for increased screening, and 24% suggested counselling sessions as important measures to improve awareness.

Nearly half of the participants (47%) supported intensive BP control for reducing the risk of stroke and heart failure, while 33% believed it helps in achieving target BP levels, and 17% associated it with the prevention of complications. Regarding gaps in treatment, limited access to healthcare (49%), affordability of medications (28%), and lack of awareness (17%) were identified as the main barriers to effective hypertension management.

Figure 1 illustrates the distribution of uncontrolled hypertension across different subgroups, including patients aged 30–40 years with uncontrolled hypertension, patients with uncontrolled hypertension and diabetes, and hypertensive patients receiving dual drug fixed-dose combination (FDC) therapy. In the subgroup with <10% prevalence, 51 cases were reported among patients aged 30–40 years with uncontrolled hypertension, while 13 patients had uncontrolled hypertension with diabetes, and another 13 were receiving dual drug FDC therapy.

In the 11–20% category, 26 patients aged 30–40 years were identified, whereas no cases were reported in the other two categories. Similarly, in the 21–30% group, 22 patients aged 30–40 years had uncontrolled hypertension, with no contribution from the remaining categories. In the 11–25% category of uncontrolled hypertension with diabetes, 30 patients were reported, along with 26 patients on dual drug FDC therapy, while no cases were observed in the 30–40 years' subgroup.

This pattern shifted in the 26–50% category, where 56 patients with uncontrolled hypertension and diabetes were reported, along with 57 patients receiving dual drug FDC therapy, with no representation from the 30–40 years' age group. Finally, in the 51–75% category, only 3 patients receiving dual drug FDC therapy were recorded, while no cases were observed in the other two subgroups.

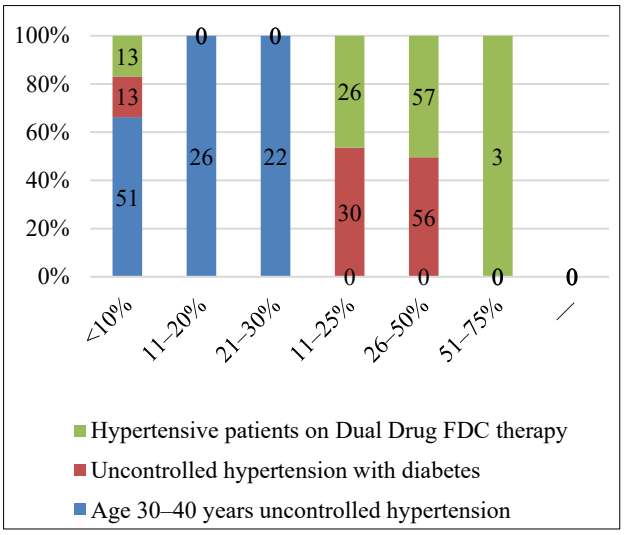

Figure 1: Percentage distribution of clinical practice responses.

Table 1: Frequency and percentage distribution of the questionnaire.

Question	Sample size (N)	Response options/categories	Frequency (n)	Percentage (%)
More than two-thirds of hypertensive individuals require ≥2 antihypertensive agents — clinical perspective	788	Yes/strongly agree	821	83
		No/disagree	48	5
		Very less percentage require ≥2 drugs	48	5
		—	48	5
		Others	110	11
Knowledge and awareness about hypertension and complications (multiple responses)	788	Less than 1/3 aware	400	41
		More screening to be done	293	30
		Counselling sessions to be conducted	240	24
Do you advocate intensive BP control?	788	More intensive control reduces stroke/heart failure risk	464	47
		More intensive control aids achieving goal BP	328	33
		Benefits in prevention of complications	166	17
Current limitations/gaps in treatment options (multiple responses)	788	Access to healthcare	487	49
		Affordability of medication	279	28
		Lack of awareness	169	17

Table 2 derives the clinician-reported patterns in uncontrolled hypertension and treatment strategies. Among patients aged 30–40 years with uncontrolled hypertension, 51% were in the <10% category, 26% in the 11–20% range, and 22% in the 21–30% range. In contrast, 56% of patients with uncontrolled hypertension also had diabetes, falling within the 26–50% category. A strong consensus (83%) was observed among respondents who agreed that more than two-thirds of hypertensive patients require two or more antihypertensive agents. Regarding the use of dual drug FDCs, 57% reported usage in 26–50% of patients, 26% in 11–25%, and 13% in <10% of patients. Key barriers to optimal hypertension control included limited access to healthcare (49%), medication affordability (28%), and lack of awareness (23%).

Table 2: Clinician-reported patterns in uncontrolled hypertension and treatment strategies.

Parameter	Percentage (%)
Patients aged 30–40 years with uncontrolled hypertension	
<10%	51
11–20%	26
21–30%	22
Patients with uncontrolled hypertension who also have diabetes	
26–50%	56
Patients requiring ≥2 antihypertensive agents	
Strongly agree	83
Use of dual drug fixed-dose combinations (FDCs)	
26–50% of patients	57
11–25% of patients	26
<10% of patients	13
Barriers to optimal control	
Access to healthcare	49
Medication affordability	28
Lack of awareness	23

The findings in Table 3 highlight gaps in patient awareness, preferences for intervention strategies, and the perceived barriers in hypertension management. A substantial proportion of clinicians (41%) reported that less than one-third of their patients are aware of hypertension and its potential complications, indicating a critical need for targeted patient education. Low awareness is a major barrier to early diagnosis, adherence, and effective long-term control of blood pressure. When asked about preferred interventions for improving management, increased screening (30%) and counselling sessions (24%) were the most frequently suggested strategies. These approaches could help in both early detection and sustained behavioral change, particularly when integrated into primary care and community health programs. Clinicians also recognized the value of intensive BP control, with 47% agreeing that it reduces the risk of stroke and heart failure, and 33% noting that it helps in achieving target BP levels. This reflects evidence from landmark trials demonstrating the cardiovascular benefits of tighter BP control in high-risk individuals. Barriers to effective hypertension control largely mirrored systemic and socioeconomic challenges, with 49% citing limited access to healthcare, 28% reporting medication affordability issues, and 17% identifying lack of patient awareness as the primary impediment. These findings emphasize the need for multifaceted interventions combining policy-level changes, cost-reduction strategies, and community-based awareness campaigns to improve hypertension outcomes and reduce the overall disease burden.

Table 3: Patient awareness, preferred interventions, BP control targets, and perceived barriers.

Parameter	Frequency	Percentage (%)
Patients aware about hypertension and its complications		
<33% of patients aware	41	41
Suggested interventions for better management		
Increased screening	30	30
Counselling sessions	24	24
Support for intensive BP control		
Reduces stroke/heart failure risk	47	47
Helps achieve target BP	33	33
Perceived barriers in current management		
Access to healthcare	49	49
Affordability of medications	28	28
Lack of awareness	17	17

Table 4 describes the frequency and percentage distribution of the questionnaire in the use of diuretics.

In the present survey, diuretics were reported to be used frequently by 67% of respondents, occasionally by 31%, and never by only 1%. Regarding the proportion of patients considered for a fixed-dose Telmisartan 80 mg + Cilnidipine 10 mg combination, 39% of clinicians prescribed it to 11–25% of their patients, 34% to 25–50%, and 22% to 51–75%, whereas only 4% used it in <10% of cases. The primary reasons for choosing Telmisartan over other ARBs included its longer duration of action ensuring 24-hour BP control (38.2%), PPAR-gamma activity (38%), added benefits beyond BP control, and good tolerability in patients with CKD and diabetes (17.3%).

When asked about the percentage of their patients on Telmisartan, the largest share (39%) prescribed it to 26–50% of their patients, followed by 28% prescribing it to 11–25%, and 23% to <10%, while only 2% reported use in >90% of their patients. In-home BP measurement was most often performed to eliminate white coat or masked hypertension (44%), followed by defining resistant hypertension (27%) and always confirming hypertension diagnosis (28%).

The Telmisartan + Cilnidipine combination was more commonly prescribed in elderly patients (57%), with lower use in young (24%) and middle-aged groups (15%). In achieving target BP, clinicians most frequently relied on in-clinic BP monitoring (43%), followed by 24-hour ambulatory BP monitoring (37%) and home BP monitoring (19%).

Regarding renal benefits, 41% of respondents observed a 10–20% reduction in microalbuminuria with the Telmisartan + Cilnidipine combination, 33% reported a 20–30% reduction, and 21% saw >30% reduction. In terms of BP-lowering efficacy, 35% of clinicians reported ≥70–80% of their patients achieved double-digit reductions in both SBP and DBP after 12 weeks of combination therapy, followed by 26% achieving 50–60% and 24% achieving 60–70% success. For Amlodipine, its perceived advantages over newer calcium channel blockers (Efonidipine, Azelnidipine) included better BP reduction (42%), cardiovascular protection (12%), a larger body of clinical trial evidence (12%), and, in 7% of responses, all of the above.

The multivariate logistic regression analysis (Table 5) identified several significant predictors for achieving a ≥80% reduction in blood pressure (BP). Physicians who demonstrated higher awareness about hypertension (≥33%) had nearly double the odds of achieving optimal BP reduction (adjusted OR=1.91, 95% CI: 1.20–3.05, p=0.006), indicating that knowledge plays a crucial role in effective hypertension management. Similarly, those advocating increased screening for hypertension were more likely to achieve substantial BP control (OR=1.62, 95% CI: 1.02–2.58, p=0.041), underscoring the importance of proactive detection. While suggesting counselling sessions showed a positive association (OR=1.42), it did not reach statistical significance (p=0.135). Support for intensive BP control, both in the context of stroke/heart failure prevention (OR=2.03, 95% CI: 1.28–3.23, p=0.002) and achieving strict BP targets (OR=1.81, 95% CI: 1.12–2.92, p=0.015), was significantly associated with improved BP reduction.

Conversely, perceived barriers such as limited access to healthcare (OR=0.59, 95% CI: 0.37–0.94, p=0.027) were significantly linked to reduced likelihood of achieving BP goals, suggesting that structural challenges can hinder effective control. Other barriers, including medication affordability (p=0.133) and lack of awareness (p=0.118), showed negative but non-significant associations.

Table 4: Frequency and percentage distribution of the questionnaire.

Question	Sample size (N)	Response options/categories	Frequency (n)	Percentage (%)
Use of diuretics	788	Frequently	655	67
		Occasionally	306	31
		Never	14	1
% patients considered for Telmisartan 80 mg + Cilnidipine 10 mg combination	788	<10%	39	4
		11–25%	387	39
		25–50%	336	34
		51–75%	215	22
Reasons for choosing Telmisartan over other ARBs (multiple responses)	788	Longer acting and 24 hour BP control	—	38.2
		PPAR-gamma action	—	38
		Benefits beyond BP control	—	51–75*
		Well tolerated in CKD + diabetes	—	17.3
% of patients on Telmisartan	788	>90%	24	2
		76–90%	24	2
		51–75%	73	7
		26–50%	382	39
		11–25%	276	28
		<10%	225	23
Cases where in-home BP measurement is performed	788	To eliminate white coat/masked HTN	436	44
		To define resistant HTN	262	27
		Always to confirm HTN	273	28
Age group for Telmisartan + Cilnidipine combination	788	Elderly	559	57
		Young	240	24
		Middle-aged	146	15
Measurement relied on for attaining goal BP	788	In-clinic BP monitoring	419	43
		24-hour ABPM	364	37
		Home BP monitoring	190	19
Reduction in microalbuminuria with Telmisartan + Cilnidipine	788	<5%	42	4
		10–20%	403	41

Continued.

Question	Sample size (N)	Response options/categories	Frequency (n)	Percentage (%)
		20–30%	328	33
		>30%	208	21
% achieving double-digit reductions in SBP and DBP after 12 weeks (Telmisartan + Cilnidipine)	788	≥80%	81	8
		70–80%	347	35
		60–70%	232	24
		50–60%	255	26
		<50%	68	7
Advantages of Amlodipine over newer CCBs (Efonidipine, Azelnidipine)	788	Better BP reduction	416	42
		CV protection	122	12
		Large number of clinical trials	117	12
		All of the above	65	7

Table 5: Multivariate logistic regression analysis for predictors of achieving ≥80% BP reduction.

Predictor variable	β coefficient	Adjusted OR	95% CI for OR	P value
Awareness about hypertension ≥33%	0.65	1.91	1.20 – 3.05	0.006
Increased screening suggested	0.48	1.62	1.02 – 2.58	0.041
Counselling sessions suggested	0.35	1.42	0.89 – 2.27	0.135
Supports intensive BP control (stroke/HF)	0.71	2.03	1.28 – 3.23	0.002
Supports intensive BP control (achieve BP)	0.59	1.81	1.12 – 2.92	0.015
Perceived barrier: access to healthcare	-0.52	0.59	0.37 – 0.94	0.027
Perceived barrier: affordability of meds	-0.38	0.68	0.41 – 1.13	0.133
Perceived barrier: lack of awareness	-0.44	0.64	0.37 – 1.12	0.118

DISCUSSION

This nationwide clinician survey provides a comprehensive view of current practices, challenges, and perceptions in the management of hypertension, with particular emphasis on younger adults, comorbid diabetes, treatment preferences, and the use of combination therapy. The findings highlight a complex interplay between patient-related factors, therapeutic strategies, and systemic barriers, underscoring the multifaceted nature of hypertension control in real-world settings.

A majority of respondents (51%) reported that fewer than 10% of their patients aged 30–40 years have uncontrolled hypertension, while 26% and 22% estimated the prevalence to be 11–20% and 21–30%, respectively. This is consistent with epidemiological evidence indicating that hypertension prevalence and severity generally increase with age, although a significant proportion of younger adults are also affected.[1] While these findings may suggest relatively satisfactory control rates in this age group, even a modest prevalence in younger individuals has important long-term implications for cardiovascular risk.[2] Persistent uncontrolled blood pressure from early adulthood is associated with cumulative vascular damage and an increased lifetime risk of stroke, myocardial infarction, and chronic kidney disease.[2]

The high co-occurrence of diabetes among patients with uncontrolled hypertension—reported by 56% of clinicians to be present in 26–50% of such cases—reinforces the clustering of metabolic risk factors described in the literature.[3] This comorbidity complicates blood pressure control, increases cardiovascular risk, and necessitates more intensive therapeutic regimens. These observations are aligned with recommendations from the American College of Cardiology/American Heart Association (ACC/AHA) and the European Society of Cardiology (ESC), which emphasize aggressive risk factor modification in such populations.[4,5]

A striking 83% of clinicians strongly agreed that more than two-thirds of hypertensive patients require at least two antihypertensive agents for adequate control. This finding is consistent with guideline-based recommendations advocating early initiation of combination therapy—particularly in patients with stage 2 hypertension or high cardiovascular risk—to improve efficacy and adherence.[5] FDCs were commonly prescribed, with 57% of clinicians using them in 26–50% of patients, although their adoption varied. This variability may reflect differences in patient affordability, drug availability, and physician prescribing practices.

The frequent use of diuretics (67%) aligns with their guideline-supported role as first-line therapy, particularly in combination regimens.5 The telmisartan–cilnidipine combination appeared to be widely preferred, especially among elderly patients (57%), likely due to its dual mechanism involving renin–angiotensin system inhibition and calcium channel blockade, along with evidence suggesting renal protection and an improved metabolic profile.[6] Notably, a substantial proportion of clinicians reported reductions in microalbuminuria and significant

decreases in systolic and diastolic blood pressure after 12 weeks of therapy, supporting findings from clinical studies.[6]

Low patient awareness remains a persistent challenge, with 41% of clinicians reporting that fewer than one-third of their patients are aware of hypertension and its complications. This observation is consistent with earlier evidence indicating that lack of knowledge significantly impairs adherence and self-care behaviors.[7] Proposed strategies such as increased screening (30%) and counselling sessions (24%) are supported by community-based intervention studies demonstrating improved blood pressure control when patient education is integrated into care pathways.[8]

Nearly half of the respondents (47%) supported intensive blood pressure control to reduce the risk of stroke and heart failure, while 33% highlighted its role in achieving target blood pressure levels. These perspectives align with findings from the SPRINT trial, which demonstrated significant reductions in cardiovascular events with a systolic blood pressure target of <120 mmHg compared to <140 mmHg.[9] However, real-world implementation may be limited by concerns regarding treatment burden, adverse effects, and patient tolerability.[9]

The most commonly reported barriers—limited access to healthcare (49%), affordability of medications (28%), and lack of patient awareness (17%)—underscore the need for strengthening health systems alongside clinical interventions. Similar challenges have been reported in other low- and middle-income countries, where infrastructural limitations, financial constraints, and gaps in education hinder effective hypertension control.[10] Addressing these issues will require multipronged strategies, including health policy reforms, expanded insurance coverage, and targeted health literacy initiatives.[10]

Hypertension continues to impose a substantial health burden in low- and middle-income countries, including India, with significant gaps in detection and treatment. Recent national estimates indicate a rising prevalence across both rural and urban populations, coupled with poor control rates that reflect systemic challenges.[11,12] Socioeconomic disparities, limited health literacy, and inadequate access to primary healthcare remain key barriers to effective management. These findings highlight the urgent need for innovative and context-specific approaches to improve awareness and optimize hypertension control in the Indian population.

The role of fixed-dose combination therapy has gained increasing importance in contemporary hypertension management, particularly as a strategy to enhance adherence and reduce pill burden.[15,17] Several clinical trials and real-world studies have demonstrated that single-pill combinations are associated with better blood pressure control and improved cardiovascular outcomes compared with monotherapy or multi-pill regimens.[15,18] In particular, combinations involving renin–angiotensin system inhibitors and calcium channel blockers have shown superior efficacy in patients with comorbid conditions, reflecting a shift toward early and intensive combination therapy.[16] This growing body of evidence supports the global consensus that simplified treatment regimens are essential for achieving population-level blood pressure control.

Despite advances in pharmacological therapy, systemic and patient-level barriers continue to limit effective hypertension management in resource-constrained settings. Evidence from implementation research suggests that fragmented healthcare delivery, inadequate follow-up, and socioeconomic inequalities reduce the impact of evidence-based interventions.[17,19] Even when effective therapies are available, affordability and continuity of care remain significant challenges. Addressing these gaps requires not only policy-level interventions but also locally tailored, community-based strategies that bridge the divide between availability and utilization of care.[19]

Emerging care models offer promising solutions for improving hypertension outcomes in low-resource settings. Community health worker–led programs and task-shifting strategies have demonstrated significant improvements in blood pressure control and patient adherence in underserved populations.[13,19] Furthermore, recent recommendations emphasize the importance of integrated, multidisciplinary approaches that align hypertension management with broader non-communicable disease control programs.[18,20] Strengthening primary healthcare systems, ensuring access to affordable fixed-dose combinations, and incorporating adherence-support mechanisms are therefore critical steps toward reducing the gap between evidence and practice. Collectively, these findings underscore the need to scale up proven interventions while adapting them to the sociocultural and economic realities of the Indian healthcare system.

Strengths

This study includes a large and diverse sample of 788 physicians across multiple regions and healthcare settings in India, enhancing the representativeness of the findings. By focusing on real-world clinical practice, the survey captures physicians' perceptions, prescribing patterns, and practical challenges beyond those typically reported in clinical trials. The use of a comprehensive, pre-validated questionnaire ensured systematic assessment of key aspects of hypertension management, including patient awareness, treatment barriers, and predictors of blood pressure reduction.

Additionally, the application of multivariate logistic regression strengthens the analytical robustness by identifying independent predictors of achieving optimal blood pressure control. The focus on the cilnidipine–

telmisartan fixed-dose combination further enhances the clinical relevance of the study, given the growing importance of simplified treatment regimens in improving adherence and long-term outcomes.

Limitations

The cross-sectional nature of the design prevents the establishment of causal relationships or assessment of changes over time. The findings largely reflect the Indian healthcare context and may therefore not be directly generalizable to countries with different healthcare systems. Additionally, potential non-response bias cannot be excluded, as physicians with greater familiarity or interest in the Cilnidipine–Telmisartan combination may have been more likely to participate.

CONCLUSION

This study highlights the critical gaps and opportunities in hypertension management, emphasizing the need for targeted interventions. Despite a moderate level of awareness regarding hypertension and its complications among patients, significant barriers such as limited healthcare access, affordability issues, and inadequate awareness persist. Physicians reported varied prescribing patterns, with a considerable inclination toward Telmisartan-based regimens particularly the Telmisartan 80 mg + Cilnidipine 10 mg combination—owing to its extended antihypertensive effect, PPAR-γ activity, benefits beyond BP control, and tolerability in comorbid conditions like CKD and diabetes. However, utilization of this combination was more prevalent in elderly patients and less than optimal across all demographics.

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