Original Article

Expert Perspectives on Metabolic Disease: An Indian Study (ESMD)

Sanjay Sharma [1], Pavan Anil Roy [2], Tafiq Johan Pandit [3], Srikanth K. V[4], K. Chandrasekaran [5], Avvaru Guru Prakash [6], Manula S [7]., Krishna Kumar M [7]

Corresponding author:
Dr. Manjula S.
Senior VP-
Department of Medical Services,
Micro Labs Limited,
31, Race Course Road,
Bangalore 560 001
Tel No: (080) 22370451/57
Email: drmanjulas@gmail.com

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ABSTRACT

One of the frequent, controllable risk factors for cardiovascular diseases (CVD), stroke, and renal failure is hypertension. It is one of the most significant clinical conditions that can be addressed with medication and lifestyle changes.[2] Pharmacotherapy for the treatment of hypertension includes benefits such as lowering blood pressure and preventing cardiovascular morbidity. The purpose of this study was to examine the management of hypertension experiences shared by consultant doctors. The goal of this study was to examine consultant doctors' knowledge of demographics, related comorbidities, adherence to treatment, and management of diverse forms of hypertension.

KEY WORDS: Hypertension, Comorbidities, management and Treatment

INTRODUCTION

Hypertension is one of the common preventable and manageable risk factors for cardiovascular diseases (CVD), stroke and renal failure.[1] It is one of a most important clinical conditions that can be treated by pharmacological and modification of lifestyle.[2] Management of hypertension by pharmacotherapy has advantages such as reduction in blood pressure and protection from cardiovascular morbidity.[3]

Modifications in the lifestyle measures for controlling hypertension include weight control, regular exercise, salt restricted diet and alcohol consumption.[4] amongst the first line antihypertensive drugs armamentarium available for control of hypertension includes agents acting on renin–angiotensin aldosterone axis (RAAS) which include ACE inhibitors and ARB, diuretics, β-blockers and calcium channel blockers.[5]

The main goal of antihypertensive therapy is to prevent morbidity and mortality linked with hypertension. There is dramatically increase prevalence of hypertension since last three decades hence proper selection of antihypertensive drug therapy is an important factor.[6]

Joint National Committee (JNC) guidelines are circulated widely in the health care system at all the levels, still there are discrepancies in prescribing practices and recommendations as per guidelines. It is observed that these discrepancies are a worldwide problem of the healthcare delivery system.[7] As per the widespread community based studies, globally there is inadequate control or treatment of hypertension.[8]

The important factor that can help to have a adequate control of hypertension will be to educate the general practitioners (GPs) and family physicians about updated guidelines for hypertensions. The GPs and family physicians should be provided with blood pressure targets and choices for monotherapy, combination therapy and switches of drugs.[9,10]

Hence this study was conducted with the aim to analyze the experience shared by consultant physicians towards management of hypertension.

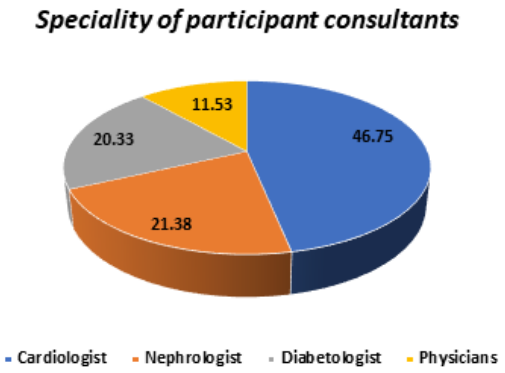
The objectives of this study were to analyze the experience of consultant physicians about demography, associated comorbidities, adherence to therapy and management of various types of hypertensions.

MATERIAL AND METHODS

This was a questionnaire based observational study involving 477 experienced consultant physicians belonging to various areas of Karnataka state. The ethics committee approval was taken before initiating the study.

The questionnaire was validated, pretested, and included sections containing items pertaining to sociodemographic details, clinical correlates, types of hypertensions and their management, pharmacological and nonpharmacological therapy, and their adherence. It was sent as google form through email. The study duration was 3 months from the generation of hypothesis to data collection and analysis. Statistical analysis: The collected data was entered into an excel sheet and analyzed with descriptive statistics by using graphs, percentages and tables.

RESULTS



As shown in Fig 1, Among study participants, consultant Physician who practice in specialized field of medicine like cardiology, nephrology & diabetology were 88.5%. More than 50% of study participants have experience of more than 25 years.

Table 2: Experience shared by Consultant Physician about sociodemographic and clinical correlates in hypertensive patients

Disease Variables	**Consultant Physicians shared their experience N (%)**
Gender	**Consultant Physicians N (%)**
Female > Male	24(5)
Male> Female	173(36.4)
Equal in both	279(58.6)
Co-morbidities	**Consultant Physicians N (%)**
Dyslipidemia	39.41%
CKD	12.15%
DM	41.50%
Others	7.00%
Factors with positive impact for Adhere to management	**Consultant Physicians N (%)**
Rural population	42%
Urban population	58.00%
Education status • Educated • Uneducated	78.00% 22%
Adherence to various approaches of management	**Consultant Physicians N (%)**
• **Dietary**	58.70%
• **Exercise**	50.30%
• **Pharmacotherapy**	76.70%
Need for Counselling	65%

As shown in table 2 experience shared by consultants about sociodemographic and clinical correlates in hypertensive patients, 58.6% and 36.4% consultants experienced almost equal distribution of gender and male predominance respectively. Diabetes mellitus (41.50%) and dyslipidemia (39.4%) were the most common co-morbidities. 58% and 78% of consultants experienced better treatment adherence in urban and educated population respectively. Adherence to pharmacotherapy (76.7%) and diet (58.7%) is more common than exercise adherence.65% consultants observed that counselling plays an important role in management of hypertension.

Table 3: Perspective of Consultant Physicians Towards Various Types of Hypertension Management

Patient Variables	Consultant Physician N (%)
Younger hypertensives	
"P" group of drugs	**Consultant Physician N (%)**
• ARB	286(60)
• B-Blockers	38(08)
• CCBs	109(22.8)
• ACE	44(9.2)
Naive hypertensive	
Presenting stage of hypertension	**Consultant Physician N (%)**
• Stage 1	205(43)
• Stage 2	176(37)
• Stage 3	36(7.5)
• Isolated Systolic	58(12.1)
Age group (Years)	**Consultant Physician N (%)**
• <30	30(6.2)
• 30-40	156(32.7)
• 40-50	244(51.2)
• 50-60	42(8.9)
• >60	5(1)
Combination therapy	**Consultant Physician N (%)**
• > 30% patients	57(12)
• < 30%	420(88)
Resistant Hypertensive	
Monthly visiting	**Consultant Physician N (%)**
• <10%	134(28.09)
• >10%	343(71.91)
Preferred combinations	**Consultant Physician N (%)**

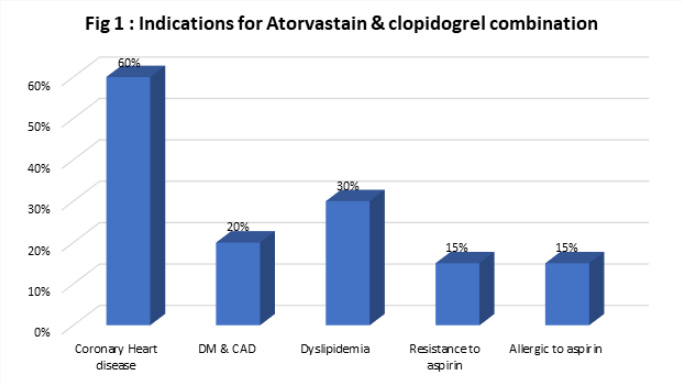
• Amlodipine + Telmisartan + HCTZ	221(46.3)
• Cilnidipine + Telmisartan + CLTD	252(52.8)
Elderly hypertensive	
Amlodipine +atenolol/Metoprolol	90(18.9)
Amlodipine +Telmisartan	133(27.8)
Amlodipine + Telmisartan +HCT/ Chlorthalidone	251(52.6)

As shown in Table 3 perspective of consultant physicians towards various types of hypertension management, 60% consultant physicians chose ARB followed by 22.8% chose P group of drugs for younger hypertension. 43% followed by 37% consultant physicians shared that naïve hypertensive patients were presenting as stage 1 and stage 2 respectively 32.7% followed by 51.2 % shared that naïve hypertensive was presenting in 30-40 and 40-50 years of age group respectively. While 420(88%) shared that less than 30% naïve hypertensive required combination therapy. Resistant hypertension experience shared by consultant physicians, 71.91% were consulting less than 10% every month. While 52.8% preferred Cilnidipine + Telmisartan + CLTD combination for their management. 52.6 %consultant physicians shared that their preferred combination in elderly hypertensive patients was Amlodipine + Telmisartan +HCT/Chlorthalidone.

Table 4: Observations of consultant physicians for benefits of various combination therapy

Amlodipine + Telmisartan	Clinical benefits	N (%)
	End organ protection	116(24.3)
	↓CV risk	179(37.4)
	↓all-cause mortality	178(37.3)
Telmisartan and Cilnidipine	Number of patients with ↓in Microalbuminuria	N (%)
	> 30%	61(12.8)
	< 30 %	416(87.2)
	Number of patients with double digits fall in SBP & DBP at 12 weeks	N (%)
	> 50%	453(95)
Atorvastatin and Clopido-grel as concomitant	Number of patients	N (%)
	15%	380(79.80)
Amlodipine + β blocker (Age group)	Patient age	N (%)
	40-60 years	372(78)

As shown in Table 4 Observations of consultant physicians for benefits of various combination therapy 37.4 %,37.3% and 24.3% consultant physician experienced ↓CV risk, ↓all-cause mortality and end organ protection respectively with Amlodipine + Telmisartan combination. With Telmisartan and Cilnidipine combination 87.2% consultant physician experienced reduction in microalbuminuria in less than 30% and 95% of them experienced double digits fall in SBP & DBP at 12 weeks in > 50% hypertensive patients. 79.81% of consultant physicians prescribe Atorvastatin and Clopidogrel combination in 15% of hypertensive patients as concomitant medication. 78% of consultant physicians prefer Amlodipine + β blocker combination in the 40–60-year age group.



As shown in fig1. Indications for Atorvastatin and clopidogrel combination use include coronary artery disease by 60% consultants followed by dyslipidemia 30% and DM with CAD 30%.

DISCUSSION

In the present study we have analyzed the experience of consultant physicians from various medical specialties having significant experience in managing hypertensive patients. Several guidelines have been developed worldwide for the management of hypertension and these serve as reference standards for clinical practitioners.11 However, many clinicians practice their own prescribing pattern in treating hypertensive patients according to their clinical experience. Unfortunately, hypertension is not appropriately controlled worldwide. (Katherine T)

The pooled hypertension control rate in India during 2001–2020 was 17.5% with significant increase over the years, reaching 22.5% in 2016–2020. Sub-group analysis showed significantly poorer control rates among males.12 Consultant in our study have experienced equal or higher incidence of hypertension in males than females this is in accordance with Jane F 2001. Most common Comorbidities were diabetes and dyslipidemia in accordance with study conducted by Juhwan Noh et al 2016.

Adherence to antihypertensive medications is a key component to control blood pressure levels and main predictor of treatment success and preventing complications.13 The World Health Organization (WHO) identifies poor adherence as the most significant cause of uncontrolled BP and estimates that 50–70% of people do not take their antihypertensive medication as prescribed.14 Participants in present study have experienced positive impact of education status and urban living showed adherence to management which is in accordance with tam et al 2020. counselling plays a significant role with respect

to adherence. In the present study, many consultants are in favor of need of counselling for proper management of hypertension and this is in accordance with Jamshed J dalal 2021.

In our study, majority of consultants are following the standard guidelines for hypertensive management such as first line drug for younger hypertensives, single drug therapy for naïve patients, stepping on to combination therapy in uncontrolled patients. In case of elderly patients combination therapy of CCB, ARB or ACE inhibitors and low dose diuretics are the recommended first line drugs.15 In present study, synergism of amlodipine and telmisartan combination on blood pressure reduction and cardiorenal protection was observed and in line with Liu W et al. In our study reduction in microalbuminuria telmisartan + Cilnidipine combination was shared by consultant this is in accordance with RN Chakraborty et al 2021. Also noted that significant number of clinicians shared double digit fall in BP at 12 weeks this is in accordance with Liu W 2011.

Conclusion: It was concluded from the present study that currently the demographic trend of hypertension is changing to involvement of female gender. Adherence to nonpharmacological approaches like dietary and exercise methods depends upon educational status. Counselling is an important aspect of successful management of hypertension. Management of hypertensive patients is as per the guidelines. Amlodipine + Telmisartan combination has significant cardiovascular benefits and better efficacy for blood pressure control. Telmisartan + Cilnidipine combination has better Reno protective effect. While Amlodipine + Telmisartan +HCT/Chlorthalidone was preferred combination for elderly patients.

Conflicts of Interest: None

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