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A CLINICAL STUDY ON HYPERTENSIVE EMERGENCIES

General Medicine

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ABSTRACT

Background And Objective: The clinical profile of patients with hypertensive emergencies presenting to hospitals in a developing country like ours is poorly known. The objective of the present study was to evaluate the modes of presentations, clinical profile and spectrum of target organ damage in patients with hypertensive emergencies This study is to find out the various modes of presentation and clinical profile of hypertensive emergencies in Narayana medical college. A number of cardiovascular, pulmonary and neurological symptoms are found to be associated with patients in hypertensive emergency with target organ involvement Due to association of hypertensive emergencies with various cerebral, cardiac and renal complications here is an need to recognize this condition so as to reduce the burden associated with it in terms of increased morbidity and mortality. And probable cause for this hypertensive crisis also going o be evaluated **Methodology:** It is a descriptive study conducted between Non 2020 to December 2021, patients above 18 years of age Systolic blood pressure of 180mmHg or diastolic blood pressure of 110mmHg with evidence of target organ damage, either clinically or on laboratory findings. Patients who are known case of Chronic renal failure, valvular heart disease, other secondary causes of Hypertension are excluded. **Results:** Males had higher chances of developing a hypertensive emergency compared to females. The commonest presenting symptoms were chest pain and dyspnoea, neurological deficit. Majority of the patients were known hypertensives. Higher levels of blood pressure at presentation were associated with an adverse outcome. Acute LVF was the commonest target organ damage observed. An in hospital mortality of 12% was observed in the present study. **Conclusion:** Known hypertensive are at a higher risk of presenting with acute target organ damage associated with a chest pain. Acute LVF is the commonest form of target organ damage encountered in the present study.

KEYWORDS

Hypertensive emergency

1.INTRODUCTION

Hypertension affects individuals of all classes and across all the groups. The relationship between blood pressure and risk of cardiovascular disease events is continuous and independent of other risk factors. It is the number one reason for an office visit to a physician; it accounts for the most drug prescriptions, it is a major risk factor for heart disease and stroke, which are the first and third leading causes of death in the developing countries and it is the number one attributable risk for death throughout the world. At the same time, it is both preventable and treatable in the majority of patients.

Despite these impressive statistics, hypertension continues to be neglected. Hypertension is present in all populations. It has been estimated that hypertension accounts for 6% of deaths worldwide. Hypertension doubles the risk of cardiovascular diseases, including coronary heart disease (CHD), congestive heart failure (CHF), ischemic and Haemorrhagic stroke, renal failure, and peripheral arterial disease. Hypertensive emergency can be an end result of chronic hypertension, non-compliance of drugs or initial presentation of essential hypertension. It's also seen that the incidence of hypertensive emergencies are increasing. This study is done to find out various modes of presentation and clinical profile of hypertensive emergencies in our hospital.

Aims And Objectives

The aim of this study is to find out the various modes of presentation and clinical profile of hypertensive emergencies in Narayana medical college. A number of cardiovascular, pulmonary and neurological symptoms are found to be associated with patients in hypertensive emergency with target organ involvement. Due to association of hypertensive emergencies with various cerebral, cardiac and renal complications here is an need to recognize this condition so as to reduce the burden associated with it in terms of increased morbidity and mortality. And probable cause for this hypertensive crisis also going o be evaluate

2.Methodology :

This is a cross descriptive study with a sample size of 50 patients visiting OPD and in the wards of department of medicine in Narayana medical college and hospital,Nellore with duration of study 18 months.

2.1 Inclusion Criteria

Patients above the age of 18 years. Systolic blood pressure of 180mmHg or diastolic blood pressure of 110mmHg Evidence of target organ damage, either clinically or on laboratory findings.

2.2 Exclusion Criteria

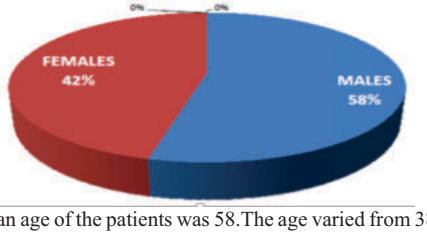
Patients less than 18 years. Chronic renal failure, valvular heart disease, other secondary causes of hypertension.

Statistical Analysis

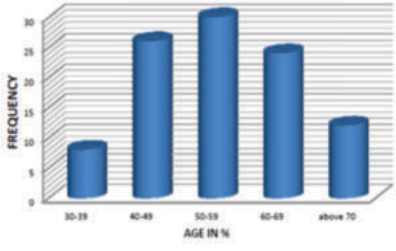
All the collected data were statistically analyzed using appropriate statistical test. P value less than 0.01 were considered significant.

3 .OBSERVATIONS AND RESULTS

1) Among the fifty patients in the present study ,male:female ratio is almost 1.4:1.

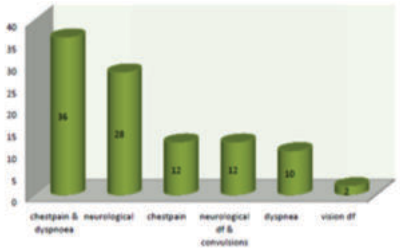


2)The mean age of the patients was 58.The age varied from 38 to 70 in males and 39 to 78 in females. The mean age for males and females were 54 and 58.5 years respectively. In the age distribution patients less than age of 50 were 34%(17 pts) and more than 50 years were 66%

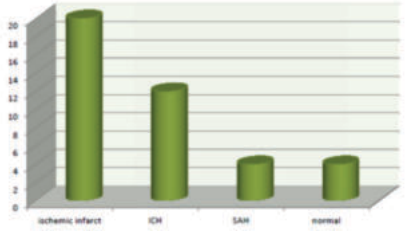


3) In the present study the presenting symptoms in chest pain&

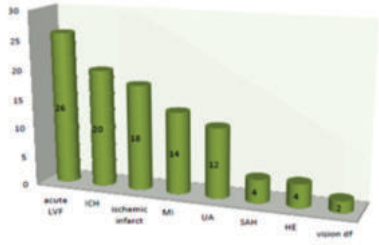
dyspnoea. The commonest presenting complaints were chest pain & dyspnoea (36%) and followed by neurological symptom(28%).



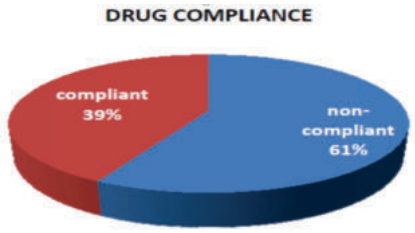
4) Among patients with neurological deficit, neurological damage included ischemic infarct(20%),intra cerebral haemorrhage (12%), SAH(4%).



5) Among the target organ involvement acute LVF (26%) ICH(20%), ischemic infarct(18%),MI(14%),Unstable angina(12%), SAH(4), hypertensive encephalopathy(4%),vision de fect(2%).

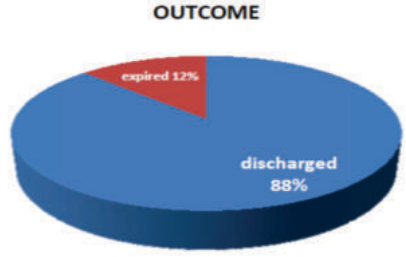


6) Of the 50 patients studied 44 patients were known hypertensives, among them 27 patients(61%) were discontinued anti hypertensives before the incident, remaining 17 patients(39%) were continued their medication.



7) Among the 50 patients 14 patients(28%) were having diabetes mellitus and 14 patients(28%) had dyslipidemias.

8) Out of 50 patients with hypertensive emergencies,6 patients died before discharge. Hospital mortality was 12%. All expired patients were had intracerbral haemorrhage.



4. DISCUSSION

In the present clinical study of hypertensive emergencies in Narayana Medical College there is mild male predilection for hypertensive emergencies. Marin et al in their study on hypertensive crisis observed that 55% of patients were males among patients with hypertensive emergencies. The proportion of males in hypertensive emergencies were also higher in the study by zampoglione et al. This is probably due to an increased susceptibility of males compared with females to hypertension related target organ damage. This also due to the fact that postmenopausal female hemodynamics is not very much different from the male profile with regard o blood pressure. The majority of female patients belonged to the postmenopausal age group which shows susceptibility of postmenopausal age to end organ damage. Decade wise distribution of age shows largest groups belonging o the fifth and sixth decade at the time of presentation with 30% and 26% respectively.

Analysing the presenting symptoms, the largest group of patients in the present study, presented with a chest pain and dyspnoea and followed by neurological deficit. Zampglione et al in their study had more patients presenting with chest pain (36%) and neurological deficit 28% respectively.

Diabetes mellitus and dyslipidemia were the other risk factors present in the present group of patients. Patients with diabetes mellitus and dyslipidemia were 28% and 28% respectively.

Prevalence of arterial hypertension in diabetic patients is greater when compared with that in non diabetic patients(40-50% and 20% respectively). Metabolic abnormalities hyperglycemia, Hyperinsulinemia and Dyspilidemia may play role in the pathogenesis and complications of arterial hypertension as seen in the present study. Highest recorded systolic blood pressure was 250mm hg with mean systolic blood pressure of 215mmHg. The highest diastolic blood pressure recorded was 160mm hg with a mean of 130 mm Hg.

Evaluation of fundus revealed changes ranging from hypertensive retinopathy to papilloedema in 50% of patients. Papilloedema was seen in 12 % of patients which is an evidence of ongoing target organ damage in these patients.

Microalbuminuria was seen in 32% of the patients which puts these patients at a higher risk for hypertension related renal disease compared to the patients without proteinuria. Computed tomography of the brain showed Intracerebral haemorrhage as the commonest cause for the neurological target organ damage followed by cerebral infarct and subarachnoid haemorrhage. Voltage criteria suggestive of left ventricular hypertrophy on ECG was seen in 20% of patients and 18% had left ventricular hypertrophy by echocardiography.

Evaluation for target organ damage in patients in the present study showed acute LVF(26%) followed by intracerebral haemorrhage (20%),ischemic infarct(18%),acute myocardial infarction (14%),Sub arachnoid Haemorrhage (4%),hypertensive encephalopathy (4%) and vision defect(2%).

The outcome of the study showed an in hospital mortality of 12% among these patients. All patients who were expired had intracerebral haemorrhage.

5.CONCLUSION

Majority of patients presenting hypertensive emergency belonged to the fifth and sixth decades of age. Males have higher chances of developing hypertensive emergencies compared in females. Known hypertensives are at a higher risk of presenting acute target organ damage associated with hypertensive emergency. Presence of diabetes mellitus and Dyslipidemia increases the chance of developing hypertensive emergency.

Commonest mode of presentation is with a chest pain and Dyspnoea. Higher levels of blood pressure at presentation is with a neurological deficit. Acute LVF is the commonest form of target organ damage encountered in the present study. The in-hospital mortality among these patients with hypertensive emergency were 12%. Cause for all was mortality was due to intracranial haemorrhage

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