ORIGINAL RESEARCH PAPER

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KEY WORDS:

A STUDY OF CLINICAL,ELECTROCARDIOGRAPHIC AND ECHOCARDIOGRAPHIC ABNORMALITIES IN ISOLATED SYSTOLIC HYPERTENSION IN GERIATRIC PATIENTS

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INTRODUCTION

In India awareness of hypertension, its risk factors and its complications is very poor. Hence, hypertension goes undiagnosed and untreated for a long time. We see many patients with hypertension diagnosed for the first time in 5th and 6th decade. The commonest cause of raised blood pressure in the older population is Isolated systolic hypertension.[1] As the age progresses more and more persons will be hypertensive, a disease, which is definitely the most prevalent, remediable risk factor for cardiovascular diseases.

Indeed, the **JNC-VIII report** recommends prompt pharmacological therapy and states that in persons older than 50 years, systolic blood pressure of more than 140 mmHg is a much more important cardiovascular disease risk factor than diastolic blood pressure.[2].

Hence the present study is undertaken to study the clinical profile of isolated systolic hypertension (systolic > 140 and diastolic ≤ 90 mmHg in elderly (above the age of 60 years), to find out any other associated risk factors, any end organ complications.

Etiopathogenesis of ISH

There are several factors, contributing more or less to the development of ISH:

1) Increased rigidity or decreased elasticity of the large capacitance arteries.
2) Increased total peripheral resistance.
3) With the advancement of age, obesity, stress, decreased physical activities, altered dietary patterns specially increased sodium and decreased potassium intake are contributory.
4) Decreased blood volume combined with run-off because smaller reservoir provided by rigid large arteries lowers diastolic blood pressure and widens pulse pressure.

BACKGROUND AND OBJECTIVES

In Geriatric population with the increase in life expectancy and modification of life style, hypertension is a major health problem. The most common cause of raised blood pressure in the older population is ISH. There is unawareness regarding the effect of ISH on target organs resulting in negligence in treating hypertension in elderly. With this background study was undertaken with an objective to know the effect of ISH on heart through ECG and ECHOCARDIOGRAM.

METHODS

Cross-sectional study of 75 elderly patients, 60 years & above (Males-39, Females-26), with SBP > 140 & DBP ≤ 90, attending OPD & in-patients of PESIMSR, Kuppam, during the period from 1/12/2016 to 31/08/2017.

Detailed evaluation of these patients, comprised of clinical history, physical examination with relevant investigations as per proforma. Statistical analysis was done using SPSS software.

RESULTS and ANALYSIS

Among 42.7% symptomatics, mean age was 71.23±6.47 years. Breathlessness and swelling of the lower limbs were common presentation. Stage I blood pressure(SBP: 140-159) was found in 36% of the patients, Stage II blood pressure (SBP: 160-170) in 36% of the patients & Stage III BP (SBP ≥180 mmHg) in 28% of the patients.

Waist/hip ratio > 0.9 in males & > 0.84 in females was found in 46% of the patients. DM was found in 41.3% and Dyslipidaemia was found in 38.7% of the cases.

The Commonest ECG finding was LVH (36% as decided by Sokolow-Lyon criteria and 28% as decided by Romhilt-Estees score system).

The Commonest ECHO finding, was increased left ventricular mass. (>131 gm/m^2 in males & >100 gm/m^2 in females.)

DISCUSSION

Isolated systolic hypertension is the commonest cause of raised blood pressure in older population. A common misconception among patients and practitioners is that elevated diastolic blood pressure is more important than elevated systolic pressure.

Infact one of the key message of JNC VIII is, in persons older than 50 years, systolic blood pressure of more than 140 mmHg is a much more cardiovascular risk factor than DBP.

CONCLUSION

ISH is the commonest cause of high blood pressure in the elderly. The incidence increases with age advancement. It is more risky in nonwhite population. Waist/hip ratios, DM, dyslipidaemia were found to be significant associated risk factors.

ISH associated with risk factors has definite effect mainly on cardia in terms of LV hypertrophy. It is an even better predictor of morbidity and mortality than is diastolic blood pressure. Several large trials have documented a clear benefit to treating ISH. Even small reductions in BP have a substantial impact on patient outcome.[64,65]

Hence, ISH in elderly to be detected early, treated promptly so as to prevent / reduce cardiovascular morbidity and mortality in our growing elderly population

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