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An observation into Stress levels in women with hypertension

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ABSTRACT

The most common cardiovascular disease is recognized as Hypertension. Approximately, in 30% of world population, the number of hypertensive adults will reach 1.5 billion by 2025. Higher severity and prevalence of hypertension are in elderly women than in elderly men. The present study was undertaken to observe stress levels in women with hypertension. 10 hypertensive and 10 age matched controls were part of the study after obtaining written informed consent. DASS 42 a standard questionnaire was used to assess depression, anxiety and stress. Data was analyzed by SPSS 20.0. Student t test was used to observe significance of difference between the groups. We observed significantly high depression, anxiety and stress levels in females with hypertension when compared with healthy controls. Our study highlights the need of more studies in this area for better understanding of association of stress and hypertension and also to develop better interventions for hypertension.

Keywords: anxiety, hypertension, women, cardiovascular

Introduction

The most common cardiovascular disease is recognized as Hypertension [1]. Approximately, in 30% of world population, the number of hypertensive adults will reach 1.5 billion by 2025 [2]. The common dangers for hypertension are older age, having a family history, being overweight or obese, low physical activity levels, and tobacco use. The etiology of hypertension remains idiopathic. The hypothesis of researcher is psychological stress is a crucial hazard for essential hypertension [3,4]. For adapting the physical and social environment, a definite set of behavioral and hormonal responses were induced in individuals with these stressful experiences. [5]Development of hypertension is associated with high job stress [6-9]. Furthermore, some studies specified that combination of psychological stress and elevated BP were different by sex [10]. Higher severity and prevalence of hypertension are in elderly women than in elderly men. Because of the differences in antihypertensive treatment patterns between males and females, it is harder to achieve BP control between them. Differences reason are tough to analyze, but could be due to poor treatment intensity, irrelevant drug choices, lack of consent, treatment resistance because of biological factors, or to other factors (eg, central obesity, and so on) [11]. The present study was undertaken to observe stress levels in women with hypertension.

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Materials and methods

10 hypertensive and 10 age matched controls were part of the study after obtaining written informed consent. The study protocol was approved by institutional ethical committee. The following criteria were followed while selecting the cases.

1. Females with in age group of 30-50
2. Females with stage 1 and stage 2 hypertension [12]
3. Not suffering with any other major complications
4. Willing participants

Assessment of stress levels

Depression, anxiety and stress scale (DASS-42): DASS 42 is a standard questionnaire to assess depression, anxiety and stress [13].

Data analysis: Data was analyzed by SPSS 20.0. Student t test was used to observe significance of difference between the groups. P value less than 0.05 was considered as significant.

Results

Table 1: Demographic parameters and depression, anxiety and stress levels in cases and controls (Data presented are mean ± SD. *P<0.05, **P<0.01, ***P<0.001)

Parameter	Cases	Controls	P value
Age (years)	37±5	38±4	0.6274
Height (cm)	156.62±10.11	154.27±8.89	0.5877
Weight (kg)	62.4±8.36	61.4±7.61	0.7871
Depression	22.58±6.74	12.64±6.84	0.0042**
Anxiety	11.83±4.91	6.41±2.47	0.0059**
Stress	15.44±6.36	7.98±4.13	0.006**

Discussion

Stress whether emotional, sociocultural or occupational may lead to illness and it is a part of everyday experience that is dealt due to the association of both stress and illness [14]. According to the survey done in 1979 stated that emotional stress, worries and anxiety are the major reasons to cause high blood pressure followed by over-weight (26%) and hereditary (12%) [15]. In the present day women had proved to be more versatile in elucidating their job at home and the work place is prone to many health complications and life-style disorders like diabetes and hypertension. The present study is taken up to observe the levels of stress in women with hypertension. We observed significantly high depression, anxiety and stress levels in females with hypertension when compared with healthy controls. A study stated that stress leads to a transient sympathetic mediated increase in blood pressure but had given no clear explanation whether continuing and repetitive stress leads to fixed hypertension or not. Further studies in this area may give clear and valuable information regarding the association of stress and hypertension.

Limitations

Major limitation in our study is less sample size.

Conclusion

We have observed significantly higher depression, anxiety and stress levels in females with hypertension. Our study highlights the need of more studies in this area for better understanding of association of stress and hypertension and also to develop better interventions for hypertension.

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