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Expenditure pattern of hypertension among elderly of Davangere city: Is it really catastrophic among them?

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Abstract

Background: Hypertension in older adults is a major and growing burden for the health care system. Geriatric group is the one which is dependent on others both physically and financially. There has been no systematic screening and treatment of hypertension in older adults which is being important risk factor for cardiovascular morbidity and mortality. Present study was undertaken to determine treatment seeking behavior and health expenditure incurred among elderly hypertensive.

Objectives: To assess health expenditure and treatment seeking pattern towards hypertension among elderly.

Material and methods: A Cross sectional study was conducted among elderly population aged 60 years and above in two urban slums of urban health centre attached to Department of Community Medicine, JJM Medical College, Davangere.

Results: Study was conducted among 263 elders. 56.65% were found to be hypertensives, among which 40.3% were known hypertensives, rest were newly diagnosed cases found during the study. The expenditure per month for hypertension was found to be Rs.187.88±10.84 for medication and Rs 337.43 ± 28.03 for routine checkup and investigations. Among previously diagnosed cases 27.35% had admitted to hospital in past one year for complications of hypertension and had incurred mean expenditure of Rs 4386± 220.

Conclusion: Elders have to be educated and motivated regarding regular health checkup and have to be oriented with newer schemes of Janaushad where medicines are available at lesser price so that seeking treatment and its expenditure should not be a burden among those.

Keywords: Hypertension, elderly, cost analysis

Introduction

Today, world is seeing a transition from communicable to non-communicable diseases. We tend to see more of diseases such as cardiovascular disease, cancer, diabetes and chronic lung diseases which are leading cause of mortality. Non-communicable diseases (NCDs) contribute to around 5.87 million deaths that account for 60% of all deaths in India. India shares more than two-third of the total deaths due to NCDs in the South-East Asia Region (SEAR) of WHO ^[1].

Among major CVDs, hypertension is the leading risk factor for morbidity and mortality in the world ^[2]. Hypertension is the commonest cardiovascular disorder, among geriatric population. It is a significant and often asymptomatic chronic disease, which requires optimal control and persistent adherence to prescribed medication to reduce the risks of cardiovascular complications.

Geriatric group is the one which is dependent on others both physically and financially. People living with such chronic conditions have to be given regular medications and to be monitored, which subjects to rising out-of-pocket (OOP) expenditures. This keeps healthcare access out of the reach of the common poor. So this study was undertaken to assess the expenditure pattern and health seeking behavior among elderly, more so living in urban slums.

Methodology

A cross sectional study was done between October 2017 to November 2017 among elders residing in urban slums attached to urban health centre of Department of Community Medicine, JJM Medical College, Davangere. A total of 263, aged 60 years and above residing in two slums of urban health centre, Davangere were included for the study to assess

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the health seeking pattern and expenditure towards treatment of hypertension. Elderly residing in the area for the last 1 year, diagnosed and seeking treatment for hypertension were included. Elderly who were critically ill and unable to comprehend questions were excluded. Information on socio demographic variables, health expenditure and treatment seeking behavior was recorded using pre tested and pre designed questionnaire. Blood pressure was measured using standardized digital sphygmomanometer by auscultatory method in sitting posture. Two readings were taken at three minutes interval and the lower of the two was taken as the final value. A person was labeled as hypertensive if the systolic BP \geq 140mmHg and/or diastolic BP \geq 90 mmHg as per the JNC-VII criteria [3]. Treatment seeking behavior and expenditure incurred were assessed among already known cases of hypertension. Newly diagnosed during study period were excluded. Expenditure on treatment for hypertension was self-reported and calculated based on the money spent on consultation with a private practitioner and that spent on purchasing anti-hypertensive medications out-side the government health system and amount spent on hospitalizations in case of admissions in past one year due to complications of hypertension.

Ethical Clearance

The study was approved from Institutional Ethics Committee for Human Subject's Research, JJM Medical College, Davanagere.

Results

Study was conducted among 263 subjects, of which 57(21.7%) were males and 204 (77.6%) were females. Among them we found 149 (56.65%) were found to be hypertensive. Among the hypertensive's 106 (40.3%) were known cases of hypertension and rest were newly diagnosed at the time of study. Among already diagnosed hypertensive's, 74 (69.8%) of the participants were found in the age group of 60-69 years. The mean age of the hypertensives was 66.47 ± 4.54 years. 26 (24.5%) were males and 80 (75.47%) were females. Majority of them had primary level schooling (79.5%) and belonged to the class IV modified B.G. Prasad Classification (68.8%). Nearly 23.8% of the elderly were living in joint families, 54.2% in three generation families, 14.6% in nuclear families and 7.4% elderly were living alone.

When we look into treatment seeking behavior of those hypertensive's, more than 50% percent didn't not take treatment regularly, ie; 55(51.8%) and 51 (48.11%) took regular treatment. The reason for not seeking and taking regular treatment was forgetting to take medications, need to walk to health facility which they found it inaccessible to go or needed help of others to take them and financial constraints to take and seek medications.

57% patients visited a private hospital /physician for obtaining treatment for hypertension. Only 19% visited a government hospital, while rest 24% consorted alternate systems of medicine 45% patients took treatment for other ailments apart from hypertension. Every month Rs.187.88 \pm 10.84 was being spent for medications and Rs 337.43 \pm 28.03 for routine checkup and investigations. This expenditure showed >10% of income was spent on treatment among 18.6% people who are under treatment. Out of the 106 hypertensive's; 29 (27.35%) had suffered some

complication due to hyper-tension for the past one year and were admitted in hospital. During hospital admission the mean expenditure was Rs 4386 \pm 220.

Discussion

In the Study that was conducted when we look into socio demographic details of 263 study participants, 21.7% were males and 77.6% were females, majority 69.8% were found in the age group of 60-69 years. Among them 56.65% were found to be hypertensive, of which 40.3% were known cases of hypertension and rest were newly diagnosed at the time of study. 68.8% of them belonged to class IV modified B.G. Prasad Classification.

Among hypertensive's it was found only 48.11% who took treatment regularly and 51.8% did not seek treatment regularly. The reason for not seeking and taking regular treatment was forgetting to take medications, need to walk to health facility which they found it inaccessible to go or needed help of others to take them and financial constraints to take and seek medications.

An average mean of Rs.187.88 \pm 10.84 for medications and Rs 337.43 \pm 28.03 for routine checkup and investigations was being spent by patients. 57% of the hypertensives visited physician/ private hospital for obtaining treatment for hypertension. Only 19% visited a government hospital, while rest 24% consorted alternate systems of medicine 45% patients took treatment for other ailments apart from hypertension. This expenditure showed > 10% of income was spent on treatment among 18.6% people who are under treatment. Over 27.35% had history of hospitalization due to complication of hyper-tension for the past one year and had incurred a mean expenditure of Rs 4386 \pm 220.

A similar study was done among 211 elderly individuals in Pondicherry, India showed that Mean age of study participants was 66 years (SD \pm 6.9), about three-fourths (76%) of study subjects were females. 28% took regular treatment, and 72% did not seek treatment regularly which was almost similar to our study. The reasons for not taking regular treatment were financial constraints and lack of a nearby health facility. The expenditure per month for hypertension was found to be Rs.134.88 \pm 11.84 for medication and Rs 227.64 \pm 18.03 for routine checkup and investigations. 25.4% had suffered some complication due to hypertension for the past one year and were admitted in hospital. During hospital admission the mean expenditure was Rs 3294 \pm 217 [4].

Similar findings were found in studies done at various study settings [5, 6, 7].

A study done at titupati showed that prevalence of hypertension was found to be 8.6%, which is very much less compared to our study. The difference in prevalence could be due to different study period [8].

A study done by Baliga *et al* at Belagavi showed that 52% were found to be hypertensive, of which 28% took regular treatment. High level of out of pocket spending by elderly is observed by way of purchase of medicines, high cost of hospitalization of varying length and charges for diagnostic services [9].

Our study showed higher expenditure pattern, probably the change of study period which might be reason for higher expenses.

Study done by stated that elderly of age 65+ years are less likely to receive treatment than those in age group 60-64 years. Elderly women are neglected in treatment seeking.¹⁰

Many people more so geriatric people are not aware of hypertension and other NCDs. And those who have been diagnosed will not be taking regular medications or will not be having good access to treatment or fail to follow up. Awareness regarding diagnosis and treatment of hypertension should be carried out routinely so that this group can lead a better life and avoid complications and burden of hypertension.

Limitations of study

Hypertension status was assessed by single visit only. Assessment of expenditure was from people or patients perspective and there can be recall bias in amount of expense incurred.

Conclusions

Due to population aging, hypertension in older adults is a major and growing burden for the health care system. In our study it showed more than half of the elderly people are suffering from hypertension and among them 16% were detected of hypertension during the study which emphasis need for regular screening for hypertension among elderly population. Geriatric population is one dependent on others both physically and financially. Measures has to be taken to reduce health expenditures so that it doesn't become a burden to seek treatment and it becomes easily accessible and affordable to all specially the geriatric.

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