

A Cross-Sectional Study on the Prevalence of Diseases among the Geriatric Population in the Rural Field Practice Areas of a Tertiary Care Hospital in Mangaluru, India

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Abstract

Background: Population ageing is a universal and inevitable phenomenon. Hence, it is necessary to understand the disease burden among the elderly in our rural field practice areas and a demographic survey was conducted to know the common diseases prevailing among them. **Objectives:** To know the common diseases among the elderly population 60 years and above and to assess the Prevalence of these diseases and to improve the quality of life of the elderly and also to treat them. **Methodology:** A community based study was conducted in the rural areas of Bollary, Jarandagudde, Mundaje and Ammunje which comes under the field practice areas of Father Muller Medical College, Mangaluru, Karnataka, India between June 2014 to May 2015. All the elderly people who visited these Centers during that period were included in the study. The data was allocated from the records kept in the out-patient departments of these health centers. **Results:** A total of 1452 elderly people were examined in the study. Among them 530(36.50%) were males and 922(63.50%) were females participated in the study. Most of the elderly were suffering from hypertension (37.67%), diabetes (5.99%) both hypertension and diabetes (9.02%), while acid peptic disease (5.51%) and other complaints (45.52%), were also seen. **Conclusion:** Non-Communicable diseases like hypertension and diabetes were more compared to acid peptic disease, other complaints like fever, cough and cold, breathlessness were effecting the elderly population. Thus it is necessary to do an early diagnosis and treatment.

Key words: Elderly population, Hypertension, Diabetes, Acid peptic disease, Other Complaints.

INTRODUCTION

“Active ageing makes the difference”. This was the WHO day theme for the year 1999. It is not only important that a man lives for a certain number of years, but it is also more important that the man adds life to the years he lived. Hence it is essential that we should remain active throughout our life expectancy for health and happiness.

Many people may be affected by diseases in all the age groups. Elderly people are no exception to this and they like children, form a vulnerable group to be infected with many of the communicable or non-communicable diseases.

The present study was undertaken in the rural field practice areas of Father Muller Medical College at Thumbay in Mangaluru. It was conducted in the four peripheral health centers of Bollary, Jarandagudde, Mundaje and Ammunje. The demographic survey was done to know the disease burden and the diseases prevailing among the elderly in these rural areas. The objective of the study was to understand the common diseases affecting the people in these areas among the elderly and to estimate the prevalence of these diseases and also to treat them and improve the quality of life of the elderly people.

MATERIALS AND METHODS

The study was conducted in the rural field practice areas of the Department of Community Medicine of Father Muller Medical College, Mangaluru, Karnataka, India. The Study period was between June 2014 to May 2015. Ethical clearance was taken from the Father Muller's Institutional ethics committee vide no. FMFC/FMIEC/2563/2015. Data was obtained from the out-patient record kept in these health centers. All the elderly people

who visited these health centers during the study period were included in the study. The data was tabulated and analyzed using simple statistical methods of rates, ratios and proportions. Chi-square test was applied to know the significance of the variables.

RESULTS

Among the study population (n=1452) there were 422(29.06%) of men belonged to the 60-70 years age group and 737(50.76%) women who belonged to the 60-70 years age-group. In the 71-80 years age group, there were 105 (7.23%) men and 118(8.13%) women were belonged to the above group. There were 3(0.21%) of men and 66(4.54%) women who belonged 81-90 years age-group. There were no men belonging to above 90 years age-group while there was only one woman (0.07%) who belonged to the above 90 years age-group. Statistically, the median age of the study population was 66.12 years.

In our study population (n=1452) we observed that 145 (27.36%) of men who suffered from hypertension and 402 (43.60%) of women had hypertension; and the total number of men and women suffering from hypertension was 547(37.67%).

There were 31(5.85%) of men who had diabetes mellitus and 56 (6.07%) of women had diabetes amounting to a total of 87(5.99%) of both men and women who suffered from diabetes mellitus. 51 (9.62%) of men and 80(8.67%) of women were suffering from both hypertension and diabetes combined. The total of both men and women who had both hypertension and diabetes was found to be 131(9.02%).

Many elderly patients were suffering from acid peptic disease. There were 23(4.34%) of men and 57(6.18%) of women and a total of 80(5.51%) of both sexes suffering from acid peptic disease. Other complaints of fever, cough, cold, headache, breathlessness, body ache, generalized weakness, coryza, knee pain, chest pain, backache, throat pain, shoulder pain were also commonly seen among the elderly people. There were 309(58.30%) of men and 352(38.17%) of women and a total of 661(45.52%) of both men and women who had other complaints. chi-square test with respect to the distribution of various diseases was done and showed that the P value was highly significant ($P=0.0001$) for hypertension and other complaints. Also P value was highly significant ($P=0.0001$) for women gender, when compared to both genders who suffered from hypertension. Among the combined total of 547(37.67%) of men and women suffering from hypertension, P value was also highly significant for hypertension ($P=0.0001$) among these people. When compared to both men and women, there were more women who suffered from hypertension.

DISCUSSION

As age advances, the elderly people are more vulnerable to a number of diseases. Hence, it is necessary to review the different situations under which the elderly people are affected and also to know the common diseases prevailing in the geriatric population.

Age and sex distribution of the elderly Distribution of age

In our study we found that 422(29.06%) of men belonged to the age group of 60-70 years which was slightly lower than the study done by Praveen Kumar N.^[2] Also, there were 737(50.76%) of women who belonged to 60-70 years group which was higher than the other study. They found that there were 80(39.6%) of men who belonged to 60-70years, while 96(37.2%) of women belonging to 60-70 years age group in their study. The median age of the study population was 66.12 years (range: 60-93 years).

Our study showed that 105(7.23%) men were belonging to 71-80 years group which was lower than the other study.118 (8.13%) women belonged to 71-80 years which was also lower than the other study. They found that there were 42(20.85) men and 80 (31.00%) women who were belonging to the 71-80 years age group. In our study there were no males above 90 years and there was only 1(0.07%) female who was above 90 years of age. This was lower than the other study where there were 38 (18.8%) men and 18(7%) of women belonging to above 90years age group.

Sex Distribution

In our study we observed that there were 530(36.50%) of males and 922(63.50%) of females among the elderly. There were more number of females than males, which shows the longevity of life of females than the males. In a study done by Shilpa.K^[1] it was found that the number of females were more than the males. There were 116 (55%) of females and 95(45.02%) males. The number of males in our study were slightly lower than their study, but there were more females, than in their study. However the number of females outnumbered the males in their study, this is consistent in other studies also^[2, 3, 4,5,6,7]

Distribution of diseases among the elderly people Hypertension

It was found that in our study 547(37.67%) elderly people suffered from hypertension. In a study done by Shilpa.K^[1] 31.3% of elderly had hypertension. This was slightly lesser than that seen in our study. In our study we found out that the number of females who suffered from hypertension were more than the males having hypertension. In studies done by Thakur

Table 1: Age and sex distribution of the elderly people

Characteristic	Study group (n=1452)	
Age (Years)	Men %	Women %
60-70	422 (29.06)	737 (50.76)
71-80	105 (7.23)	118 (8.13)
81-90	3 (0.21)	66 (4.54)
>90	0 (0)	01 (0.07)
Sex	530 (36.50%)	922 (63.50%)

Median age of the study population = 66.12 years

Table 2: Distribution of diseases among the elderly people.

Diseases	Men (%) n=530	Women(%) n=922	Total (%) (n= 1452)
Hypertension	145 (27.36)	402 (43.60)	547 (37.67)
Diabetes Mellitus	31 (5.85)	56 (6.07)	87 (5.99)
Both HTN and DM	51 (9.62)	80 (8.67)	131 (9.02)
Acid peptic disease	23 (4.34)	57 (6.18)	80 (5.51)
Others	309 (58.30)	352 (38.17)	661 (45.52)
P Value	P = 0.0001	P = 0.0001	P = 0.0001

R.P,^[5] Singh J.P,^[6] the total percentage of hypertensive were less than in our study. It was 30.7% and 34.75% respectively. But, in other studies done by Praveen Kumar N,^[1] Minie E.Jacob etal,^[1] Ashok Kumar T,^[1] Akriti Gupta,^[7] the total percentage of hypertensive were more than found in our study.

In studies done by Thakur R.P,^[5] Singh J.P,^[6] and Akriti Gupta,^[7] the number of females having hypertension was more than the males. This was similar to our study. But in other studies done by Shilpa.K,^[1] Praveen Kumar N,^[1] Ashok Kumar.T^[1] the number of males who were suffering from hypertension were more than the females. But the general observation on the whole is that in the early adolescence and adult life, the males suffer more from hypertension, but as age advances the number of females suffering from hypertension are more than the males.

Diabetes

Once regarded as a single disease entity, diabetes is now seen as a heterogeneous group of diseases, characterized by a state of chronic hyperglycemia, resulting from a diversity of aetiologies, environmental and genetic, acting jointly.^[8] There were 31(5.85%) of males, 56(6.07%) of females with a total of 87(5.99%) of elderly suffering from diabetes in our study. The number of both males and females suffering from diabetes in our study was lower than in other studies.^[1,4,6,7] In a study done by Praveen Kumar N,^[1] the number of males and females suffering from diabetes mellitus were lesser than in our study.

Acid peptic disease

There were 23(4.34%) of males and 57(6.18%) of females and a total of 80(5.51%) of elderly people who had acid peptic disease. The total percentage of elderly suffering from acid peptic disease was greater in our study when compared to these studies.^[2,4,7] In a study done by Singh J P,^[6] the total percentage of elderly people suffering from acid peptic disease was lower than our study.

CONCLUSION AND RECOMMENDATION

Majority of the population above 60years of age in the present study were suffering from hypertension (37.67%), followed by diabetes mellitus (5.99%)

and acid peptic disease (5.51%). They also had other complaints like fever, cough, cold, headache, breathlessness, body ache, generalized weakness, coryza, knee pain, chest pain, backache, throat pain and shoulder pain, (others = 45.52%)

Since there is high morbidity load among the rural elderly, hence it is recommended that we need to provide them with elder- friendly primary geriatric care services.^[4] This study also reflects that most of these morbidities can be prevented or delayed by early intervention.^[1] Preventive health care strategies and programs specific to the need of the elderly should be formulated and implemented.^[7]

Present health need is to develop an integrated approach for managing geriatric health problems and to improve the quality of life. It is imperative to integrate geriatric health services at primary health care centres in addition to increasing awareness among the people about health, diseases and health care facilities in order to improve the quality of life.^[1] Screening for hypertension, especially among women can be done to prevent hypertension among them.

Limitation of this study

As in the present study morbidity status of the elderly was based on records, no screening test or laboratory investigation was done. Hence, some of the morbidities which could be identified by these tests might be missed.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ABBREVIATIONS USED

FMMC: Father Muller Medical College; **FMIEC:** Father Muller Institutional Ethics Committee.

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