

A retrospective study of morbidity pattern in geriatric women of coastal Karnataka

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Abstract

Background: Aging is a normal irreversible developmental change in all living organisms over a chronological time. Most physical changes that occur with aging in humans are gradual and take place over a long period. In addition, the rate and degree of change is known to vary among individuals. Disease factors can increase the speed and degree of the changes. With advancements in medical knowledge and treatment facilities, life expectancy at birth has taken a giant leap in recent times. Thus, it is important to familiarize with the morbidity pattern and thereby allocate the resources and personnel to meet the needs of this population.

Objective: To study the morbidity pattern in geriatric women of coastal Karnataka, India.

Materials and Methods: Female geriatric patients who visited the tertiary care facility in coastal Karnataka, India for various problems from January 2013 to December 2013 were included in the study. Information regarding their age, vitals, medical history, diagnosed diseases, and drug history was accessed from the medical records section of the hospital and the descriptive study was reported to categorize the geriatric patients according to the ailments they had.

Result: Our results showed that majority of the geriatric women had multiple illnesses. A total of 29.2% had diabetes mellitus of which 40.4% had complications. A total of 26% had hypertension, 10% had respiratory illnesses, 8% had fractures, 7.8% had ischemic heart disease, 6.8% had renal problems, 6.6% had cataract, and 5.6% had various carcinomas, thyroid diseases, gynecologic problems, psychiatric disorders, and anemia.


Conclusion: Diabetes mellitus and hypertension were the leading problems among the study population. Hence, it is prudent to screen the elderly patients for these noncommunicable diseases and to spread knowledge, awareness, and self-care advice to them.

KEY WORDS: Diabetes, geriatric women, hypertension, morbidity

Introduction

Aging is a normal irreversible developmental change in all living organisms over a chronological time. It is associated with both physical and psychological changes. Most physical changes that occur with aging in humans are

gradual and take place over extended periods. In addition, the rate and degree of change varies among individuals. Diseases can augment these changes. The Indian constitution has made well-being of elderly population mandatory in Article 41 directing that "the State shall within the limits of its economic capacity and development make effective provision for securing the right to public assistance in case of old age."^[1] With advancements in medical knowledge and treatment facilities, life expectancy at birth has taken a giant leap in recent times. In India, the World Health Organization reports life expectancy for female population as 68.2 years in 2013 with a World Life Expectancy ranking of 136.^[2] Projections made beyond 2016 by the United Nations indicate that 13.3% and 21% of geriatric population in 2025 and 2050, respectively, will be in India. It was 6.8% in 1991. Planning commission, Government of India, reports

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that currently 40% of this population is below poverty line and 73% of them are illiterates.^[3]

Many modern day problems of the geriatric population namely diabetes mellitus, hypertension, and osteoarthritis are related to diet and lifestyle. With the increase in knowledge and awareness of diseases and promotion of healthy lifestyles and preventive programs, the postponing of morbidity to later years of life is becoming increasingly common. This success has been more apparent among the Western population. Unfortunately, same cannot be said of the Indian population. As a number of modifiable factors contribute to aging-related morbidity and these illnesses are likely to be responsive to preventive interventions, it is important for us to look into the issue of lifestyle and adopt health promotion measures to ensure a better quality of life for the geriatric population. Very few studies have documented the pattern of morbidity requiring hospital care of elderly women in India. Hence, it is important to determine the most common conditions for which the elderly people require hospital care and then to spread this awareness as well as preventive measures among them, which will ultimately reduce the debility. Familiarizing with the pattern of morbidity will also help in proper allocation of the resources and personnel to meet the needs of this population.

A community-based study conducted in North India showed that nearly 70% of the elderly population had ophthalmic problems whereas 48% had hypertension. A total of 42% had psychosocial problems, which was more among the elderly women.^[4] Studies have also revealed that with age, there is a decrease in inequalities in morbidity between the genders.^[5] A 10-year longitudinal study identified that elderly women with higher protein intake had fewer health problems in the United States.^[6] Study of morbidity pattern in rural south Indian elderly population of Tamil Nadu has revealed pain in joints and joint stiffness as the leading complaint followed by dental problems and ophthalmic and hearing impairments.^[7] Joshi et al.^[8] determined the morbidity pattern and its relationship with disability and psychological distress in elderly North Indian population and concluded that higher morbidity had higher disability and distress, and age, sex, and occupation were important determinants of morbidity. Morbidity and all-cause mortality are also dependent on dietary and lifestyle factors. A study in the *Journal of the American Medical Association* showed that adherence to Mediterranean diet and healthy lifestyle reduced the all-cause and cause-specific mortality of the elderly population by nearly 50%.^[9]

Trending the disease and functional limitation among the elderly population in America has shown that there is a need for increase in the resources for medical care, rehabilitation, and assistive interventional technology.^[10] A Nigerian study documented that the cardiovascular problems were the most common problem with hypertension being the most frequent diagnosis among the elderly Idikan community. There was no gender association.^[11] An ICMR project disclosed that the most common morbidity was due to chronic diseases, which were indeed the outcome of increased life expectancy. Hearing impairment followed by blindness, cardiovascular disease,

and cancer accounted for majority of the disease load in the elderly Indian population.^[12] There are very few such studies from the South Indian female geriatric population documenting the pattern of morbidity; hence, this study was undertaken.

Material and Methods

A retrospective study was done on all geriatric women attending a tertiary care facility of a private medical college hospital of coastal Karnataka, India, from January 2013 to December 2013. Ethical approval was obtained from the Institutional Ethics Committee. Data regarding age, gender, address, general examination, detailed past, personal medical history, drug history, diagnosis, and treatment were documented from the information available from their medical records. Permission to access the necessary records was obtained from proper authorities of the institution. Descriptive statistics (proportions) were applied to study the pattern of morbidity among the study population.

Results

There were 500 geriatric women who sought tertiary care facility from January 2013 to December 2013 and their morbidity pattern was described in Table 1. A total of 40.4% of the women with diabetes had complications [Figure 1].

Discussion

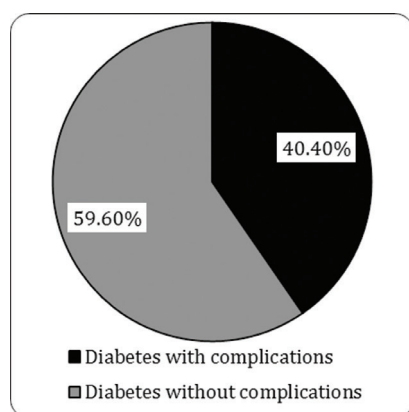
The United Nations does not quote a standard numerical criterion but agrees that those with an age of 60-plus years are considered to be the elderly population.^[13] In India, the elderly population accounts for 7% of the total population, of which two-thirds live in villages and nearly half of them in poor conditions.^[14] As a result of urbanization, migration, and dual-career nuclear families, care of the elderly people has become more of a personal and social problem in India.^[15] As younger generation migrates from rural to urban areas in search of better life and job opportunities, it is resulting in the elderly persons being left out to take care of themselves at times when family support is most needed.

We found that the medical problems reported by the elderly people were mainly chronic noncommunicable diseases. Diabetes and hypertension accounted for the majority of the cases [Table 1] in our study. A total of 29.2% of the women had diabetes. A total of 40.4% of these diabetics had complications [Figure 1]. A total of 26% were people with hypertension. Similar study conducted in Dehradun had reported 41.4% of the geriatric population to be having hypertension.^[16] A community-based study in Rajasthan reported 48% hypertension among the geriatric age group.^[17]

Respiratory problems were the next predominant illness in our study. A total of 10% had various respiratory illnesses, which were mainly chronic bronchitis and asthma and other

Table 1: Percentage distribution of various morbidities ($N = 500$)

Morbidity	Frequency	Percentage (%)
Diabetes mellitus	146	29.2
Hypertension	130	26
Respiratory illnesses	50	10
Fractures	40	8
Ischemic heart diseases	39	7.8
Renal problems	34	6.8
Cataract	33	6.6
Various carcinomas, thyroid diseases, gynecologic problems, psychiatric disorders, and anemia.	28	5.6

**Figure 1:** Percentage distribution of diabetes with and without complications ($n = 146$)

nonspecified lower respiratory tract infections. A small percentage (2.2%) of women with pulmonary tuberculosis was observed. Prakash et al.^[4] have reported a prevalence rate of 36% in their study. Our study found that 8% had musculoskeletal-related problems including fractures, osteoarthritis, and spondylitis.^[4] The reason being, in postmenopausal women, there are changes in the hormonal pattern resulting in altered bone physiology leading to its demineralization and the consequent osteoporotic changes. Prakash et al.^[4] reported 14.6% of musculoskeletal problems among the elderly population in their study. A total of 7.8% had ischemic heart diseases in their study.^[4] Aortic sclerosis among the elderly population in the United Kingdom was seen to be associated with an approximate 50% increase in risk of myocardial infarction even in the absence of hemodynamically significant obstruction to left ventricular outflow.^[17]

A total of 6.8% had renal problems such as pyelonephritis, ureteric obstruction, renal calculus, and acute renal failure. A total of 4.6% had urinary tract infection in our study. Neglect in nutrition and lack of personal hygiene and care act as contributing factors for precipitation of these diseases. Cataract accounted for 6.6% of the diseases in our study population whereas a community-based study in Chandigarh revealed 19% of the subjects had mature and immature cataract.^[18]

Our study also revealed 4.2% to be having various carcinomas including carcinoma of ovary, cervix, lung, esophagus, liver, tongue, colon, rectum, cholangiocarcinoma, and chronic myeloid leukemia. Incidence of neoplasm is high among the elderly population. Environment and genetics play a major role in its development. Most of these patients attended the hospital for seeking various therapeutic modalities for the cancer.

A total of 4% had thyroid diseases such as multinodular goiter, hypothyroidism, and thyroglossal cyst. A total of 3.6% had psychiatric illness mainly depression, loneliness, and feeling of neglect. Also, 3.4% of the individuals had anemia. On the contrary, Chandigarh-based community survey had reported majority of their sample population to be having anemia, which was nearly two-third of the population.^[18] As there is no life debilitating symptoms in the less severe forms of anemia, the elderly people usually do not seek hospital care; hence, probably, our study revealed only 3.4% of them to be having anemia. More such studies among both the genders across different settings form the future scope of this study.

In terms of health status, morbidity among geriatric women is more apparent than men. We focused only on the female morbidity pattern and only one sample area; these are the limitations of this study. In the process of caring and nurturing other members of the family, women in India are known to neglect their own well-being. Prevalence of high morbidity among the elderly population needs strengthening of geriatric health care services to meet the common existing problems in the community. Preventive strategies, curative measures, and rehabilitative programs for the elderly population are the need of the hour in our country.

Studies regarding the causes for seeking tertiary care among women, who are geriatric, in India are scarce. Our study among the elderly women of coastal Karnataka of South India has highlighted a high prevalence of morbidity and identified common existing medical problems such as diabetes mellitus, hypertension, respiratory diseases, arthritis, and anemia. As there is a rapid expansion in the number of elderly population, there is an urgent need to develop geriatric health care services in India and provide training to health care providers to manage the common existing health problems in the country. Unearthing information on this aspect will enable

proper allocation of resources as well as to spread awareness and preventive measures among the masses as majority of this section of population is illiterate in Indian scenario.

Conclusion

Diabetes mellitus and hypertension were the leading diseases among the study population. Hence, it is prudent to screen the elderly population for these noncommunicable diseases and to spread knowledge, awareness, and self-care advice to them.

References

1. Ministry of Social Justice and Empowerment. *National Policy on Older Persons*. Available at: <http://socialjustice.nic.in/hindi/pdf/npopcomplete.pdf> (last accessed on November 11, 2015).
2. Available at: <http://www.worldlifeexpectancy.com/india-life-expectancy> (last accessed on November 11, 2015).
3. Government of India. Planning Commission. Report of the Expert Group to Recommend the Detailed Methodology for Identification of Families Living Below Poverty Line in Urban Areas. Available at: http://planningcommission.nic.in/reports/genrep/rep_hasim1701.pdf (last accessed on November 11, 2015).
4. Prakash R, Choudhary SK, Singh US. A study of morbidity pattern among geriatric population in an urban area of Udaipur Rajasthan. *Indian J Community Med* 2004;29(1):35–40.
5. Huisman M, Kunst AE, Mackenbach JP. Socioeconomic inequalities in morbidity among the elderly: an European overview. *Social Sci Med* 2003;57(5):861–73.
6. Vellas BJ, Hunt WC, Romero LJ, Koehler KM, Baumgartner RN, Garry PJ. Changes in nutritional status and patterns of morbidity among free-living elderly persons: a 10-year longitudinal study. *Nutrition* 1997;13(6):515–9.
7. Purty AJ, Bazroy J, Malini KAR, Vasudevan K, Veliath A, Panda P. Morbidity pattern among the elderly population in the rural area of Tamil Nadu, India. *Turk J Med Sci* 2006;36(1):45–50.
8. Joshi K, Kumar R, Avasthi A. Morbidity profile and its relationship with disability and psychological distress among elderly people in Northern India. *Int J Epidemiol* 2003;32(6):978–87.
9. Knoop KTB, de Groot LCPGM, Kromhout D, Perrin AE, Moreiras-Varela O, Menotti A, et al. Mediterranean diet, lifestyle factors, and 10-year mortality in elderly European men and women: the HALE Project. *JAMA* 2004;292(12):1433–9.
10. Parker MG, Thorslund M. Health trends in the elderly population: getting better and getting worse. *Gerontologist* 2007;47(2):150–8.
11. Ogunniyi A, Baiyewu O, Gureje O, Hall KS, Unverzagt FW, Oluwole SA, et al. Morbidity pattern in a sample of elderly Nigerians resident in Idikan community, Ibadan. *West Afr J Med* 2001;20(4):227–31.
12. Shah B, Prabhakar AK. Chronic morbidity profile among elderly. *Ind J Med Res* 1997;106:265–72.
13. World Health Organization. Definition of an older or elderly person. Available at: <http://www.who.int/healthinfo/survey/ageingdefnolder/en/index.html> (last accessed on November 11, 2015).
14. Jamuna D. Stress dimensions among caregivers of the elderly. *Indian J Med Res* 1997;106:381–8.
15. Jamuna D. Issues of elder care and elder abuse in the Indian context. *J Aging Soc Policy* 2003;152(2–3):125–42.
16. Kishore S, Juyal R, Semwal J, Chandra R. Morbidity profile of elderly persons. *JK Sci* 2007;9(2):87–9.
17. Otto CM, Lind BK, Kitzman DW, Gersh BJ, Siscovick DS. Association of aortic-valve sclerosis with cardiovascular mortality and morbidity in the elderly. *N Engl J Med* 1999;341(3):142–7.
18. Swami HM, Bhatia V, Dutt R, Bhatia SPS. A community-based study of the morbidity profile among the elderly in Chandigarh, India. *Bahrain Med Bull* 2002;24(1):1–8.

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