

MORBIDITY PATTERN AMONG THE ELDERLY POPULATION IN AN URBAN FIELD PRACTICE AREA OF GUNTUR MEDICAL COLLEGE, GUNTUR.

K.V. Phani Madhavi¹, B. Anil Kumar², B. Chandrasekhar Reddy³, B.P. Ravi Kumar⁴

HOW TO CITE THIS ARTICLE:

K.V. Phani Madhavi, B. Anil Kumar, B. Chandrasekhar Reddy, B.P. Ravi Kumar. "Morbidity pattern among the elderly population in the urban field practice area of Guntur Medical College, Guntur". Journal of Evolution of Medical and Dental Sciences 2013; Vol. 2, Issue 52, December 30; Page: 10277-10283.

ABSTRACT: INTRODUCTION: India, the world's second most populous country, has experienced a dramatic demographic transition in the past 50 years, entailing almost a tripling of the population over the age of 60 years (i.e., the elderly) (Government of India, 2011). Discoveries in medical science and improved social conditions during past few decades have increased the life span of man. The ageing population is both a medical and sociological problem. It creates a greater demand on the health services of a community. In rapidly graying world, healthy aging is vital for countries. The Predicted explosion of non-communicable diseases like cardiovascular diseases, cancer, and depression in the ever increasing number of older persons globally, will result in enormous human and social costs unless preventive action is taken.¹ Morbidity among elderly people has an important influence on their physical functioning and psychological well-being. This study was undertaken to know the prevalence of various morbidities among the elderly patients. **OBJECTIVE:** To assess the morbidity profile of geriatric population. **METHODOLOGY:** A cross sectional study was conducted in Mallikarjun pet which is in the urban field practice area of Guntur medical college, Guntur. Mallikarjun pet consists of 1156 families with a population of 4114. The study was conducted to assess the health status of elderly population during October 2012 – November 2012. Study has included all the households and residents of the study area who were above 60 years of age. Out of 297 elderly persons, 283 participated in the study and data were collected using pretested questionnaire followed by physical examination. Data was analyzed using SPSS Version 21.0. **RESULTS:** Out of 283 study participants, 76 (26.9%) are males and 207 (73.1%) are females with a mean age of 70 + 6.8 yrs. Majority of them are living with spouse 225 (79.5%) whereas 53 (18.7%) are widows, 5 (1.8%) are widowers. About 133 (47%) belong to lower socio-economic class. Almost all are suffering with arthritis of knee joint. About 278 (98.24%) are anemic, 102 (36%) are known hypertensive, 20 (7%) are diabetics and 2 (0.7%) are suffering from Coronary artery disease. **CONCLUSION:** There is a need for creating awareness regarding regular periodic medical examination and treatment of elderly at the primary care level, which will help prevent further deterioration of their health status.

KEY WORDS: morbidity, elderly.

INTRODUCTION: India, the world's second most populous country, has experienced a dramatic demographic transition in the past 50 years, entailing almost a tripling of the population over the age of 60 years (i.e., the elderly) (Government of India, 2011). This pattern is poised to continue. It is projected that the proportion of Indians aged 60 and above will increase from 7.5% in 2010 to 11.1% by 2025 (United Nations Department of Economic and Social Affairs [UNDESA], 2008). This is a small percentage point increase, but a remarkable figure in absolute terms.

ORIGINAL ARTICLE

According to UNDESA data on projected age structure of the population (2008), India had more than 91.6 million elderly in 2010 with an annual addition of 2.5 million elderly between 2005 and 2010. The number of elderly in India is projected to reach 158.7 million by 2025 (United Nations Department of Economic and Social Affairs, 2008), and is expected, to surpass the population of children below 14 years by 2050.¹

Morbidity among elderly people has an important influence on their physical functioning and psychological well-being. Many elderly have several disorders at the same time. The incidence of diseases increases with age. The importance of early surveillance of the health needs of elderly people has been emphasized, Knowledge of the situation and circumstances of the elderly population is essential to the provision of cost- effective services and the planning of strategies for intervention and care.

Little is known about the health needs of elderly population. Assessment of the morbidity profile will help in the application of interventions, to improve the health status and the quality of life of the elderly. The objective of this study was to know the prevalence of various morbidities among the elderly patients.

OBJECTIVE:To assess the morbidity profile in geriatric population.

METHODOLOGY:A cross sectional study was conducted in Mallikarjun pet consisting of 1156 families with a population of 4114 which is in the urban field practice area of Guntur medical college, Guntur to assess the health status of elderly population during October 2012 – November 2012. Study had attempted to include all the households and residents of the study area who were above 60 years of age. Out of 297 elderly about 283 elderly persons participated in the study. The information was collected on a predesigned and pretested questionnaire through personal interview by house to house visits.

Each individual was informed about the purpose of the study, and confidentiality of the information was assured. In order to establish rapport and to ensure complete coverage, repeat home visits were made. A detailed history was taken regarding present and past illness. General physical examination was done. Height was measured in the standing position with bare foot against the wall and was calculated to the nearest 0.5cm. Body weight was measured in kilograms using a spring weighing machine to the nearest 0.5 kg with light clothes on. Blood pressure was measured twice using a mercury sphygmomanometer in the right arm with the elderly in the sitting position. The Korotkoff phases I and V were recorded for systolic and diastolic pressures respectively. If high BP was detected, two more readings were taken on two different occasions to confirm hypertension. They were subsequently graded as Normotensive: systolic BP <140, diastolic <90 mmHg, Hypertensive: systolic BP >140 and diastolic >90 mmHg (JNC 7).

Screening for vision was tested by Snellen's chart. The laboratory tests done on individuals included hemoglobin estimation by Sahli's method and random blood sugar by electronic glucometer. All these investigations were conducted at the same time or an appointment was given on following days as per the convenience of the individuals.

Fourteen persons could not be interviewed as they were not present at house or locked houses even on repeated visits. Hence the study population consisted of 283 elderly individuals. All the data collected was analyzed using SPSS software Version - 21 and the results are presented.

ORIGINAL ARTICLE

RESULTS: Of the 283 elderly respondents, 76(26.9%) were male and 207 (73.1%) were female. Their mean age was 70.14 years (S.D = 6.8 years, range 60–96 years).

- Majority of the elderly belong to age group 65-69 years 100 (34.8%) followed by 70-74 years 79(27.5%) and above 80 years 41(14.3%).
- The majority of respondents (n = 225, 79.5%) were living with spouse, 53 (18.7%) were widows, 5 (1.8%) were widowers.
- Regarding personal habits, 70 (24.73%) of the elderly group were smokers and 4 (1.41%) regularly consumed alcohol, and 29 (10.25 %) are both smokers and alcoholics.
- The percentage of illiterate elderly was found to be 78.4%
- Only 1% of the elderly have done study till graduation.
- About half (49.8%) of the respondents were unemployed.
- Most of the elderly (47%) belongs to lower class.
- Only 2.8% of the elderly belongs to upper class.
- Almost all are suffering with arthritis. About 278(98.24%) are anemic, 226(78.9%) are known hypertensive, 29(10.2%) are diabetics and 2(0.7%) were suffering from Cardiovascular artery disease.
- Total Morbidity prevalence was 146 (51.6%).

Age in years	NO (%)
60-64	34(11.8%)
65 -69	100(34.8%)
70 -74	79(27.5%)
75-79	33(11.5%)
>80	41(14.3%)
Marital status	
Married	225(79.5%)
Widow	53(18.7%)
Widower	5(1.8%)
Education	
Illiterate	222(78.4%)
Primary	52(18.4%)
Secondary	7(2.5%)
Intermediate	1(0.4%)
Graduate	1(0.4%)
Occupation	
Unemployed	141(49.8%)
Unskilled	93(32.9%)
Skilled	35(12.4%)
Semiskilled	13(4.6%)
Professor	1(0.4%)
Socio-economic status	
Upper	8(2.8%)

ORIGINAL ARTICLE

Upper middle	37(13.1%)
Lower middle	10(3.53%)
Upper lower	95(33.57%)
Lower	133(47%)

Table 1: Sociodemographic profile of study population

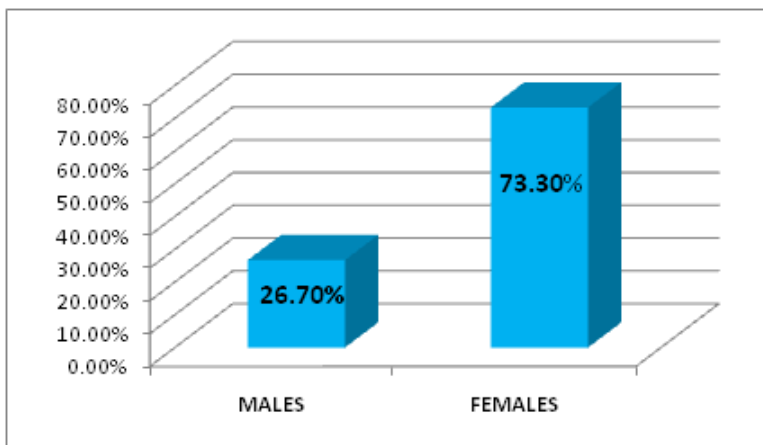


FIG. 1: Showing sex wise distribution of morbidity

Living with	NO. (%)
Living alone	11(3.9%)
With spouse in own house	210(74.20%)
Living (with spouse) with children	5(1.8%)
Living (without spouse) with children	52(18.3%)
Living with grandchildren	1(0.4%)
Living with relatives	4(1.4%)

Table 2: Living arrangement of study population

TYPE OF MORBIDITY	NO (%)
Hypertension already detected and taking treatment including detected during the study(>140/90)(JNC-7)	226(78.9%)
Diabetes mellitus already detected and taking Treatment including detected during the study(Random Blood Sugar (> 200 mg/ml)	29(10.2%)
Arthritis (knee joint)	277(97.87%)
Anemia	278(98.24%)
Chronic bronchitis	9(3.2%)
Cardiovascular accident(CVA)	2(0.7%)
Neoplasm's	7(2.5%)

Table 3: Morbidity pattern among study population

ORIGINAL ARTICLE

BMI	NO. (%)
< 18.5 (Underweight)	54(19.1%)
18.5-24.9(normal)	152(53.7%)
25 - 29.9(pre obese)	54 (19.1%)
30 -34.9(obese I)	19 (6.7%)
35 - 39.9 (obese II)	4 (1.4%)

Table 4: Distribution of elderly based on Basal metabolic rate

- Only 8.1% of the elderly are obese.

EYE CONDITION	NO.(percentage)
No cataract(right eye, left eye)	17(5.9%)
Operated both eyes for cataract	16(5.6%)
Operated only left eye for cataract	4(1.4%)
Operated only right eye for cataract	1(0.3%)
Cataract in both eyes	245(86.5%)
Total	283(100%)

Table 5: Distribution of cataract among elderly

- Majority of the elderly (86.5%) are having cataract in both the eyes.

	HYPERTENSIVES	NON HYPERTENSIVES	TOTAL
BMI (>25)	111	14	125
BMI(<25)	118	40	158
TOTAL	229	54	283

Table 6: Distribution of obesity among Hypertensive and Non-Hypertensive

Pearson chi square value =9.007 df=1 p=0.003

Likelihood ratio=9.411

- There is statistically significant association found between BMI and hypertension.

DISCUSSION: In India, the elderly people suffer from dual medical problems, i.e., both communicable as well as non-communicable diseases.

This is further compounded by impairment of special sensory functions like vision and hearing. A decline in immunity as well as age-related physiologic changes leads to an increased burden of morbidity in the elderly.

In this study the literacy rate was found to be 21.6% among the elderly which is comparable with the findings of Anil Jacob et al where it was 21.3 %.²

The body mass index (BMI) is a useful index of relative weight that can be applied to define obesity. In the present study 19.1% of the elderly were overweight and 8.1% are obese whereas it was 32% and 21.2% respectively in a study by Lawrence et al.³ Obesity is associated with impaired physical activity and associated risks.

Majority of the elderly (98.24%) were suffering from anemia. In contrast The prevalence was (86.46%) in Jain NC et al study.⁴ Anemia in elderly may be multifactorial in etiology.

ORIGINAL ARTICLE

A high prevalence of Osteoarthritis / joint pains(97.9%) was reported in the current study especially it was high among females. This reflects the hard life of women who never retire from household work unless totally disabled. In contrast the prevalence was(84.35%) in a study done Surekha Kishore et al⁵, only 22.2% in a study conducted by Kajal Srivastava et al in urban Agra⁶ and 26.8% in Lawrence et al³ and 15.6% in a Korean study.⁷

Eye problems were the most commonly diagnosed morbidity amongst the respondents; cataracts accounted for 86% of the diagnoses. The high prevalence of cataract amongst the respondents may be attributed to cultural fear of surgery, the cost of surgery and the belief that the diminution of vision is the consequence of ageing. In contrast it was (70%) in a study conducted by Prakash et al⁸, 40% in a study reported by Purohit and Sharma et al⁹, (39.4%) in a study conducted by Lawrence et al³, 27.7% in Surekha Kishore et al⁵, 24.4% in a study conducted by Kajal Srivastava et al in urban Agra⁶

Prevalence of Hypertension was found to be 78.9% of the study population. In contrast it was 41.4% in a study reported by Surekha Kishore et al⁵, (37.5%) in Korea,⁷ 41.81% in Jain NC et al⁴, 2.2% in Kajal Srivastava et al in urban Agra⁶.

Prevalence of Diabetes was 29(10.2%) in the study population which is comparable with the findings of Korean study (14.9%)⁷, Lawrence et al³ 13.2%.³

In the present study the prevalence of Morbidity among elderly males and females was (51.31%) and females (51.7%). In contrast it was very high in a study conducted by Piramanayagam et al¹⁰ where it was 77.6% in males and 90.9% in females.

CONCLUSION: Majority of the elderly (98.24%) were suffering from anemia.

A high prevalence of Osteoarthritis / joint pains(97.9%) was reported in the current study especially it was high among females. This reflects the hard life of women who never retire from household work unless totally disabled.

Eye problems were the most commonly diagnosed morbidity amongst the respondents; cataracts accounted for 86% of the diagnoses. The high prevalence of cataract amongst the respondents may be attributed to cultural fear of surgery, the cost of surgery and the belief that the diminution of vision is the consequence of ageing.

Prevalence of Hypertension was found to be 78.9% of the study population.

Prevalence of Diabetes was 29(10.2%) in the study population

RECOMMENDATIONS:

1. Appropriate intervention strategies must be initiated by the policy makers to improve the health status of the elderly.
2. Health care personnel must be actively involved in providing health education regarding life style modification by making frequent visits to their homes.
3. The health of the aged is a public health issue and needs to be addressed through primary health care, for that every medical officer has to undergo training in geriatric health care.
4. There should be separate geriatric clinics in both private as well as government hospitals to deal with the problems faced by the elderly.
5. Separate Geriatric OPD services to be established to should provide screening services as well as curative and rehabilitative services and convalescent homes to provide long-term care.

ORIGINAL ARTICLE

6. Community Based Health Insurance system for elderly people has to be developed to support them financially.

REFERENCES:

1. SubhojitDey, DevakiNambiar, J. K. Lakshmi, Kabir Sheikh, and K. SrinathReddy. Aging in Asia: Findings from new and emerging data initiatives, 2012/15. Health of the Elderly in India: Challenges of Access and Affordability.
2. Anil Jacob Purty, Joy Bazroy, Malini Kar, Kavita Vasudevan, Anita Veliath, Purushottam Panda. Morbidity Pattern among the Elderly Population in the Rural Area of Tamil Nadu, India. Turk J Med Sci 36 (2006) 45-50.
3. Adebuseye L A, Ladipo M M, Owoaje E T, Ogunbode A M. Morbidity pattern amongst elderly patients presenting at a primary care clinic in Nigeria. Afr J Prm Health Care Fam Med. 2011; 3(1).
4. Jain NC, Pawar AB, HadiyaRavjibhai, Bansal RK, Short Communication Morbidity profile of elderly people in slums of Surat city.
5. Surekha Kishore, RuchiJuyal, JayantiSemwal, Ramesh Chandra. Morbidity Profile of Elderly Persons.
6. Kajal Srivastava, S C Gupta, S K Kaushal, MridulChaturvedi. Morbidity profile of elderly a cross sectional study of urban Agra.
7. Eun-kyung Woo Changsu Han, SangmeeAhn Jo, Min Kyu Park. Morbidity and related factors among elderly people in South Korea: results from the Ansan Geriatric (AGE) cohort study .BMC Public Health 2007, 7:10 doi: 10.1186/1471-2458-7-10.
8. Prakash R, Choudhary SK, Singh US .A Study of morbidity pattern among geriatric population in an urban area of Udaipur, Rajasthan. IJCM 2004; 29(1): 35-40.
9. Purohit CK, Sharma R. a study of general health status of persons aged 60 years and above in RHTC area, Naila. Ind J Med Research. 1976; 38(6):117-22.
10. Piramanayagam A, Bayapareddy N, Pallavi M, Madhavi E, Nagarjunareddy N, Radhakrishna L.A cross sectional study of the morbidity pattern among the elderly people South India. Int J Med Res Health Sci. 2013; 2(3):372- 379.

AUTHORS:

1. K.V. Phani Madhavi
2. B. Anil Kumar
3. B. Chandrasekhar Reddy
4. B.P. Ravi Kumar

PARTICULARS OF CONTRIBUTORS:

1. Assistant Professor, Department of Community Medicine, Mamata Medical College, Khammam.
2. Assistant Professor, Department of Community Medicine, NRI Medical College, Chinakakani.
3. Assistant Professor, Department of Community Medicine, Mamata Medical College. Khammam.
4. Professor, Department of Community Medicine, Mamata Medical College. Khammam.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. K.V. Phani Madhavi,
Assistant Professor,
Department of Community Medicine,
Mamata Medical College,
Khammam, Andhrapradesh.
Email- drmadhavikvp@gmail.com

Date of Submission: 23/11/2013.
Date of Peer Review: 24/11/2013.
Date of Acceptance: 13/12/2013.
Date of Publishing: 27/12/2013