

Disease Patterns among the Elderly People coming in Tribhuvan University Teaching Hospital, Kathmandu, Nepal

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Abstract

Introduction: Globally, the proportion of elderly people is increasing at an unprecedented rate. Geriatric health problems are important issues even in developing countries like Nepal. The main objective of the study is to identify the disease patterns among the elderly people coming in Tribhuvan University Teaching Hospital (TUTH), Kathmandu, Nepal.

Methods: A cross sectional descriptive study was done among 100 patients, aged 60 years and above, in General Health Checkup clinic of Tribhuvan University Teaching Hospital in Kathmandu. Written consent was maintained in the study. The obtained data through questionnaire method were managed by coding and entered and analyzed by using IBM SPSS V20.

Results: More than half (53%) of the patients were male. The mean (\pm SD) age was 67.35 (\pm 6.927) years. Most of them were suffering from more than one disease. Hypertension was the commonest morbidity found in 47% of the patients. The other health problems were diabetes mellitus, dyslipidemia, coronary artery disease, hypothyroidism, cholelithiasis, cataract, chronic obstructive airway disease, benign hyperplasia of prostate and hysterectomy.

Conclusion: From the study, it can be concluded that non-communicable diseases are the major bulk of diseases in elderly population and have substantial impact on public health. Clinical settings like general health checkup clinics should focus on disease prevention and management including life style modifications, early detection and treatment, and self-management education. Effective geriatric health care services need to stress ranging from family-based community care approach to convenient access to primary health care. Family caregivers and health care professionals need training and support in this field.

Keywords: Elderly people, Disease patterns

Introduction

Globally, the proportion of elderly people is increasing at an unprecedented rate.¹ The number of people aged 60 and over is growing faster than any other age group. A growth in older persons of some 694 million or 223 percent is projected in between 1970 and 2025. There will be a total of about 1.2 billion people over the age of 60 in 2025. By 2050, there will be 2 billion with

80 percent of them living in developing countries. In terms of regions, over half of the world's elderly people live in Asia.² In the context of Nepal, the elderly people above 60 years has been from 4.6% in the year 2001 to 9.1% in the year 2011.³

The global demographic transition has been a cause of serious concern to both developed and developing nations. It is only in recent years that the World Health

Organization (WHO) has tried to tackle this truly global problem with concerted efforts. Geriatric health problems are important issues even in developing countries like Nepal. One of the biggest social changes brought about by improved standards of living is population aging. In most developing countries, formal social security systems have limited coverage and inadequate benefit payments. As a result, majority of the older people depend on family support networks, especially in rural settings where people are most affected by poverty and poor health conditions. According to Nepal census 2011, Nepal has 2.1 million elderly population which constitutes 8.1% of the total population.⁴ Medical problems in the elderly can involve any organ system in the body. Most conditions result from decreased function or degeneration of the involved organ. Comprehensive health maintenance screening of this population is becoming an important task for primary care physician. In Nepal like in other developing countries, geriatric medical care is a neglected area which deserves better understanding particularly by the general practitioners. This study is an attempt to find out the morbidity patterns among geriatric patients attending general health checkup clinic.

Developing countries like Nepal have a poor track record of equitable distribution of health care. Marginalized groups living in urban slums and rural villages have poor penetration of health services. Estimates of health problems of the elderly in developing countries are required from time to time to predict trends in disease burden and plan health care for the elderly.

Methods

This was the cross sectional descriptive study conducted in General Health Checkup (GHC) clinic of Tribhuvan University Teaching Hospital (TUTH) in Kathmandu. GHC of TUTH provides screening checkup as a package program and thus, is an appropriate program to identify the disease pattern. In this six months long study, 100 patients aged 60 years and above, who came for screening checkup, were selected using non probability purposive sampling technique.

Questionnaire method was used to collect the data from the patients. In an anonymized questionnaire proforma, chief complaints, demographic history, personal, past, family history, medication history, allergic and general and systemic examinations and detailed investigation reports were recorded. Likewise, necessary investigations according to the format of

GHC were done. Patients were managed according to the patterns of diseases.

Diagnosis of the disease and related information were derived from:

1. History of chronic diseases. For example - hypertension, diabetes.
2. Findings on clinical examinations.
3. Findings of laboratory investigations, radiological investigations and electrocardiogram.

Descriptive analysis was done using IBM SPSS V 20. This study was approved by the Institutional Review Board of the Institute of Medicine. Further, written consent was taken from each patient. The identity and information of the patients were kept confidential.

Results

In the study, out of the total 100 patients, more than half of them 53% were male while 47% were female. 57% of them were from Kathmandu valley and 43% from outside Kathmandu valley. The age ranged from 60 to 80 years. More than three-fourth (77.0%) of them was in the age group 60 to 70 years and only 9% were above the age of 80 years. The mean (\pm SD) age was 67.6 (\pm 6.927) years. Most of them were suffering from more than one disease.

Smoking: About three fifth of the patients 63% were non-smokers followed by current smokers (21%) and ex-smokers (16%). **Alcohol intake:** About one-fourth (24%) were currently consuming alcohol; 4% had given up and 72% had never taken. **Body Mass Index (BMI):** With respect to BMI, about one third of the patients (34%) were found normal followed by overweight (29%), obese (28%) and underweight (9%). **Hypertension:** Hypertension was the commonest morbidity affecting 47%. Out of them, 43% were already diagnosed and 4% additional were diagnosed during this general health checkup. Hypertension was more among males than females - 50.9% and 40.4% respectively. **Diabetes Mellitus:** One in ten patients (11%) had past history of Type 2 diabetes mellitus. New cases were diagnosed in only 2%. Diabetes was common among males (15.1% vs. 8.5%). **Dyslipidemia:** Only 1% case reported to have dyslipidemia but additional 14% were found so after the lipid profile test. **Coronary artery disease (CAD):** 3% of the patients were under treatment for coronary artery disease and 3%

more were diagnosed as CAD on electrocardiogram. **Hypothyroidism:** Hypothyroidism was noted in 14.9% females and 1.9% males. **Cholelithiasis:** There was history of cholecystectomy in 11% patients and on ultrasonography of abdomen, 8% new cases were diagnosed to have cholelithiasis. Cholelithiasis was higher among females than males (23.4% vs. 7.6%). **Cataract:** A total of 11% patients had cataract surgery either in one or both eyes. Additional 1% patient was found to have cataract requiring surgery. **Chronic Obstructive Airway Disease (COAD):** Twelve percent patients had chronic obstructive airway disease. **Benign Hyperplasia of Prostate (BPH):** Among male patients, 9.4% had already undergone surgery for benign hyperplasia of prostate. Additional 30.2% males were found to have prostatomegaly grade 2 or more. **Hysterectomy:** Among female patients, 14.9% had past history of hysterectomy for various indications. Additional 4.3% were having uterovaginal prolapse. **Hyperuricemia:** Hyperuricemia was detected in 3% patients only. There was one case with widespread metastasis of cancer with unidentified origin. There were no cases of cirrhosis of liver.

Discussion

BMI which is regarded as an overall indicator of general health was within normal range in one third (34%) subjects only. Underweight included 9% while overweight and obese were 29% and 28% respectively. Thakur et al reported 20.4% underweight in Maharashtra, India.⁵

Hypertension was the most common disease in this study which is similar to other studies done in Nepal and abroad. Shankar et al in a drug utilization study from western Nepal noted hypertension to be the most frequent in hospitalized geriatric patients.⁶ A study in urban Kathmandu reported 32.5% prevalence of hypertension in general population.⁷ A study from Bangladesh reported hypertension as the commonest disease among the elderly patients attending out-patient clinics.⁸ Another study from India revealed 24.1% prevalence of hypertension among elderly attending primary health centers.⁹ A community based cross sectional study in Punjab India found the prevalence of Hypertension 53.7%.¹⁰ With the increasing elderly population, the prevalence of hypertension is increasing globally.^{9, 11}

Coronary artery disease in this study was 6%. A hospital based study in Nepal Medical College Teaching Hospital among patients above the age of 60 years revealed ST changes in ECG in 6.4% subjects.¹² Another ECG study in the same hospital in subjects between the age of 80 to 89 years showed ST changes in 8.48%.¹³ A community-based cross-sectional study in Maharashtra, India reported Ischemic Heart Disease (IHD) in 7.6%.⁵

In this study, 13% had Type 2 diabetes mellitus with

male predominance (15.1% vs 8.5%). Shrestha et al in a community based study in Nepal reported 19% prevalence with male predominance.¹⁴ Relying on fasting for the diagnosis might have missed the cases as fasting criteria are less sensitive for diagnosing diabetes in elderly population.¹⁵ However, a hospital based inpatient study on non-communicable diseases reported diabetes in 12%.¹⁶

About one-fifth (21.0%) of the subjects were current smokers. Tobacco cessation campaigns among the elderly should be worthwhile as study has shown that even people who quit past 60 years of age live longer than those who continue to smoke.¹⁷

History of cholecystectomy was 11% and additional 8.0% new cases were diagnosed on ultrasonography of abdomen. In elderly, cholecystectomy is recommended before the onset of acute cholecystitis.¹⁸

In this study, a total of 14.9% had past history of hysterectomy for various indications. However, the detailed indications were not recorded. Additional 4.3% were having uterovaginal prolapse. A population based study in Australia estimated lifetime risk of hysterectomy of 35%.¹⁹

Among male subjects, 9.4% had already undergone surgery for benign hyperplasia of prostate and additional 30.2% were found to have prostatomegaly grade 2 or more in ultrasonography. However, this study did not include prostate symptom scoring and/or quality of life in those participants. A study from Dharan, Nepal concluded that the prostate volume had no correlation with age, symptom score and quality of life score. Thus, the prostatic size should not be an only and important consideration.²⁰ A histopathological study of prostatic biopsy, revealed prostatitis in 17.0% cases and thus deserves due consideration in cases of prostatomegaly.²¹

Conclusion

Non-communicable diseases are the major bulk of diseases in elderly population and have substantial impact on public health. Clinical settings like general health checkup clinics should focus on disease prevention and management including life style modifications, early detection and treatment, and self-management education. Effective geriatric health care services need to stress ranging from family-based community care approach to convenient access to primary health care. Family caregivers as well as health care professionals need training and support in this field.

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References

1. United Nations Population Fund. Ageing in the twenty first century: a celebration and a challenge. 2012 [cited 2017 July 22].
2. World Health Organization. Active ageing: a policy framework. 2002 [cited 2017 July 22].
3. Population Reference Bureau. World population data sheet. 2013.
4. Shrestha L. Geriatric health in Nepal: concerns and experience. *Nepal Med Coll J*. 2013 June; 15(2):148-52.
5. Thakur RP, Banerjee A, Nikumb VB. Health problems among the elderly: a cross-sectional study. *Ann Med Health Sci Res*. 2013 Jan-Mar; 3(1): 19-25.
6. Shankar PR, Upadhyay DK, Subish P, Bhandari RB, Das B. Drug utilization among older inpatients in a teaching hospital in Western Nepal. *Singapore Med J*. 2010 Jan; 51(1):28-34.
7. Dhungana RR, Pandey AR, Bista B, Joshi S, Devkota S. Prevalence and associated factors of hypertension: A community-based cross-sectional study in municipalities of Kathmandu, Nepal. *Int J Hypertens*. 2016; 2016:1656938. doi: 10.1155/2016/1656938.
8. Hosain GM, Begum A. Health needs and health status of the elderly in rural Bangladesh. *Asia Pac J Public Health*. 2003; 15(1):3-9.
9. Kamble SV, Ghodke YD, Dhumale GB, Avchat SS, Goyal RC. Health Status of elderly persons in rural area of India. *Indian Medical Gazette*. 2012; 295-99.
10. Singh N, Singh SK, Yadav A, Suman SK, Kumar S, Singh JV. Community based study of the morbidity profile among elderly people in a rural area of Patiala district. *J Adv Res Biol Sci* 2012; 4(2): 156-61.
11. Chadha SL, Radhakrishnan S, Ramachandran K, Kaul U, Gopinath N. Epidemiological study of coronary heart disease in urban population of Delhi. *Indian J Med Res*. 1990 Dec; 92:424-30.
12. Devkota KC, Thapamagar SB, Bista B, Malla S. ECG findings in elderly. *Nepal Med Coll J*. 2006 Jun; 8(2):128-32.
13. Devkota KC, Pudasaini B. ECG changes in octogenarians. *Nepal Med Coll J*. 2011 Sep; 13(3):216-9.
14. Shrestha UK, Singh DL, Bhattarai MD. The prevalence of hypertension and diabetes defined by fasting and 2-h plasma glucose criteria in urban Nepal. *Diabet Med*. 2006 Oct; 23(10): 1130-5.
15. Choi KM, Lee J, Kim DR, Kim SK, Shin DH, Kim NH, et al. Comparison of ADA and WHO criteria for the diagnosis of diabetes in elderly Koreans. *Diabet Med*. 2002 Oct; 19(10):853-7.
16. Bhandari GP, Angdembe MR, Dhimal M, Neupane S, Bhusal C. State of non-communicable diseases in Nepal. *BMC Public Health*. 2014 Jan 10; 14:23. doi: 10.1186/1471-2458-14-23
17. Doll R, Peto R, Borcham J, Sutherland I. Mortality in relation to smoking: 50 years' observation on male British doctors. *BMJ*. 2004; 328:1519-27.
18. Nielsen LB, Harboe KM, Bardram L. Cholecystectomy for the elderly: no hesitation for otherwise healthy patients. *SurgEndosc*. 2014 Jan; 28(1):171-7. doi: 10.1007/s00464-013-3144-8.
19. Spilsbury K, Semmens JB, Hammond I, Bolck A. Persistent high rates of hysterectomy in Western Australia: a population-based study of 83 000 procedures over 23 years. *BJOG*. 2006 Jul; 113(7):804-9.
20. Agrawal CS, Chalise PR, Bhandari BB. Correlation of prostate volume with international prostate symptom score and quality of life in men with benign prostatic hyperplasia. *Nepal Med Coll J*. 2008 Jun; 10(2):104-7.
21. Shakya G, Malla S, Shakya KN. Salient and comorbid features in benign prostatic hyperplasia: a histopathological study of the prostate. *Kathmandu Univ Med J (KUMJ)*. 2003 Apr-Jun; 1(2):104-9.