ISSN: 2349-2678

Contents lists available at www.ijpba.in

International Journal of Pharmaceutical and Biological Science Archive

Index Copernicus Value 2017: 71.80

Volume 5 Issue 1; January-February; 2017; Page No. 67-70

RESEARCH ARTICLE

Clinical Profile and Pattern of Non-Communicable Diseases in Individuals Aged Over 40 Years: A Cross-Sectional Study

Dr Shankar Wankhede

Associate professor, Department of General Medicine, DY Patil School of Medicine, Navi Mumbai, Nerul, Navi Mumba 400 706 Maharashtra, India

ABSTRACT:

Background: Non-communicable diseases (NCDs) are a leading cause of morbidity and mortality worldwide, especially among older adults. With increasing life expectancy and changing lifestyles, understanding the clinical profiles and patterns of NCDs in individuals aged over 40 is crucial for effective healthcare planning.

Objective: This study aims to analyze the clinical profiles, prevalence, and patterns of non-communicable diseases among individuals aged 40 years and older.

Material and Methods: A cross-sectional study was conducted in the Department of General Medicine involving 200 participants aged over 40 years who attended a tertiary care hospital. Data on demographics, medical history, lifestyle factors, and clinical assessments were collected. Statistical analyses were performed to determine the prevalence and associations of different NCDs.

Results: Among the participants, hypertension (65%) was the most prevalent condition, followed by diabetes mellitus (45%) and cardiovascular diseases (30%). A significant association was found between obesity, sedentary lifestyle, and the prevalence of NCDs. The study also identified a high incidence of co-morbidities, with 35% of individuals having more than one NCD.

Conclusion: The high prevalence of non-communicable diseases in individuals over 40 highlights the need for targeted health interventions and preventive measures. Lifestyle modifications and regular health screenings are essential to manage and prevent NCDs in this age group.

Keywords: Non-communicable diseases, NCDs, Hypertension, Diabetes, Cardiovascular diseases, Age over 40 and Lifestyle factors

Introduction

Non-communicable diseases (NCDs) are increasingly recognized as a major public health challenge globally. These diseases, which include cardiovascular diseases, diabetes, chronic respiratory diseases, and cancers, are characterized by their long duration and generally slow progression (1). The World Health Organization (WHO) estimates that NCDs account for approximately 71% of all deaths globally, with a significant proportion occurring in individuals aged over 40 years (2). As the global population ages, understanding the clinical profiles and patterns of NCDs in this demographic becomes increasingly critical.

The etiology of NCDs is multifactorial, often involving a complex interplay of genetic, environmental, and lifestyle factors (3). Lifestyle choices such as poor diet, physical inactivity, smoking, and excessive alcohol consumption have been linked to the development and progression of these diseases (4). Additionally, risk factors such as obesity and hypertension are highly prevalent in older populations, exacerbating the burden of NCDs (5).

Hypertension is a leading risk factor for cardiovascular diseases and is notably prevalent among individuals aged over 40 years (6). It is often asymptomatic, leading to delayed

Corresponding author: Dr Shankar Wankhede |

diagnosis and treatment. Diabetes mellitus, another common NCD, is associated with significant morbidity, including complications that can severely impact the quality of life (7). Chronic respiratory diseases, often linked to smoking and environmental pollutants, further contribute to the morbidity associated with NCDs in older adults (8).

Understanding the patterns and clinical profiles of NCDs in individuals aged over 40 is essential for developing effective public health strategies. This study aims to assess the prevalence of various non-communicable diseases in this population, explore their associations with lifestyle factors, and highlight the need for preventive healthcare interventions.

AIM AND OBJECTIVES

Aim:

To analyze the clinical profiles and prevalence of non-communicable diseases in individuals aged over 40 years.

Objectives:

1. To identify the prevalence of specific non-communicable diseases among individuals over 40.
2. To assess the relationship between lifestyle factors and the occurrence of NCDs in this demographic.

MATERIAL AND METHODS

This cross-sectional study was conducted in the Department of General Medicine at a tertiary care hospital over six months. A total of 200 participants aged 40 years and older were recruited using convenience sampling. Ethical approval was obtained from the institutional review board, and informed consent was obtained from all participants.

Inclusion Criteria:

- Adults aged 40 years and older
- Willingness to participate in the study

Exclusion Criteria:

- Individuals with acute infections or chronic illnesses unrelated to NCDs
- Patients unwilling to provide informed consent

Data was collected using a structured questionnaire, which included demographic information, medical history, lifestyle factors (diet, physical activity, smoking, and alcohol consumption), and clinical assessments (blood pressure, body mass index, and fasting blood glucose levels). The prevalence of various NCDs was determined, and statistical analyses were performed using SPSS software.

Table 1: Clinical Characteristics of Participants Aged Over 40 Years

Characteristic	N (%)
Age (mean ± SD)	55.3 ± 10.2
Gender (Male/Female)	100 (50%)/100 (50%)
Hypertension	130 (65%)
Diabetes Mellitus	90 (45%)
Cardiovascular Diseases	60 (30%)
Chronic Respiratory Diseases	40 (20%)
Obesity (BMI ≥ 30)	70 (35%)

Table 1 shows the clinical characteristics of the participants, with a notable prevalence of hypertension (65%) and diabetes mellitus (45%). The incidence of obesity was also significant, indicating the potential risk factors for NCDs in this age group.

Table 2: Lifestyle Factors and Their Association with NCDs

Lifestyle Factor	NCD Prevalence (N=200)	Odds Ratio (95% CI)
Sedentary Lifestyle	150 (75%)	2.8 (1.5-5.3)

Poor Dietary Habits	160 (80%)	3.2 (1.7-6.1)
Smoking	50 (25%)	1.5 (0.8-2.9)
Alcohol Consumption	40 (20%)	1.3 (0.6-2.8)

Table 2 outlines the association between lifestyle factors and the prevalence of non-communicable diseases. Sedentary lifestyle and poor dietary habits were significantly associated with higher rates of NCDs, as indicated by the odds ratios.

Discussion

The results of this study underscore the high prevalence of non-communicable diseases among individuals aged over 40 years. Hypertension, diabetes mellitus, and cardiovascular diseases emerged as the most common conditions, corroborating findings from similar studies that have highlighted the burden of NCDs in older populations (9). The prevalence of obesity and its association with these diseases further emphasizes the need for targeted health interventions.

The relationship between lifestyle factors and NCDs is particularly concerning. Sedentary behavior and poor dietary habits were significantly correlated with higher rates of non-communicable diseases, supporting existing literature that links lifestyle choices to disease risk (10). Encouraging physical activity and promoting healthier eating habits are vital for preventing NCDs and improving health outcomes in this demographic.

Additionally, the study identified a significant incidence of co-morbidities among participants, with 35% having more than one NCD. This co-morbidity is a common phenomenon in older adults and poses significant challenges for healthcare management (11). Effective management of patients with multiple NCDs requires a comprehensive approach that considers the interplay between different diseases and their treatments (12).

The implications of these findings are substantial for public health strategies aimed at reducing the burden of NCDs. Preventive measures, such as regular health screenings, lifestyle modification programs, and community health initiatives, are essential to address the rising incidence of NCDs in individuals over 40 (13). Furthermore, raising awareness about the risks associated with sedentary lifestyles and unhealthy dietary choices can empower individuals to make healthier decisions (14).

In conclusion, this study highlights the significant prevalence of non-communicable diseases in individuals aged over 40 years and underscores the critical role of lifestyle factors in their development. Public health initiatives focusing on prevention and early intervention are essential to manage and reduce the burden of NCDs in this population.

References

1. World Health Organization. Noncommunicable diseases country profiles 2014. Geneva: World Health Organization; 2014.
2. WHO Global Status Report on Noncommunicable Diseases 2010. Geneva: World Health Organization; 2011.
3. Beaglehole R, Bonita R, Horton R, Adams C, et al. Priority actions for the non-communicable disease crisis. Lancet. 2011;377(9775):1438-47.
4. Hu FB. Resolved: there is sufficient scientific evidence that decreasing dietary fat intake reduces the risk of chronic disease. Obesity. 2008;16(6):1344-54.
5. Barlow J, Wright C, Turner A, et al. Health promotion: a strategy for reducing health inequalities. Health Educ Res. 2015;30(2):266-78.
6. Ezzati M, Lopez AD, Rodgers A, et al. Comparative risk assessment collaborative group. Estimates of global and regional smoking prevalence in 1990 and projections to 2020: a systematic analysis of tobacco mortality. Lancet. 2006;367(9510): 677-81.
7. American Diabetes Association. Standards of medical care in diabetes—2014. Diabetes Care. 2014;37(Supplement 1).
8. Yach D, Hawkes C, Gould CL, et al. The global burden of chronic diseases:

overcoming impediments to prevention and control. JAMA. 2004;291(21):2616-22.
9. Ghosh S, et al. Prevalence of hypertension in elderly: a study in a rural community. Int J Community Med Public Health. 2016;3(3):591-5.
10. Duran AC, et al. Lifestyle factors and their association with non-communicable diseases in adults: a systematic review. Prev Med. 2016;85:160-70.
11. Dyer AR, et al. Epidemiology of comorbidity in adults aged 45–64 years. Am J Public Health. 2005;95(7):1150-5.
12. Kearney PM, et al. Global burden of hypertension: analysis of worldwide data. Lancet. 2005;365(9455):217-23.
13. McGowan M, et al. The impact of lifestyle interventions on reducing the incidence of diabetes: a systematic review. Diabet Med. 2016;33(7):838-49.
14. Rachum L, et al. Health literacy and its role in reducing health disparities among people with chronic diseases. Prev Chronic Dis. 2016;13.