



STUDY ON MORTALITY IN DEPARTMENT OF GENERAL MEDICINE OF A TERTIARY CARE HOSPITAL OF BIHAR.

General Medicine

Govind Kumar	Additional Professor, Department of General Medicine, IGIMS, Patna
Arshad Ahmad*	Additional Professor, Department of General Medicine, IGIMS, Patna. *Corresponding Author
Soni Talreja	Assistant Professor (Ex), Department of General Medicine, IGIMS, Patna
P Deepankar	Assistant Professor, Department of General Medicine, IGIMS, Patna
Sanjay kumar	Professor & Head, Department of Community Medicine, IGIMS, Patna

ABSTRACT

BACKGROUND: India is under demographic transition due to several factors, especially due to social and economic changes. Mortality parameters are key indicators of health of study population. Hence this study was done to know the mortality pattern of deaths in a tertiary care teaching hospital of Bihar, India.

METHODS: It was a retrospective study of all deaths in the Department of General Medicine, Indira Gandhi Institute of Medical Science, Patna, India of 1 year duration July 2019- June 2020 after permission and approval from Institute Ethical committee. The case records of all deaths from Medical Record Department were analysed for mortality pattern. Medicolegal cases were excluded from current study. The deaths had been classified according to International Classification of Diseases-10th revision. Data was analysed using percentages and chi-square test.

RESULTS- Total 2950 patient admitted in Department of General Medicine from OPD and Emergency Department. Out of which 75 patients died, constituted 2.54 % of all admission during study period of 1 year. Among them 50 were male and 25 were female constituted 66.7 % and 33.3% of all death respectively. Death were 40 in age less than 60 year, and 35 in age group more than 60 year. More number of death were attributed to non-communicable diseases constituted 56 out of 75 death (74.67%).

CONCLUSIONS: India is witnessing ongoing social and economic change resulting in demographic transition. Likewise, pattern of diseases resulting in morbidity and mortality. Non-communicable diseases are more prevalent currently and it is on rise. Screening of high-risk population and health education of mass are key to prevent or reduce morbidity and mortality due to non-communicable diseases.

KEYWORDS

Mortality pattern, Non-communicable diseases, Infective diseases.

Introduction

India is in a state of rapid epidemiological transition due to economic and social change⁽¹⁾ The mortality pattern is one of the key indicator of health of population under study. Mortality statistics gives much more information about the health of population.⁽²⁾ Since long most epidemiological studies begin with mortality data, which is easy to obtain and reasonably accurate. Many country routinely collecting mortality data and cause of death. They are using this data in prioritizing the action and monitoring of public health⁽³⁾ Disease has not changed significantly but their pattern has changed through human history. Pattern of disease in developing countries are very different from developed ones. In developing country like India, there is an increase in frequency of new health problems as hypertension, diabetes, coronary artery disease, cancer and accidents.^(4,5) The medical record department in a teaching hospital has a system of compilation and retention of records. The acquisition of meaningful statistics from these records for health care planning is lacking. Mortality data from hospitalized patients reflect the causes of major illnesses and care-seeking behaviour of the community as well as the standard of care being provided. Records of vital events like death constitute an important component of the Health Information System.

Aim & Objective-To study the mortality pattern and its causes in Patients admitted in General Medicine Department of a tertiary care hospital.

Study design – Retrospective observational study .

Methods: It was a one-year retrospective study of all deaths in the Department of General Medicine, Indira Gandhi Institute of Medical Science, Patna, India, conducted during July 2019- June 2020 after permission and approval from Institute Ethical committee.

Inclusion criteria- The case records of all deaths in the Department of General Medicine from Medical Record Department were analysed for causes and mortality pattern.

Exclusion criteria - Medicolegal cases were excluded from current study.

Data Analysis- The deaths had been classified according to

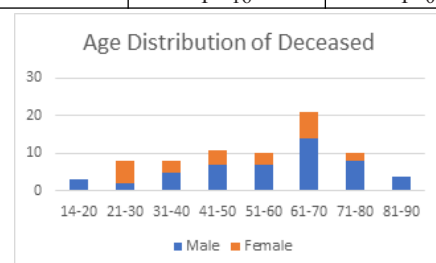
International Classification of Diseases-10th revision and data were analysed using percentages and chi-square test.

Results- Total 2950 patient admitted in Department of General Medicine from OPD and Emergency Department. Out of which 75 patients died, constituted 2.54 % of all admission during study period of 1 year. Among them 50 were male and 25 were female constituted 66.7 % and 33.3% of all death respectively (**Table 1 and Graph 1**). Death were more common in Male as compared to females. Age range in this study were 14 - 87 with mean age of 54.56 year.

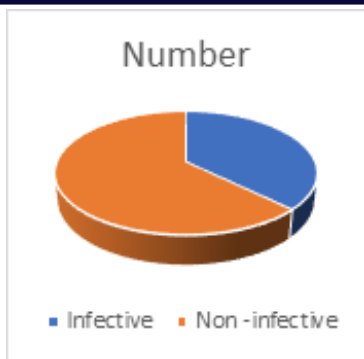
More death was recorded in age less than 60-year compared to more than 60 year of study population. More death was recorded in age range of 61-70 year and 41-50 year in age subgroup of more than 60 year and less than 60 year respectively. Male were more affected in > 60 year age group. More number of deaths were attributed to non-communicable diseases as immediate causes, and it consisted 47 out of 75 death 62.67% (**Graph 2**). However 59 out of 75 deceased had Comorbidity in the form of Hypertension, Diabetes mellitus and Coronary Artery Disease(**Graph 3**). Hospital stay ranged from 1-25 days. Out of 75 deceased patients 49 (65.34 %) died within five day of hospital admission of which twelve patients (16%) died within 24 hour of hospital admission (**Table 2**).

Table 1 - Age and Sex Distribution of Deceased

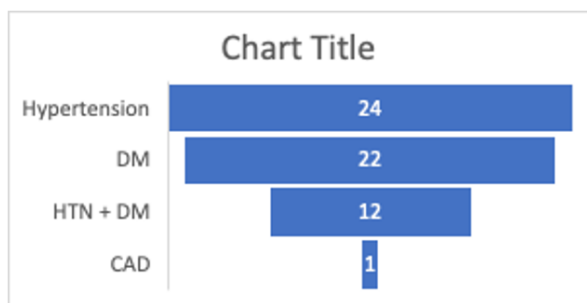
	< 60 YR (N=40)	>60 YR (N=35)
No of Death N=75	M=14 F= 16	M=26 F=09



Graph 1 – Age and Sex distribution of Deceased.



Graph 2- Distribution of Aetiology



Graph-3 Presence of known Co-Morbidity

Table 2 - Relation of Duration of Hospital stay and mortality

Serial no	Duration of hospital stay	Number of death (N=75) and percentage
1	1-5	49 (65.34 %)
2	6-10	17 (22.67%)
3	11-15	05 (6.67%)
4	16-20	02 (2.67%)
5	21-25	02 (2.67%)

DISCUSSION-

In our study death were more in males than females this finding was similar to other Indian studies.¹ Most of deaths (53.33%) were in 14 - 60 year age group. The proportional mortality in our study is higher compared to other Indian studies , Shankar G et.al (43.14 %), Godale et.al (29.94-34%).^{1,2}

In this study 62.67 % of all death were attributed to non-communicable diseases, finding from other Indian studies are as Shankar G et.al (70.03%), Godale et.al (68-74%).^{1,2} According to R Prakash Upadhyay in India non-communicable disease accounted for 40% of all hospital admissions in year 2004.⁸ Swe et al. observed 2.2 fold increase in no of hospital admissions due to non-communicable disease in 6 -year period 2012-2017.⁹ Fifty-nine patient had known comorbidities as presence of Hypertension, Diabetes Mellitus, Coronary artery disease .According to Sarma PS et al. 67 % of disease burden in India is attributable to non-communicable diseases (NCDs) and injuries.⁶ In this study Hypertension and Diabetes were more prevalent co-morbidity (48%). According to Geldsetzer P et al , the crude prevalence of diabetes and hypertension was 7.5% (95% CI, 7.3%-7.7%) and 25.3% (95% CI, 25.0%-25.6%), respectively.⁷ Out of 75 deceased patients 49 (65.34 %) died within five day of hospital admission of which twelve patients (16%) died within 24 hour of hospital admission. High mortality within five days of admission, possible explanation is as patients are usually referred to tertiary care hospital in very critical stage.

Conclusion-

Mortality is a key indicator of health of population under study. Prevalence of Non-communicable disease in India is on rise due to rapid change in social, economic factors and ultimately urbanisations. Resulting in disproportionate increase in NCD admissions, and it needs increased tertiary care facilities to cater such demand. At the same time strengthening of primary health facilities is need of hour for prevention ,early detection of NCD and its complications and Mortality due to non-communicable disease.

Conflict of Interest- none of author is having any conflict of interest

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