Profile of Cause Specific Mortality In A Tertiary Care Hospital: Ujjain Experience

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Abstarct: Background: The purpose of this study was to highlight the profile of deaths in a tertiary care hospital attached to a Medical College in central India. With reference to the highlights, the study deals the future plan for the improvement in patient care, teaching, training and research. Method: The data was collected with the help of a proforma and studying the Medical Certificate of Cause of Deaths (MCCD) in a calendar year 2015. After filling a proformas for all deaths, these proformas were analysed and a conclusion was drawn. Results: The present study reveals that the total deaths in the year 2015 were 459 and most number of deaths were from department of Medicine. The most common cause of death was Cerebrovascular accidents in the year 2015. Approximately 80 % deaths were within 48 hours of hospital admission. Conclusion: There is a shift in the trends in deaths patterns in India from communicable diseases to the non- communicable diseases. Around 80 % deaths were noted within 48 hours of hospital admission, which needs an upgradation of emergency & super-speciality medical services. [Vishal S NJIRM 2017; 8(6):25-29]

Key Words: Deaths, MCCD, ICD-10, diseases, profile.

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Introduction: It is important to know the frequency of the death, as it throws light on pattern of various diseases & anomalies. With the passage of time, the pattern of the deaths has changed a lot.[1] The pattern of the diseases in developing countries varies greatly than those in developed ones. In a typical developing country, most deaths result from infectious and parasitic diseases, abetted by malnutrition.[2]There is no appreciable change in the prevalence of tuberculosis, filariasis, diarrhoeas and dysentery. On the other hand, an increase in the frequency of new health problems such as coronary heart disease, hypertension, cancer, diabetes and accidents has been noted.[3]India is a vast country, though we expect that pattern of hospital deaths in Ujjain may be same as studied elsewhere. To know the exact pattern and profile of deaths this study is undertaken in C.R. Gardi Hospital, associated with R.D.Gardi Medical College, Ujjain.

Aims & Objectives:

1. To know the prevalence of death in relation to hospital admissions.
2. To know the prevalence in relation to various organ systems involved.
3. To know the duration from hospital admission to the death.
4. Any suggestion towards reducing the hospital deaths

Methods: It is a cross-sectional retrospective study. The period of this study is one calendar year in 2015.Total 459 deaths occurred during this period. A proforma was prepared and relevant data was entered into it consistent with the objectives of the study. The underlying cause of death was recorded with great accuracy and was classified as per ICD 10th revision. After filling a proformas for all deaths, these proformas were analysed and a conclusion was drawn. Strict confidentiality of the case papers has been maintained and no medical facts have been revealed, disclosing the identity of the deceased.

Inclusion and exclusion criteria: All brought in dead cases and the cases which were referred for Post Mortem examination has been excluded. Rest all have been included.

Data Analysis: The help of statistician and statistical software like SPSS has been taken.

Ethical issues: No ethical issues involved as it has been studied from already prepared documents. Identity of the deceased have not been disclosed.

As this study does not involve live patients, this study may be treated in the category “Exempted Case.”

Results: In calendar year 2015 a total of 459 deaths were registered in the Medical Record Section . The statistics of deaths as per departments are as follows.

Department	Deaths
Obg	6
Medicine	216
Paediatrics	79
Surgery	47
Ophthalmology	0
Psychiatry	0
Ortho	4
TB & Chest	65
Total	459

Further the deaths were analysed separately department wise

Death in department of Medicine in year 2015

Disease	Total Admission	Male	Female	Deaths
People living with HIV/AIDS	355	195	160	13
Diabetes Mellitus type II	599	326	273	31
Hypertension	726	337	289	29
Cerebro Vascular Accidents	345	219	126	40
Ischemic Cardiomyopathy	33	20	13	02
Congestive Cardiac Failure	177	97	58	20
Renal Failure	40	7	5	2
Cirrhosis	60	44	16	5
Acute Liver Disease	44	42	02	7
Septicaemia	119	68	52	20
Malaria	182	108	74	02
Poisoning	35	16	19	5
Pulmonary TB	456	321	135	12
Ac. Gastroenteritis	976	530	446	02
Anaemia	1558	788	770	26
Total				216

Deaths in department of Surgery in the year 2015

Disease	Total Admission	Male	Female	Deaths
Inguinal Hernia	725	701	24	
Benign Prostatic Hypertrophy	541	541	0	2
Appendicitis	489	244	245	3
Intestinal Obstruction	60	39	21	3
Sub-acute intestinal obstruction	72	41	31	7
Perforation	86	64	22	5
Septicaemia	6	3	3	4
Head injuries	116	74	42	5
Road Traffic Accidents	75	46	29	2
Soft tissue injuries	10	6	4	2
Sub-dural hematoma	11	4	7	5
Burns	48	27	21	5
Ca. Breast	169	4	165	4
Total				47

Deaths in department of Paediatrics in year 2015

Disease	Total Admission	Male	Female	Deaths
Seizure disease	95	54	41	1
Malaria	36	20	16	1
Pneumonia	109	77	42	13
Thalessemia Major	1297	818	499	3
Epilepsy	5	1	4	1
Sickle cell	13	11	3	2
GTC	9	5	4	
LBW	344	164	180	44
NNH	92	50	42	2
NNS	14	7	7	1
PTB	4	1	3	1
PLHA	1		1	
Diarrhoea	32	14	18	5
Ac. Gastro	323	188	135	5
Hyperbilirubinemia	8	1	7	1
Meningitis	32	20	12	6
CLHA	6	4	2	
UTI	127	74	53	2
Febrile Convulsions	24	13	11	
Total				79

Deaths in department of T.B. & Chest in the year 2015

Disease	Total Admission	Male	Female	Deaths
TB	38	30	8	5
COPD	275	287	88	20
Bronchial Asthma	390	234	156	0
Pneumonia	29	23	6	7
Emphysema	166	157	15	4
Ca. Lung	24	19	5	0
Pneumothorax	33	26	7	3
Pleural effusion	117	90	27	3
Pulmonary TB	330	240	90	7
Old treated Koch's	213	134	79	3
MDR	201	151	50	5
PTB Defaulter	63	50	13	8
Total				65

Deaths in the department of Orthopaedics in the year 2015

Disease	Total Admission	Male	Female	Deaths
Fracture neck femur	63	37	26	2
Inter Inter trochantric fracture	305	186	119	1
Fracture Shaft femur	260	161	99	1
Total				4

Deaths in the department of Obstetrics and Gynaecology in the year 2015

Disease	Total Admission	Male	Female	Deaths
Placenta Previa		-	3	3
Post Partum Haemorrhage		-	2	2
COPD		-	1	1
Total				6

Most common causes of death across all the department in the year 2015 are as follows:

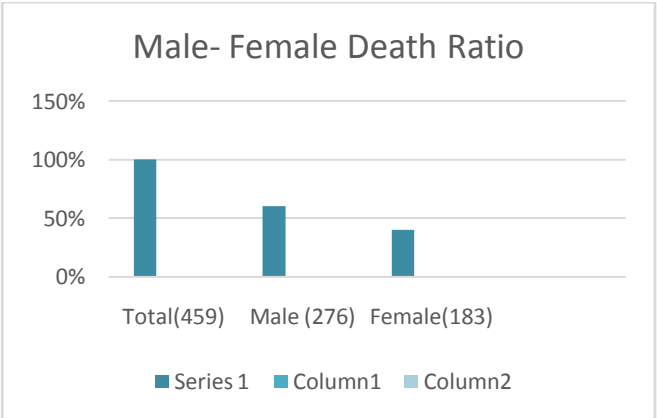
Cause of deaths	Department	No. of deaths	Percentages (With respect to total admissions)
Cerebro vascular Accidents	Medicine	40	11.59
Septicaemia	Medicine	20	16.80
Low Birth weight	Paediatrics	44	12.79
Diabetes Mellitus II	Medicine	31	5.17
Hypertension	Medicine	29	3.99
Congestive Cardiac Failure	Medicine	20	11.29
Anaemia	Medicine	26	1.66
Chronic Obstructive Pulmonary Disease (COPD)	T.B. and Chest Medicine	20	7.27
Pneumonia	T.B. and Chest Medicine	7	24.13
Intestinal Obstruction	Surgery	10	7.57

Time interval since hospital admission and death

Hospital deaths	No. of deaths (459)
Within 12 hours	88 (17.42)
12-24 hours	125 (27.23%)
ours	153 (33.33 %)
>48 hours	93(20.26 %)

Discussion:

Fig. Deaths in hospital in year 2015: Male & Female distribution



In the present study, the preponderance of male deaths (60%) over female, similar to the present study, was a finding of Godale *et al*[1] and Bhatia *et al.*[2]Chronic non-communicable diseases are assuming increasing importance among the adult population in both developed and developing nations. They are leading causes of death and there is a upward trend of non- communicable diseases due to many reasons such as change in life styles and behaviours. [7]

The present study reveals that the total deaths in the year 2015 were 459 and most number of deaths (216) were from department of Medicine. The most common cause of death was Cerebrovascular accidents (40) which is 11.59 % of the total deaths in the year 2015. Followed by it, septicaemia was also among the most significant condition in which 20 deaths (16.80 %) were reported and cardiovascular (CCF, Myocardial infarction and Hypertension). Most paediatric deaths (44) were reported in low birth weight which is greater as compared to Godale et.al Respiratory conditions viz. COPD and pneumonia were also noted as major causes of death in year 2015. Approximately 80 % deaths were within 48 hours of hospital admission. Which suggests that there is an urgent need to upgrade the emergency & super-speciality medical services for better medical care & reducing the mortality statistics.

Conclusion: There is a shift in the trends in deaths patterns in India. Earlier it used to be the communicable diseases, but now it is the non-

communicable & life style disorders which are taking the tolls of human lives. Simultaneously HIV/ AIDS & TB related deaths have also increased.

Recommendation: From the present study, it is obvious that most of the mortalities took place in Department of Medicine and allied subjects. It means that the resources of the institution may also be distributed pro rata. So that enough attentions can be given to critical patients to reduce the mortalities. It is not out of the place to suggest that a brief introduction of ICD-10 may be given at II MBBS level and it should be further emphasized during internship. Improvisation and expansion of super speciality medical care in the institution may help to minimise the mortalities.

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