

Demographic Studies of Autopsied Cases at North Bengal Medical College Hospital During the National Lockdown Period Due to COVID 19 Pandemic

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Abstract

The outbreak of COVID 19 pandemic in India has started from the month of March when many cases were tested positive for novel coronavirus. The high infectivity of the disease led many governments to impose strict lockdown with the aim of limiting its spread. To restrict its spread and save the people of India our government has also imposed strict nationwide lockdown in a phase wise manner. Though the lockdown was imposed to restrict the spread of COVID 19 but it had severe undesirable impact on the socio-economical and psychological status of the people especially of low to medium income groups involved in private jobs. The aim of this study was to study the cases of autopsied unnatural deaths with special emphasis to find out the correlation between demographic pattern of deceased with the lockdown. In this study we have analysed the 961 cases of autopsied unnatural deaths in the mortuary of Department of Forensic Medicine, NBMCH, Darjeeling, West Bengal from the first day of lockdown up to the month of September (24th March 2020 to September 2020). All data were analysed by appropriate statistical tools like SPSS software. In this study we found that male (66.4%) predominated over the females and most of the cases belongs to adult age group (44.27%). Persons involved in private jobs (44%) were more severely affected compared to the government jobs and cases of suicidal deaths (45.7%) rises but cases of deaths due to road traffic accidents (13.9%) drastically reduced during lockdown period.

Key words -Pandemic, Corona, Covid 19, autopsy, infectious diseases, Mental Health, Road traffic accidents, Suicide.

Introduction

The first case of acute respiratory syndrome was reported from Wuhan in Hubei province of China by the Chinese authorities around December 2019 (1). This respiratory disease was named as coronavirus disease 2019 also known as COVID-19 and was later identified to be caused by the SARS-CoV-2 (2). This virus belongs to the family of viruses known to cause diseases ranging from the common cold to more serious

diseases such as the Middle East respiratory syndrome (MERS) and the SARS (3,4). In India COVID-19 cases had begun in late January with around 3 confirmed cases but later accelerated to 28 confirmed cases by 4 March 2020 and on 28 March 2020 near the beginning of the lockdown that started on 24th March there were around 909 confirmed cases in India with 85% of them hospitalized (5). The World Health Organization (WHO) on March 11, 2020, has declared the novel coronavirus (COVID-19) outbreak a global pandemic. (6) Following this outbreak of the pandemic corona virus in India. The first lockdown of the entire nation was then announced on 24th March 2020 for a period of 21 days (7) which was then further extended phase wise. Several guidelines were issued by the MHA in order to reduce transmission

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of COVID-19 these included social distancing measures, spatial distancing of at least (2 m distance) ⁽⁸⁻¹¹⁾, even generalized lockdown of the entire nation that included travel restrictions, nationwide closing of businesses, controlled movement of individuals ⁽¹⁰⁻¹²⁾. The main concern was to decrease the spread of the disease so as to gain enough time to strengthen the Healthcare system and to prevent overwhelming of the healthcare systems, mainly of the intensive care units (ICUs) ⁽¹¹⁻¹³⁾. The entire nation came to a halt and along with the economy all the people went through a tough phase of staying indoors unable to socialize and continue with their normal day to day activities also leading to increase domestic violence on females and rising incidences of child abuse. The most vulnerable group being the migrants, daily wage labourers and people of lower socio economic status involved in private jobs. Due to this restricted movement of vehicles during the lockdown period the total number of road traffic accidents also decreased as compared to normal days. The lockdown also took a very big toll on the mental health of the people so this study has been conducted to analyze the demographic data associated with all the cases of autopsied bodies during the National lockdown period.

Objectives

Prospective cross sectional study of autopsied bodies conducted during the lockdown period from the month of 24th March 2020 to 30th September 2020 in the morgue of NBMCH, Darjeeling to find out the cause of death in relation to the various social, economical and other demographic factors.

Materials and Method

It is a prospective cross sectional study and in this study we have analysed the cases of autopsy of dead bodies conducted at the morgue of North Bengal Medical College Hospital, Siliguri, West Bengal during the nationwide lockdown period i.e. from 24th March 2020 to September 2020. Information regarding the demographic profile of the deceased was collected from inquest papers, autopsy report, information from relative, police and treatment record. We have analysed all data with the help of SPSS software,

Results and Discussion

Most autopsied cases were of male subject (66.4 %) which is in accordance with the study of Elsoukkary S.S. ⁽¹⁴⁾ and the ratio of males to females was approximately 2:1. In this study most of the deaths were seen in adult population of 21 to 40 years of age group (44.27%). In our study most of the deceased were not even married (52%) and because of the lockdown there was sharp increase in incidences of loss of jobs in private sectors and it is also reflected in our study as most of the deceased were involved in private jobs (44%) followed by person who were unemployed (20%). Social isolation and unemployment due to COVID 19 leads to psychological stress of the people and due to this cases of suicides by hanging (27.8%) and poisoning (17.9%) were increased compared to deaths due to road traffic accidents (13.9%). This finding is not in accordance with the study of Deb Prabir Kumar et al.¹⁵ which shows incidences of road traffic accidents in North Bengal region was 25.73% in 2009, 28.32% in 2010 and 32.76% in 2010. This low incidence of road traffic accidents (13.9%) in our study during nationwide lockdown period might be due to the fact that reduced outside movement of people causes less exposure to the road traffic accidents. With the passage of months cases of autopsy were increasing from March (15.5%) to September (20.7%).

Table 1 -AGE: (n- 961)

Age	Frequency	Percentage
0—5 yrs	12	1.25%
5- 10 yrs	15	1.56%
11 -20 yrs	135	14.04%
21-30 yrs	262	27.26%
31-40 yrs	163	16.98%
41-50 yrs	171	17.8%
51-60 yrs	103	10.72%
61-70 yrs	71	7.39%
>70 yrs	29	3%
	961	100

Table 2 - SEX (n = 961)

Gender	Frequency	Percentage
MALE	638	66.4%
FEMALE	323	33.6%
	961	100

Table 3 - EDUCATION (n = 961)

Education	Frequency	Percentage
PRIMARY	288	29.96 %
secondary	211	21.95 %
Higher secondary	173	18 %
Graduate	164	17.07 %
Post graduate	38	3.95 %
Never been to school	87	9.05 %
	961	100

Table 4 - OCCUPATION (n = 961)

Occupation	Frequency	Percentage
Student	173	18%
Pvt job	423	44.02 %
Govt job	125	13%
Retired	48	5%
Not working	192	19.98 %
	961	100

Table 5 - Cause of Death: (n = 961)

Cause of death	Frequency	Percentage
Hanging	267	27.8%
RTA	134	13.9%
Poisoning	172	17.9%
Natural cause	96	10%
Drowning	150	15.6%
Burn	75	7.8%
Others	67	7%
	961	100

Table 6 - Month of incidence: (n = 961)

Month	No of autopsies	%	Male	%	Female	%
24th – 30th March	28	3 %	17	1.76	11	1.14
April	149	15.5%	98	10.2	51	5.30
May	138	14.4%	97	10.09	41	4.26
June	128	13.3%	86	8.95	42	4.37
July	146	15.1%	102	10.62	44	4.58
August	173	18%	118	12.29	55	5.72
September	199	20.7%	120	12.49	79	8.22
	961	100	638	66.4	323	33.6

Conclusion

During the national lockdown period there was complete restriction of movement of person to outside except to those who were involved in emergency services. Due to these restrictions people started facing social isolations inside their home and were also predisposed to develop the psychological stress. This results in increase incidences of death due to suicide and same is also reflected in our study like out of the total unnatural deaths most of the cases were suicide due to hanging (27.8%) and poisoning (17.9%). Due to restrictions of unnecessary outside movement there was significant decrease in the cases of road traffic accidents and in our study we also found very less number of road traffic accident cases (13.9%) compared to other modes of deaths.

Conflict of Interest –No Conflict of Interest

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Ethical Clearance –Ethical clearance was obtained from Ethical committee, North Bengal Medical College, Darjeeling.

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