

Study of Comparison of Suicidal Cases in the Lockdown Period During First Wave of COVID-19 with that of Suicidal Cases in the Period before it among Dead Bodies Brought for Autopsy at Nalanda Medical College, Patna - A Record Review

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ABSTRACT

Introduction: The COVID-19 pandemic has affected the entire world, physically, psychologically and socio-economically. It has caused extreme mental stress to not only those infected but also those who had to remain indoors for prolonged period due to lockdown.

Aims and Objectives:

- 1) To study and compare all confirmed suicidal deaths in the first lockdown period upto its peak period (September 2020) with suicidal cases during the previous six months from October 2019 to 24th march 2020.
- 2) Demographic analysis of suicidal cases with determinants like incidence, sex, & age wise distribution, mode of suicide, any specific causes etc, will be studied & evaluated for any perceptible change from earlier prelockdown suicidal deaths

Materials and Methods: It is retrospective, record review analytical and comparative study based on postmortem examination reports of all cases conducted by all doctors of department of FMT, Nalanda Medical College, Patna who did autopsy during both periods (pre lockdown & post lockdown/unlock) together with study of all police inquests, requisitions (challans), sent by the police investigating officers of concerned cases.

Study period- a) 25th march 2020 to September 2020 (lockdown phase). b) October 2019 to 24th march 2020 (Prelockdown phase).

Results: Total number of suicides increase from 6.61% in pre-covid period to 8.56% in lockdown period. In the prelockdown phase the cases of hanging were 66.66% but due to poisoning 33.34%. But in the lockdown phase hanging accounted for the 95.45% and poisoning just 4.55%.

Conclusions: Lockdown must be needed based, preplanned and financial support to the needy together with behavioural counseling should be undertaken in letter and spirit. There is an urgency to realize the severity of this suicidal tendency.

Keywords: covid, lockdown, suicide, hanging, autopsy

INTRODUCTION

There is hardly a person in the world who is not affected by COVID-19 pandemic, either physically or psychologically or socioeconomically. Initially called Novel corona virus, later it was popularly called COVID19 virus & now it is officially named SARS COV-2 (Severe Acute respiratory syndrome corona virus-2). [1]

Corona virus is basically a RNA virus causing influenza like symptoms in most of the cases, with varying severity from mild in most cases to severe with rapidly dipping oxygen saturation

& permanent changes in lungs. Severe cases often lead to multi organ failure & subsequent death. Thus, the fear and psychosis associated with it is very much, often leading to irritability & depression.[2]

Covid was first reported from Wuhan institute of Virology in China on 31st December 2019.[4] The infection is supposed to be transmitted by bats & similar mammals. However, questions about leakage of virus from Wuhan laboratory, accidentally and knowingly, have been raised. WHO has also sent a group of scientists to unearth the origin of this dreaded virus & they could not find any clinching evidence to suggest human instigated leakage of the virus, they have not completely ruled out such a possibility, if any. [5]

In India the virus started spreading in March 2020 through air, though the first case was detected on 30th January 2020.[6] Thus the central government announced preparatory JANTA CURFEW on 22nd March 2020, followed by pan India lockdown from night of 24th March 2020.[7] Lockdown means all residents were asked to remain indoors except the persons dealing with essential services. The idea was to break the chain of transmission. However, besides its desirous effect, lockdown also led to unprecedented exodus of labourers & migrants from states of their jobs to their homes. This caused great physical and mental turmoil with insurmountable financial hardships. The lockdown was extended phase wise as cases soared all over India followed by unlocks in which restrictions were gradually eased. Nationwide lockdown was imposed in four phases from 25th march 2020 to 31st may 2020. Unlock commenced from 1st June 2020 in phases. [8]

The peak of cases in first wave was in the unlock 4 period, that is during mid September 2020 & after that the cases steadily dropped till March 2021 when the so called 2nd wave started. So, the stressful conditions of all persons during lockdown & early unlock phases due to various physical, mental, & socioeconomic challenges,

reportedly led to increase in Depression & suicides among the victims & other trapped in prolonged lockdown. There was two prolonged problem, Covid scare while going out & lockdown blues when confined to your house. Plummeting income & frequent skirmishes among family members compounded the problem. These factors led to increase in depressive features in people, often leading to suicide or attempt to suicide. As the cases gradually went down after September, the stress also became lesser till the advent of the dreaded second wave from roughly from march 2021 onwards.[9]

AIMS AND OBJECTIVES:

- 1) To study and compare all confirmed suicidal deaths in the first lockdown period upto its peak period (September 2020) with suicidal cases during the previous six months from October 2019 to 24th march 2020.
- 2) Demographic analysis of suicidal cases with determinants like incidence, sex, & age wise distribution, mode of suicide, any specific causes etc, will be studied & evaluated for any perceptible change from earlier pre-lockdown suicidal deaths.

MATERIAL AND METHODS

Study design and method- It is retrospective, record review analytical and comparative study based on postmortem examination reports of all cases conducted by all doctors of department of FMT, Nalanda Medical College, Patna who did autopsy during both periods (pre lockdown & post lockdown/unlock) together with study of all police inquests, requisitions (challans), sent by the police investigating officers of concerned cases.

Study site- The study will be carried in the department of FMT, Nalanda Medical College, Patna, Bihar, India. It is a tertiary level health care & teaching centre situated in Patna, the capital of Bihar.

Study objectives- All postmortem cases of alleged suicides coming to Nalanda Medical

College & Hospital, Patna which have been confirmed as suicides. It is a retrospective study & record review, the relatives of victims were not involved.

Study period- a) 25th march 2020 to September 2020 (lockdown phase). b) October 2019 to 24th march 2020 (Prelockdown phase).

Statistical analysis

Statistical analysis was done by Epi-info statistical tool. The results were calculated under standard demographic determinants. Qualitative data is presented as percentage.

RESULTS

Period of study- Pre lockdown non covid phase from October 2019 to 24th march 2020. It should be made clear that this noncovid phase does not mean that there were no covid cases but it implies that there were very few cases in that period when compared to the steep rise in cases in the lockdown phase from 25th march 2020 to September 2020.

September 2020 was chosen as cut off date as by the end of September, cases became appreciably lesser and within control until second wave.

It was comparative retrospective case review study. The determinants taken up and dealt with are:

a) Total number of cases (all) that is total number of autopsies conducted during the periods under study in the mortuary of department of FMT, Nalanda Medical College, Patna.

- b) Total number of alleged and confirmed suicidal cases.
- c) mode of suicide.
- d) sex differentiation.
- e) age below 30 and above 30 years.
- f) rural-urban divide.
- g) marital status.
- h) socio-economic status.
- i) seasonal variation .

Comparative charts were prepared between prelockdown phase (October 19 to 24th march 2020) and lockdown period (25th march 2020 to September 2020).

Table1. shows the percentage of suicidal death

Period of study	Total number of autopsies	Total number of suicidal death	Percentage
Pre-lockdown	272	18	6.61
Lockdown	257	22	8.56

Table 2. Indicates mode of suicide

Period of study	Mode of suicide (percentage)	
	hanging	poisoning
Pre-lockdown	12(66.66%)	06(33.34%)
lockdown	21(95.45%)	01(4.55%)

Table3. Sex distribution of victims

Period of study	Male(percentage)	Female(percentage)
Pre-lockdown	08(44.44%)	10(55.56%)
lockdown	11(50%)	11(50%)

Table 4. Age distribution of cases

Period of study	Below30 years (percentage)	Above 30years (percentage)
Pre-lockdown	13(72.23%)	05(27.77%)
lockdown	14(63.64%)	08(36.36%)

Table 5. Marital status of victims

Period of study	Married (percentage)	Unmarried (percentage)
Prelockdown	12(66.66%)	06(33.34%)
lockdown	11(50%)	11(50%)

Table 6. Socio-economic status of victims

Period of study	low(percentage)	average(percentage)
Pre-lockdown	11(61.12%)	07(38.88%)
lockdown	07(31.82%)	15(68.18%)

Table 7. Seasonal variation in cases

Period of study	Seasonal variation			
	winter(percentage)	rainy(percentage)	spring(percentage)	summer(percentage)
Pre-lockdown	11(61.12%)	01(5.55%)	06(33.33%)	0(0%)
lockdown	0(0%)	01(4.55%)	09(40.91%)	12(54.54%)

DISCUSSION

Covid was real torrid experience for most of us. In the first phase, lockdown was imposed which helped in slowing down the spread of the virus. However, besides the obvious and now, well known physical

problem, covid also resulted in insurmountable mental and economic problem in the masses. The fear of the unknown enemy with no definitive treatment, together with being confirmed indoors for the prolonged period led to

many psycho-somatic issues especially in co-morbids who are more vulnerable. It is said that two utensils together always make a noise, similarly prolong stay of the spouses at home led to increase in marital discords. Economic stress due to loss of jobs, exodus of families, high cost of covid treatment, made the situation worse. Furthermore, news of death of near and dear ones, compounded the pall of gloom. All these factors led to increase in cases of depressive features in person. Unfortunately, some of them who were emotionally labile cracked in these trying circumstances and committed or tried to commit suicide. Sen CS, Stuckler D (2008) also shows that the economic consequences of the pandemic are likely to lead to an increase in suicides as shown during past economic crises.[9]

So, my purpose of study was to know about such aforesaid cases and make an indepth study on the impact of covid leading to suicide cases. Then, we compared the data with that of precovid period. On comparing the two data, it was found that some factors went on expected lines with minor deviations whereas some of the deviations seen in other factors were wider and eye opening.

Total number of cases in pre-lockdown period was 272 but in lockdown it was 257. Lesser autopsies were conducted as there was lesser movement of people due to lockdown.

Total number of suicides increase from 6.61% in pre-covid period to 8.56% in lockdown period. This vindicated our thought that more people committed suicide in covid lockdown times but the deviation was within normal limits. The Centre for Monitoring Indian Economy estimated that 27 million young people between the ages of 20–30 years lost their jobs in April 2020 during the lockdown [10]. It is also estimated that nearly 100 million Indian jobs are at risk in the coming months [11]. While modelling studies have predicted significant increases in suicides and attempted suicides in other countries

[12, 13] in the coming years as unemployment increases.

However, as we discussed the methods/modes of suicide there were startling revelation. In the pre-lockdown phase the cases of hanging were 66.66% but due to poisoning 33.34%. But in the lockdown phase hanging accounted for the 95.45% and poisoning just 4.55%. This marked deviation was due to the fact that in the lockdown phase, as shops were closed and vehicular traffic was restricted, so it was not possible for victims to procure poisonous substances. Thus, hanging was the preferred mode of suicide. Other methods of suicide like self immolation, fall from heights, firearm, drowning etc were not found in this retrospective case study.

Aradhana Singh, C. L. Nawal, H. L. Saini et.al(2012) done a retrospective observational study of poisoning and hanging cases during lockdown as a marker of emotional tide of COVID-19 pandemic in a tertiary care center in North-western India and found that pre-lockdown and lockdown might have equal number of hanging cases during the study period, but percentage wise there is a definite rise in the hanging cases during lockdown, that is, 8% of the total MLC patients, while it was 5% during pre-lockdown (p=0.409). Hanging cases during pre-lockdown period constitute around 0.12% which rose to 0.21% during lockdown. In poisoning cases also the number was 2.5% during pre-lockdown period and 6.5% during lockdown period.[14]

Sex differentiation data showed minimal deviation. It was surprising to note that more persons of lower age group (below 30 years) committed suicide in both study group. As elderly and comorbid were more vulnerable to covid, this data was against the popular perception. More suicidal cases in youngsters can also be attributed to uncertainty in exam schedule due to covid. Age group 30 years was selected as cut off as beyond 30 years is the active, professional period of life with retirement generally pegged at 60 years.

Hence pre 30 and past 30 victims were studied. Mamun MA, Griffiths MD done a study in Bangladesh and found that overall most vulnerable age group was of 16-30 years where maximum number of poisoning and hanging cases occurred. The least vulnerable age group was of over 50 years where total poisoning cases were 19. Interestingly, there was no hanging cases in this age group.[15]

Marital status also showed accepted deviation and suicide, as expected, was more in married person in both study groups. Another significant deviation was seen in socio-economic status of victims. In pre-lockdown phase, 61.12% belonged to low socio-economic group and 38.88% to average socio-economic group. Contrary to this, only 31.82% victims belong to low socio-economic group in lockdown phase and 68.18% of average socio-economic group committed suicide. This can be explained by the fact that covid affected less people of low socio-economic group and thus had lesser impact on their socio-economic status. On the other hand, it mostly affected the middle class which had to face severe monetary loss due to lockdown, exodus of migrants and high cost of covid treatment. That is why there are no persons of high income group as they were more mentally and financially equipped to face the challenge. The plight of average socio-economic group, popularly called middle class in covid was sad but true.

Seasonal variation, in our opinion was more due to the period (season) of study than covid as there is no perceptible reason for increased covid deaths in a particular season. As the pre-lockdown phase involved more winter cases (61.12%) in winters and the lockdown was more in the summer (54.54%) and spring (40.91%) seasons.

CONCLUSIONS

Thus we can say that there has been increase in suicidal cases during lockdown compared to pre-lockdown. However there has been a sharp increase in hanging cases

in the lockdown period and appreciable deviation in determinants such as age, socio-economic status and seasonal variation. All said and done I feel that this study, in its little way, has fulfilled the purpose of pinpointing at the differences between the two study groups vis-à-vis covid.

There is an urgency to realize the severity of this suicidal tendency. To combat this emerging problem due to emotional and psychological stress, a helpline number for the social and psychological support is needed through phone calls to the peoples. There should be sympathetic dedication towards the COVID-19 positive cases. Arrangement of good quality nutritive food for the hungry people. Salary for the labourers/workers should be continued. This study will help us to be better prepared for such eventualities.

Lockdown must be needed based, preplanned and financial support to the needy together with behavioural counseling should be undertaken in letter and spirit. Finally we will also undertake comparative study with the fearsome second phase of covid in 2021. We also urge everyone to take vaccination at the earliest possible opportunity to avoid more such lethal phases. Till then, everyone must follow the covid appropriate behavior.

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