Deaths due to delayed presentation to the hospital from fear of contracting COVID-19 during lockdown period: a tertiary care center experience

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ABSTRACT

Background: Sudden rise in COVID-19 cases in March 2020 due to spread of pandemic led to immediate lockdown order in many states and cities across the USA. Everyone had to stay home to stop the spread of the virus. We investigated all deaths in our hospital during lockdown period and assessed how many presented and died from non-COVID-19-related illness. Among those deaths, we assessed how many presented late due to excessive fear of catching coronavirus in the hospital and succumbed to the same illness due to very late presentation.

Methods: We retrospectively reviewed charts of every patient who expired in the hospital in a 45-day period, March–April 2020.

Results: Three of 107 (2.8%) deaths during lockdown period in this hospital were clearly attributable to delayed presentation arising specifically from fear of coming to the hospital. All three died from non-COVID-19-related illnesses.

Conclusions: Authors hereby propose enhanced efforts in the direction to alleviate unnecessary fear among public even during lockdown. People should be encouraged to continue to access health care for serious/fatal medical conditions regardless of the pandemic.

1. Introduction

During the pandemic of COVID-19, many states of the USA including Illinois issued stay-at-home order for public, to limit the transmission of the virus. The message from health-care officials was to practice ‘social distancing,’ and avoid close human contact. Everyone including patients with mild symptoms of COVID-19 were encouraged to self-quarantine at home until recovery. As an unintended consequence, patients with non-COVID illnesses, such as stroke or myocardial infarction, presented late to the healthcare facilities due to fear of contracting COVID-19 [1]. This added significantly higher morbidity which otherwise in pre-COVID era would have been preventable. In this study, we aim to look at the impact of stay-at-home order on the occurrence of excess deaths due to non-COVID-19 illnesses, specifically resulting from delay in seeking care due to excessive fear of contracting coronavirus inside the hospital, at our tertiary care center in Peoria, Illinois.

2. Methods

We studied retrospectively all adult patients >18 years who died at the OSF SFMC hospital in Peoria, Illinois, between 15 March and 30 April 2020. The study was approved by UICOMP institutional board review (1606397-1). Requirement of consent was waived by the IRB as the study only involved reviewing charts of already deceased patients. Physician investigators reviewed electronic medical record (EMR) of each deceased patient. The variables obtained were cause of death, comorbidities, microbiology, radiology, pathology, COVID-19 test, and autopsy results. Patients who died from COVID-19-related causes were excluded. EMR notes were assessed for clear documentation of patients or families’ reluctance in coming to the hospital due to fear of catching the virus and whether that led to delayed treatment and death due to that delay. Another independent investigator reviewed to confirm or refute the original conclusion on any chart that met the criteria. If doubt existed after the second opinion, those charts were not counted positive. However, inadequate documentation regarding fear and inadequate documentation regarding delay in seeking care could result in underestimation.

3. Results

A total of 107 deceased patients were identified who met the inclusion criteria. The minimum and maximum age was 24 years and 93 years, respectively. The mean age was 69.56 years. Among the patients, 44.9% were females and 55.1% were males. Fifty-two
percent (56/107) died within 24 h of arrival to ED and 86% (92/107) died within 7 days of admission to the hospital. Mean number of chronic illnesses were 4.64, and 77% patients had three or more chronic illnesses. Most common causes of death in this group were septic shock, respiratory failure, and cardiac arrest. Three cases, 2.8% (3/107) of non-COVID deaths, were identified where clear documentation of delay in seeking care was present. Characteristics of these three patients are described in Table 1. Cases where recorded entry in EMR was not documented distinctly or delay in seeking care documentation were ambiguous—those cases were not counted as positive.

| Age/Sex (M/F) | Number of comorbidities | Etiology of death based on microbiology, pathology, and radiological findings | COVID testing results (P/N) | Time of onset of symptoms prior to arrival | Was death preventable if presented early |
|---------------|-------------------------|--------------------------------------------------------------------------------|-----------------------------|-------------------------------------------|-----------------------------------------|
| 1 37/F        | 2                       | Cardiac arrest due to septic shock and polymicrobial bacteremia                | Negative                    | 14 days                                   | Yes                                     |
| 2 56/F        | 7                       | Cardiac and respiratory arrest due to late presentation of aspiration pneumonia | Negative                    | 9 days                                    | Yes                                     |
| 3 86/F        | 4                       | Cardiac arrest due to late presentation of ST-elevation MI                     | Not done                    | 2 days                                    | Yes                                     |

These deaths were preventable if they presented earlier and timely intervention was instituted at the OSF SFMC hospital, Peoria, Illinois.

5. Conclusions
Lockdown is an excellent measure to reduce new COVID infections and deaths. Upon chart review, we found 3 of 107 deaths during lockdown period. These patients intentionally delayed care due to fear of getting COVID-19 and died due to late presentation. Our study thus emphasizes the unintentional and unfavorable consequence of the lockdown message.

Disclosure statement
No potential conflict of interest was reported by the author(s).

Author contribution
Concept and design: SB and MR
Acquisition, analysis, or interpretation of data: All authors
Drafting of the manuscript: All authors
Critical revision of the manuscript for important intellectual content: All authors
Administrative, technical, or material support: SB
Supervision: SB

Compliance with ethical standards
The study was retrospective cross-sectional data analysis from deceased patients. IRB approval obtained from UICOMP Peoria IRB under IRBNET ID: 1606397-1

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