

Characteristics, Clinical Presentation of COVID-19 Patients Who Died in Fortis, Anandapur, Kolkata

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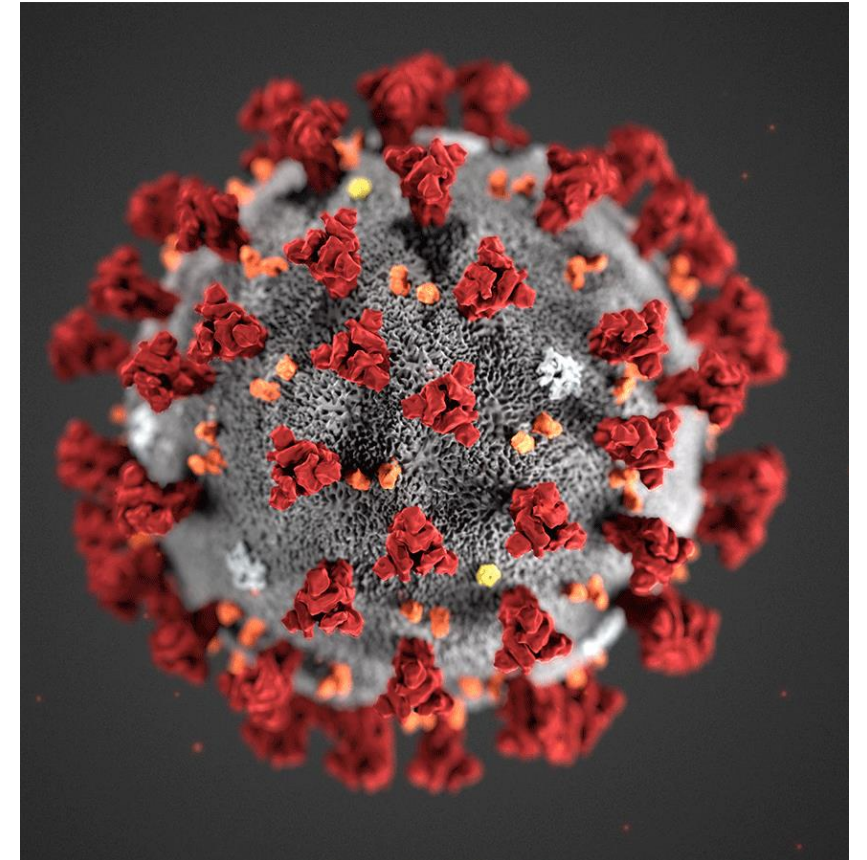
MBA – Hospital and Healthcare Management

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Overview of the Presentation

1. Introduction
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4. Research question and research objective
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About Fortis Hospital, Anandapur, Kolkata

1. Fortis founded in 1996, the goal being creating a world-class integrated healthcare delivery system in India.
2. Fortis Hospital Kolkata is a NABH accredited super-speciality hospital which was established on January 9, 2011.
3. Treating COVID-19 since the onset of pandemic.
4. Proper allocated wards and special ICU areas created for the COVID-19 patients.
5. Constituting a team of doctors for multiple specialities to tackle the infection in an infected individual.

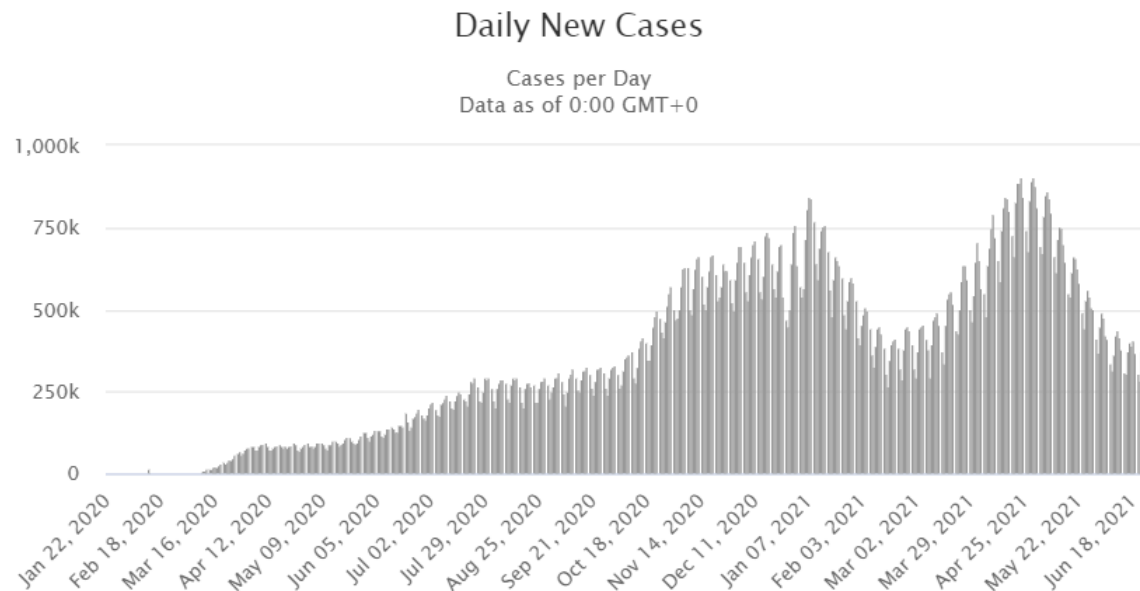
Introduction to COVID-19

1. Caused by SARS-COV-2
2. Started in December 2019.
3. First identified in the Wuhan City, Hubei province of China.
4. Was declared as Public Health Emergency of Internal Concern by WHO.
5. These virus has very high infectivity rate resulting in spread of the virus across the globe.
6. Severity of the disease ranges from asymptomatic to life-threatening.
7. Primarily affects the respiratory system. Other organs involved are cardiac, kidney.

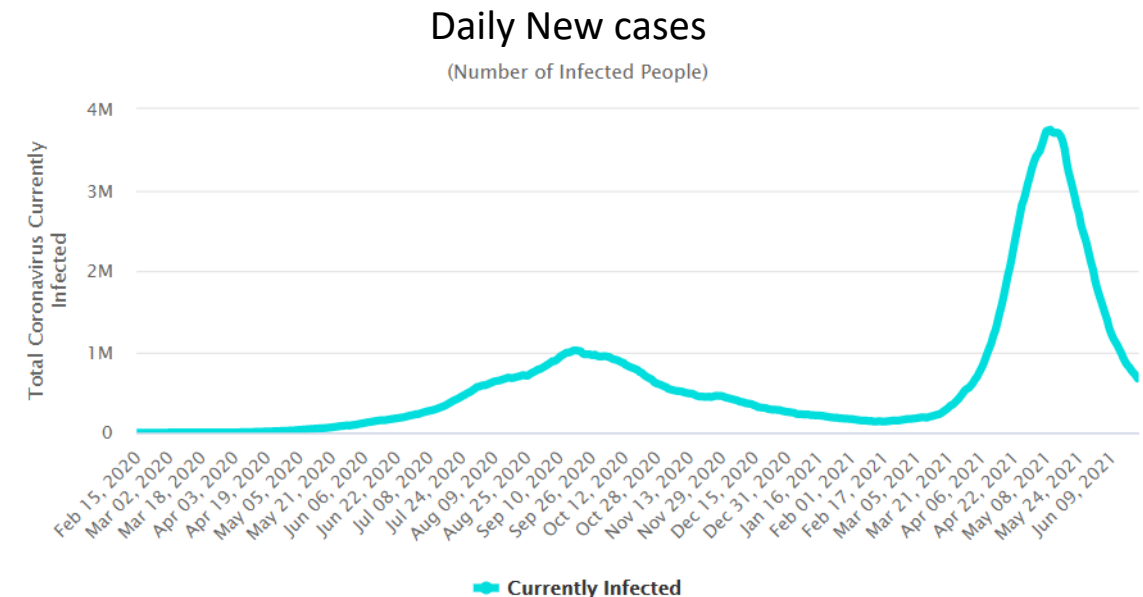
Review of Literature

1. Around 5 months gap between the two waves. Newer strains have mutated and other organs involvement also been seen. On addition, to lack of medical facilities to fight the rapidly growing number of cases (Jain et al., 2021).
2. Extrapulmonary involvement seen in cardiovascular system, haematological, Central nervous system and gastrointestinal tract and renal system(Cascella et al., 2021).
3. New guidelines set by AIIMS, ICMR for the treatment of the patients(ICMR, 2021).
4. Increasing the production medical equipments and usable has greatly helped in the treatment of the patients (Bikkina et al., 2021).

Scenario of the COVID-19 Daily New Cases Global and India (till 20th June 2021)



Global

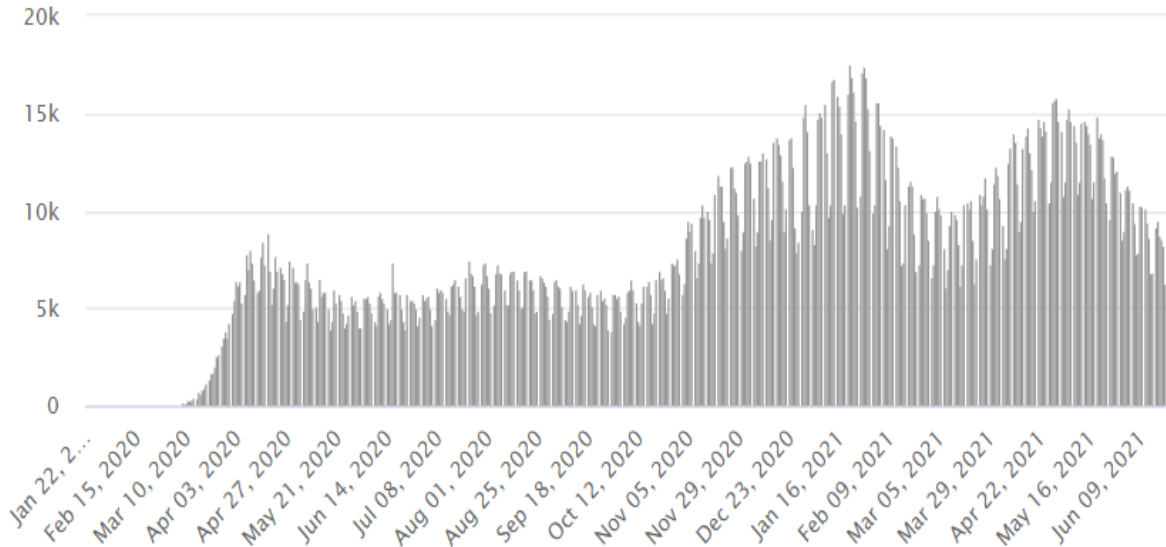


India

Scenario of the COVID-19 Deaths Global and India (till 20th June 2021)

Daily Deaths

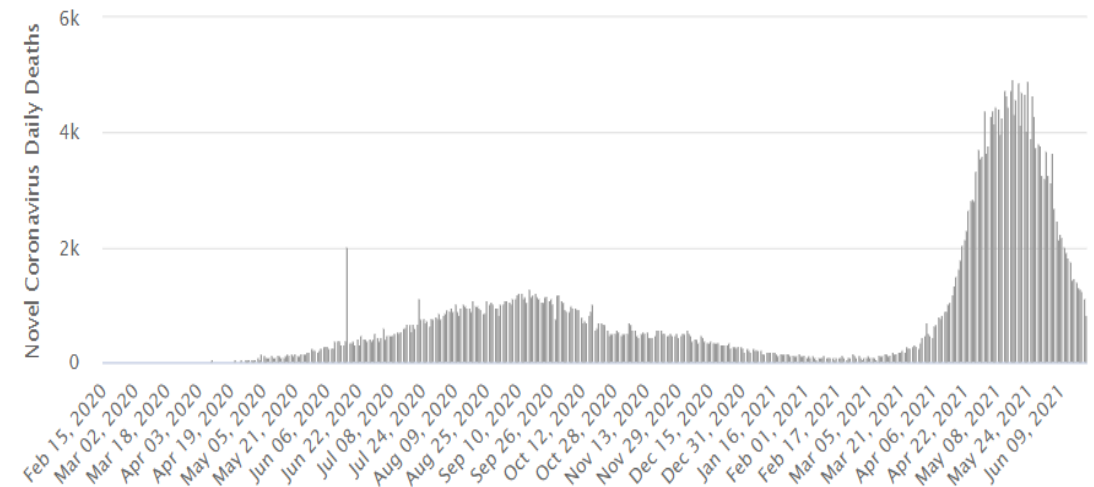
Deaths per Day
Data as of 0:00 GMT+0



Global

Daily Deaths

Deaths per Day
Data as of 0:00 GMT+8



India

First wave V/S second wave in India

PARAMETERS	FIRST WAVE	SECOND WAVE
Causative organism	SARS-COV-2 virus.	Mutant variants of SARS-COV-2 virus.
Symptoms	Mostly related to the respiratory system.	Other system involvement like gastrointestinal and renal etc.
Shortness of breath	Lesser cases.	More cases.
Age of the patient	Older population.	The younger population is also affected.
Patient with comorbidities	More affected.	Did not discriminate.
Availability of medicines	The shortage was there.	Available in hospitals and pharmacies.
Health care workers	Less trained and not vaccinated.	More trained and vaccinated.
Ventilator beds	Was within the hospital capacity.	Beds were increased to meet the increasing number of patients.
Investigative testing	Less	More.
PPE	Were in short supply.	Supply was in plenty.
Vaccine	Not available.	Available.
Treatment cost	High.	Markedly reduced.
Oxygen requirement by patients	Less.	More.
Disease spread	Slower.	Faster.
Positivity rates	Lower.	Higher.
The peak of the wave	Gradual.	Steep.

Source: Differences between First wave and Second wave of COVID-19 in India available at ncbi.nlm.nih.gov

Research Question and Research Objective

- **Research question –**

What are the characteristics, clinical presentation of COVID-19 patients who died in Fortis, Anandapur, Kolkata?

- **Research objective –**

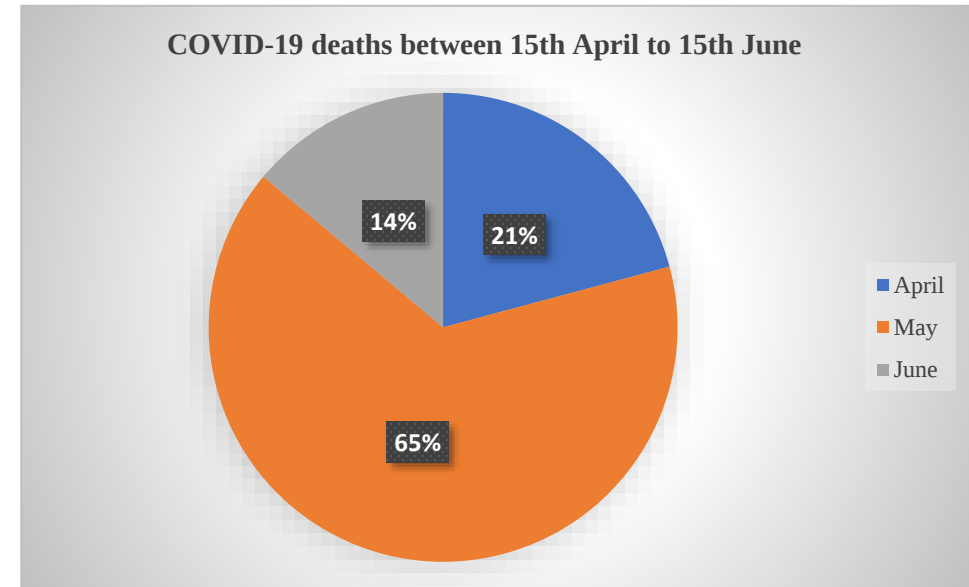
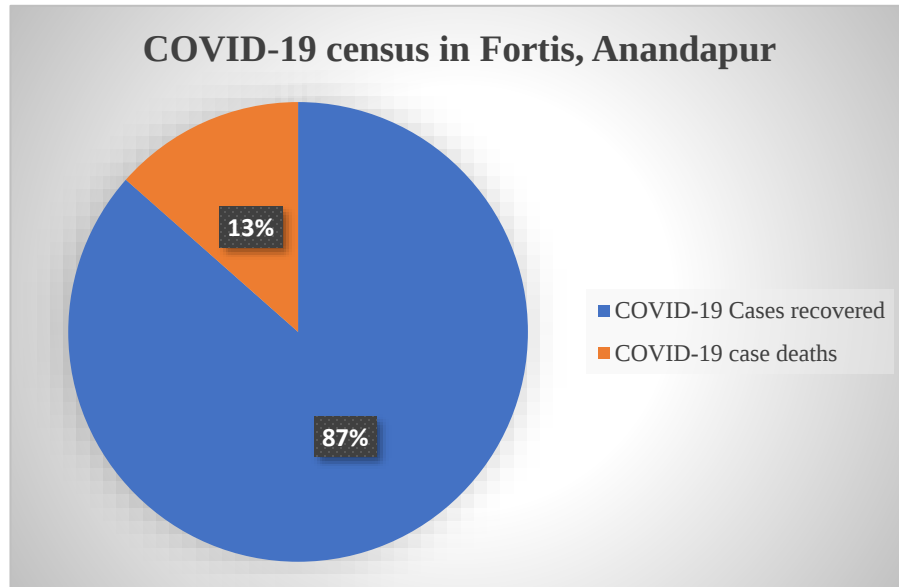
To describe the clinical characteristics of COVID-19 patients who died in Fortis Hospital, Anandapur.

Methods and Materials Used for This Study

- **Research Design** - It is a cross-sectional descriptive study of the COVID-19 patients that were admitted in Fortis Hospital, Anandapur.
- **Study Duration** - 15th April 2021 to 15th June 2021
- **Data source** – Secondary data was collected from the medical records of the COVID-19 patients who died in Fortis Hospital, Anandapur, Kolkata during the period of the study.
- Sample Size – 72.
- Sampling technique – Non probabilistic purposive sampling.
- Inclusion Criteria –
 1. Patients who were discharged /died due to COVID-19 in the Fortis hospital.
- Exclusion Criteria –
 1. All COVID-19 patients who were alive during study period.

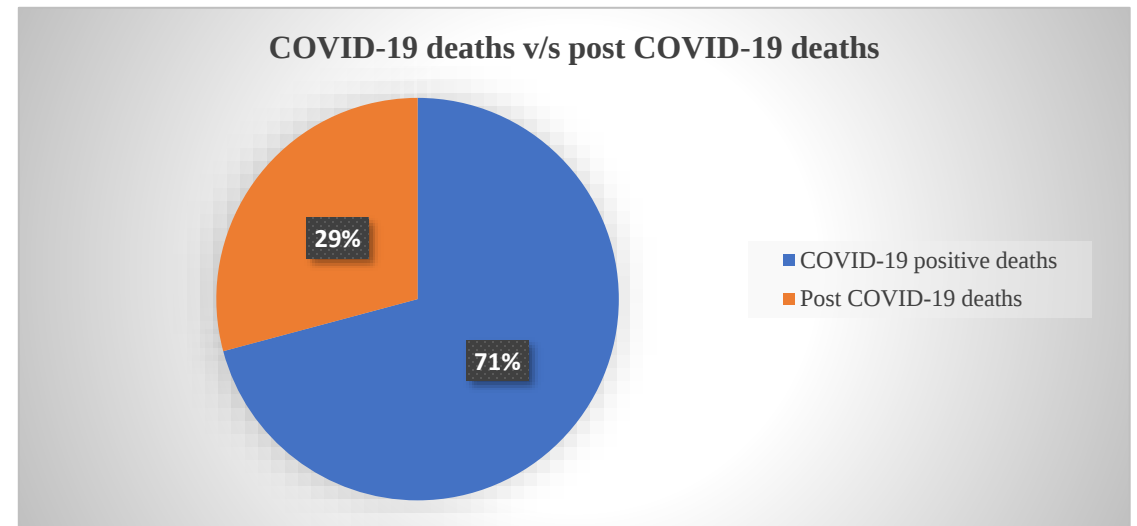
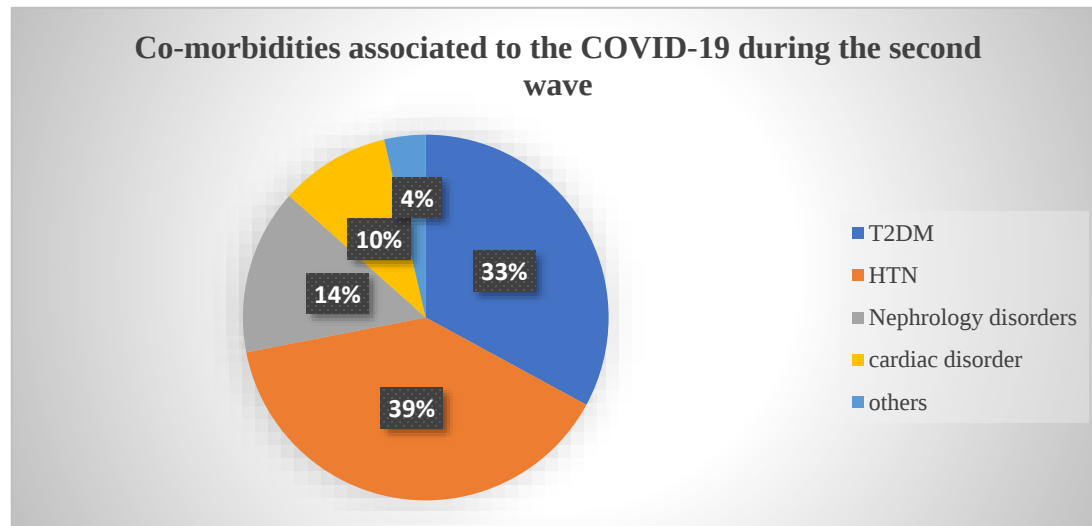
Data Analysis

- Mortality Rate was 13% among the COVID-19 patients during the study period.
- 65% of the mortality was seen in the month of May, followed by 21% in April and 14% in June.



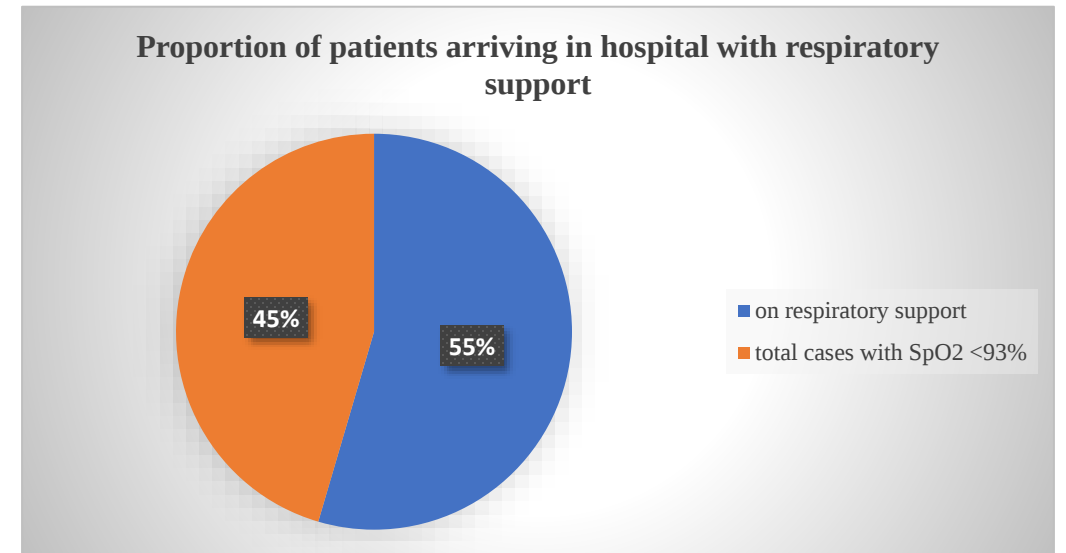
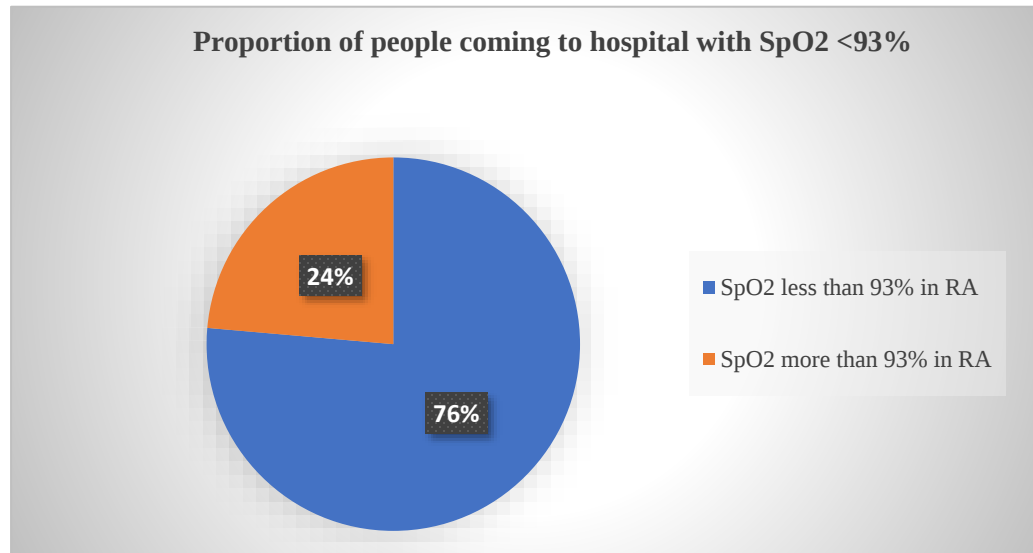
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- 29% of the deaths were linked with post COVID-19 complications.
- Some of these complications were superimposed on pre-existing co-morbidities.
- Some extra-pulmonary involvement are cardiac, kidney.



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- 24% of the COVID-19 patients who died had come to the hospital with SpO2 less than 93%.
- Among them 55% of the cases were already on respiratory support when they arrived in the hospital.



Analysis: Factors Associated With The Mortality

- Due to triaging of the patients for admission, only the severely ill patients were admitted and were given preference. Thus, these patients already had a lower chance of survival compared to patients who presented with minimal symptoms.
- The majority of the patients came with co-morbidities. Many had uncontrolled risk factors like T2DM and HTN. Some patients already came with a history of cardiac or renal events for which they already underwent treatment.
- Many patients presented late even when the guidelines stated that patients should come to the hospital when the SpO2 falls below 94% in RA.
- A good proportion of patients were elderly population.

Some Common Causes Associated With the COVID-19 Deaths

1. The delay in seeking medical attention may be attributed to the lack of knowledge among the population about protocols set by the government and when approach the hospital.
2. And short supply of the medical oxygen in the local hospitals.
3. It can also attribute to the lack of hospital beds.
4. Comorbidities have always played a vital role in the outcome of the COVID-19 disease, mainly nephrological disorder (excluding T2DM and HTN).

Recommendations and Limitations

Recommendations –

- Hospitals should have a team of nurses who will regularly check up on the patients who are advised for home isolation.
- Continuous monitoring of the daily progress and keeping a record of their vital signs, will help get an idea about the progression of the disease.
- In case of any deterioration of the condition of the patient the consulting physician can be informed, and proper follow-up can be done in time based on the investigations and treatments advised by the physician.

Limitations –

- This hospital-based study included the patients who died due to COVID-19 and does not have the clinical presentation of the patients who were discharge.
- The final outcome of the patients who were alive during the study period is not known.
- It cannot be generalised to the population since this is hospital-based study.
- Severity of co-morbidities not related to COVID-19 may have influenced the study data.

References

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THANK YOU
