



Mortality Profile of Covid Patients at Tertiary Health Care Centre

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ABSTRACT

Background

Almost 200 countries are affected by the new viral illness COVID-19, which has a diverse clinical profile globally. Early detection and control of risk factors are crucial steps in the fight against COVID-19 in the absence of viable treatments. This study was carried out in a tertiary care hospital in Srikakulam, Andhra Pradesh to evaluate mortality profile of COVID -19 patients and identify associated factors with COVID deaths.

Methods

The General Medicine department of Great Eastern Medical School & Hospital Ragolu Srikakulam conducted this retrospective study from July 2020 to December 2020. Data was collected from death records of patients who were Confirmed positive

cases of COVID 19 infection by Antigen positivity or RT PCR. Analysis was based on the, total deaths, age and gender distribution, duration of hospital stay and co-morbidities.

Results

In our study, Majority of the deaths in our study were of male population, i.e. 75.29% .

Deaths occurred within the first week of admission were 77.17%. Most of the deaths were of age greater than 65 years i.e 71.02% ,34% of deaths were due to ARDS, 38.90% of patients were having no comorbidities.

Conclusion

From this study we found no significant association between age and gender with comorbidities and hospital stay.

Keywords

COVID -19, co-morbidity, mortality

INTRODUCTION

Covid 19 which began in Wuhan, China and gradually became a pandemic disease. It caused severe morbidity and mortality across the globe. The First case was reported in India on 27th January 2020 and in Srikakulam on 25th April 2020. After that the cases started rising tremendously and recently we experienced the second wave. Till date there have been 237 million cases of Covid 19 globally and 4.8 million deaths. In India, 3.3 million cases have been diagnosed and 4,50, 160 deaths. Compared to the total population of India , the death rate is relatively less in Srikakulam district as compared to the global scenario. Since our institute was declared as District Covid Hospital, we decided to analyse our data of deaths and compare it will the global scenario and Indian data.

RESULTS AND ANALYSIS

Total of 359 COVID-19 death secured at GEMS Hospital Srikakulam, from July 2020 to December 2020.

We have an allayed based on

- Gender
- Age
- Comorbidities
- Duration of hospital stay and made comparison based on above parameters.

AIMS AND OBJECTIVES

- To evaluate mortality profile of COVID -19 patients.
- To identify associated factors with COVID deaths.

MATERIALS & METHODS

This is a retrospective cross-sectional study of COVID 19 deaths which occurred from July 2020 to December 2020. Data was collected from death records of patients who were Confirmed positive cases of COVID 19 infection by Antigen positivity or RT PCR (polymerase chain reaction) .Analysis was based on the, total deaths, age and gender distribution; duration of hospital stay and co-morbidities. Data was presented as percentage ,proportions. Associated factors affecting mortality of COVID-19 was found out by Chi-Square test.

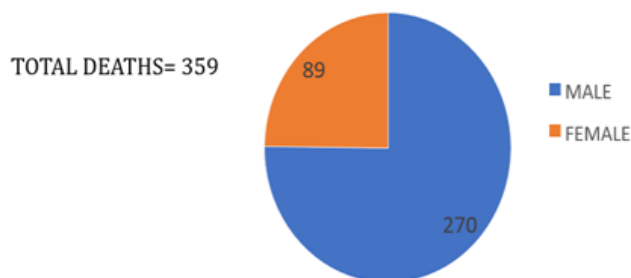


FIGURE -1 SEX DISTRIBUTION OF

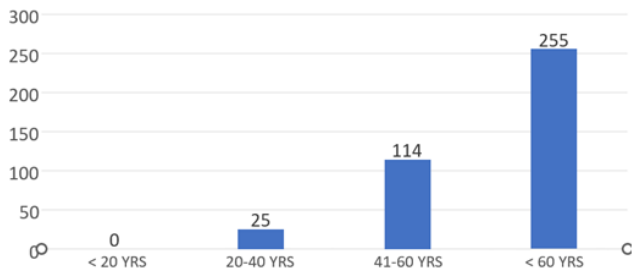


FIGURE -2 AGE WISE DISTRIBUTION

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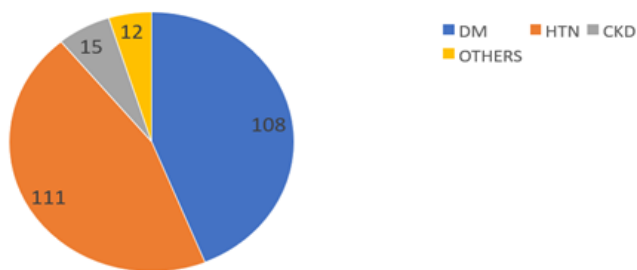


FIGURE -3 ASSOCIATED CO-MORBIDITIES

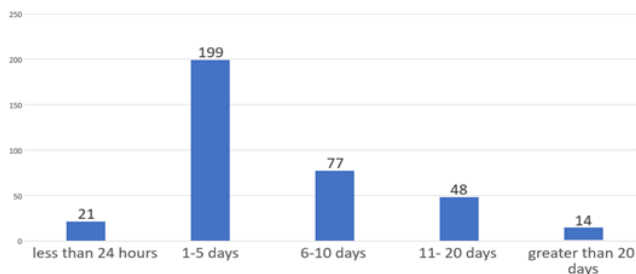


FIGURE 4 DURATION OF HOSPITAL STAY

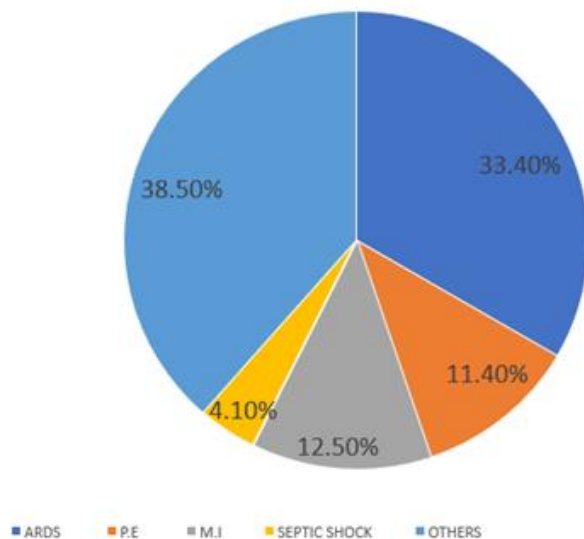


Figure 5 Distribution Based on Cause of Death in this study we have compared –

- Between gender with presence of comorbidities.
- Gender with 7 day mortality.
- Age and the duration of hospital stay.

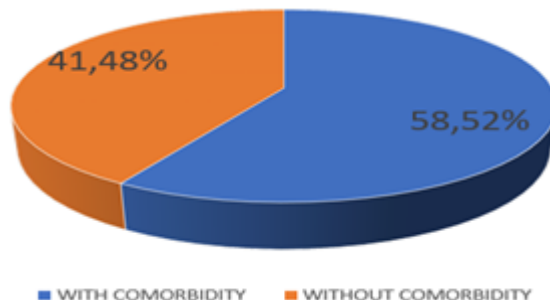


Figure 6: Distribution of Male Patients Based on presence or Absence of Comorbid conditions.

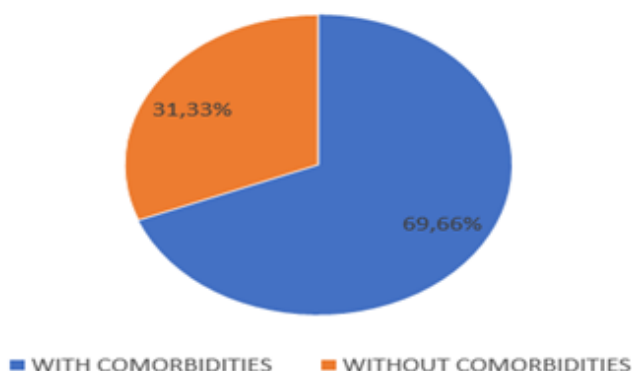


Figure 7: Distribution of Female Patients Based On Presence Or Absence of Comorbid Conditions.

	WITH CO-MORBIDITIES	WITHOUT COMORBIDITIES	p value
MALE	158	112	0.08
FEMALE	62	27	0.08
TOTAL	220	139	

Table1: Gender Distribution with Comorbidities

	LESS THAN 7 DAYS	MORE THAN 7 DAYS	p value
MALE	172	98	0.690
FEMALE	54	35	0.690
	TOTAL = 226	TOTAL = 133	

Table 2: Duration of Hospital Stay

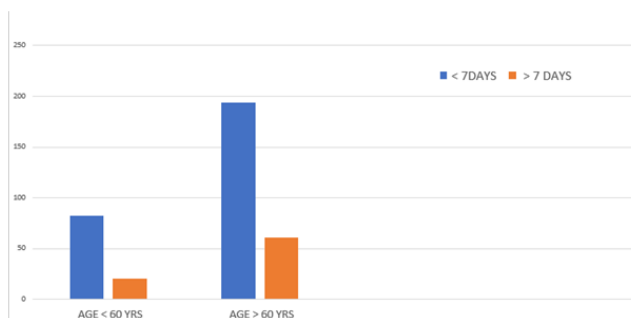


Figure 8: Age and Duration of Hospital Stay

AGE	STAY < 7 DAYS	STAY > 7 DAYS	p value
< 60 YRS	83	21	0.52
> 60 YRS	194	61	0.52
	Total = 277	Total= 82	

Table 3: Age and Duration of Hospital Stay

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- Majority of the deaths in our study were of male population, i.e.75.29%.
- Deaths occurred within the first week of admission were77.17%.
- Most of the deaths were of age greater than 65 years.i.e71.02%
- 34% of deaths were due to ARDS.
- 38.90% of patients were having no comorbidities.
- From the study we found no significant association between age and gender with comorbidities and hospital stay.

DISCUSSION

- The mortality rate in India is 1.36 %.
- Our centre is a tertiary care medical college where seriously ill patients are admitted requiring Intensive care management and high flow oxygen and hence our death rate is high .

1. A study conducted in R.N COOPER hospital, Mumbai on mortality of COVID patients.
 - When compared with above study we found more male deaths (71%), to 63% ; Majority of the deaths were within first 5 days (55.95%) to 69.65% deaths which occurred within 3 days.
 - We also studied association between age and gender with comorbidity and hospital stay.
2. In a study by Biswas , found significant correlation between gender and comorbidities and COVID deaths.Whereas in our study we couldn't find any relation between the same parameters.
3. In an another study on Clinical Characteristics and Mortality Profile of COVID-19 Patients Aged less than 20 years Old in Pernambuco – Brazil , showed greater COVID-19 severity and fatality in children < 1 year of age compared to adolescents. It further showed predominance of

females (52.8%) and majority of comorbidities were of oncological disease.

4. A study on clinical profile and risk factors for mortality among COVID-19 inpatients at a tertiary care centre in Bengaluru, India showed median survival time was significantly lesser in male COVID-19 patients (16 days) as compared to female patients (20 days). Increasing age, male gender, patients presenting with symptoms of fever, cough, breathlessness, smoking, alcohol consumption, comorbidities were significantly associated with mortality among COVID-19 patients.
5. A study by Nadeem R on Clinical Profile of Mortality and Treatment Profile of Survival in Patients with COVID-19 Pneumonia Admitted to Dubai Hospital, showed majority of the patients were young males with pre-existing conditions. Ferritin, CRP, and D-dimers were higher in nonsurvivors. Treatment with chloroquine, antivirals, and anticoagulation was not different between survivors and nonsurvivors.
6. A study by Vitor Manuel Becerra – Munoz on Clinical profile and predictors of in-hospital mortality among older patients hospitalised for COVID-19, showed patients aged ≥ 65 years hospitalised for COVID-19 had high rates of in-hospital complications and mortality, especially among patients 75 years or older. Age ≥ 75 years, dementia, peripheral oxygen saturation $< 92\%$, severe lymphopenia and qSOFA scale > 1 were independent predictors of mortality.
7. A study conducted by Krishna Gokhale on clinical profile and associated mortality in people with and without diabetes with Coronavirus disease 2019, showed patients with COVID-19

and DM with complications presented with a more severe clinical and biochemical profile, but this did not associate with increased mortality in this study.

8. A study by Lysandro Pinto Borges on COVID-19 mortality profile during the first 15 months of the pandemic, showed that sex, age and the presence of comorbidities were the factors with the greatest influence on mortality from COVID-19.
9. A study was conducted by Ashleigh Kernohan, Anna Boath on Mortality in COVID-19 patients with radiological changes on admission, showed a significantly higher mortality rate for those who have received oxygen therapy and also reported that the presence of ground glass opacities is associated with mortality.

CONCLUSION

- COVID 19 affects people of all age groups and gender. It neither spares people with comorbidities nor those without any comorbidities.
- Social distancing, proper usage of mask covering the nose and mouth and hand hygiene will be long lasting self disciplinary measures to curtail the spread of this disease.

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