A DESCRIPTIVE STUDY ON EMERGENCY CASES DURING PRE, INTRA AND POST COVID 19 PANDEMIC REPORTED AT TERTIARY CARE HOSPITAL, NELLORE, ANDHRA PRADESH

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Abstract

Background of the study: Corona virus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. It was first reported to the World Health Organization (WHO) from Wuhan, China, in December 2019, caused by the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). The virus has spread to India and 106 other countries in Asia, Europe, North America, Africa, and Oceania. On March 11, the World Health Organization (WHO) declared the outbreak a pandemic. India has one of the highest COVID-19 infection rates in the world with over 2.5 million confirmed cases and the death toll on the rise. The first case of COVID-19 was identified on January 30, 2020 in Kerala, in a student who had returned from Wuhan, China. In response, the Government imposed a nationwide lockdown to prevent community transmission of the infection. Methodology: The research design is Descriptive cross-sectional retrospective design that focus on obtaining information about association between emergency reported cases during pre, intra and post COVID-19 pandemic with selected socio demographic variables. The study was conducted at casualty and secondary data was obtained from records maintained in emergency departments at Narayana Medical College and Hospital. 250 samples were chosen by convenience sampling technique and data was collected by using a self-structured questionnaire. EZR software was used to analyze the data. Results: Majority of diagnosis during pre, intra and post pandemic 6 (8.5%) CVA, 10(14.3%) COPD, are higher during pre-pandemic comparative of intra and post pandemic. 14(14.1%) poisoning, 11(11.1%) Hypertensive, 9(9.1%) fracture, 13(13.1%) abscess are higher in post pandemic comparative of pre and intra pandemic. Minority of diagnosis during pre, intra , post pandemic 1(1.0%) bronchitis , 1(1.0%) snake bite , are lower during post pandemic compared to pre and intra pandemic, 1[1.4%] pneumonia are lower during pre-pandemic compared to post and intra pandemic.

INTRODUCTION

Corona virus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus.It was first reported to the World Health Organization (WHO) from Wuhan, China, in December 2019[1]. The first case of COVID-19 was identified on January 30, 2020 in Kerala, in a student who had returned from Wuhan, China. India declared a lockdown which was starting from 25 March 2020 to 30 May 2020 and gradually relaxed after that1. There was a significant reduction in the growth rate of cases. It also helped increase the duration in the doubling of patients[2]. Few studies have reported the impact of lockdown on various essential services. Knowing the effect of lockdowns on hospital services is essential to plan for future pandemics and disasters. Further, with each country experiencing more than one wave, lockdowns (either nationwide or region wise) would be required in the ensuing years[3].

A study described by Mandeep Kaur Saini, Hemendra Kumar et.al on Impact of lockdown on medical emergency visits during the COVID-19 pandemic in India, The pattern of diseases requiring emergency visits during the lockdown period differed significantly from those before and after. The proportion of cardiovascular diseases and poisonings had increased during the lockdown period[4]. During the national lockdown of India for COVID-19 a substantial decrease in ED visits was observed and similarly, family Doctors widely reported a considerable reduction in clinic visits. The possibility of postponing necessary urgent care for conditions with possible serious consequences has been advocated in India and in other countries and this could have been a contributing factor of death in some patients[5].

OBJECTIVES

1. To identify and describe the Emergency cases during pre, intra and post COVID 19 Pandemic reported to emergency department at tertiary care facility.

2. To identify the association between the reported cases during pre, intra and Post COVID 19 pandemic with selected socio demographic variables.

HYPOTHESES

H0: There will be no significant association between the reported cases during pre, intra and Post COVID 19 pandemic with selected socio demographic variables.

H1: There will be significant association between the reported cases during pre, intra and Post COVID 19 pandemic with selected socio demographic variables.

METHODOLOGY

Research Design: Quantitative approach, descriptive cross-sectional retrospective design

Setting of the study: Narayana Medical College and Hospital, Nellore

Sample: The patients who developed emergency during pre, intra and postCOVID-19 Pandemic and admitted in emergency Department, ICU's at Narayana Medical College and Hospital, Nellore In this study convenience sampling technique is used to select the samples which fit into the inclusion criteria.

Criteria for sampling:

Inclusion criteria:

1) Aged between 18-65yrs

2) Both males and females

Exclusion criteria:

1) Records which are incomplete

2) Aged less than 18 years.

Demographic Variables

Basic demographics includes age, gender, IP number of the participant, contact number area of living: Urban/Rural, occupation, history of medical condition, History of surgical conditions, history of attack COVID-19

Data Collection Tool:

Developed self-structured questionnaire to obtain details available in the client's case sheet /records in emergency department of Narayana Medical College and Nellore.

The permission to conduct the study obtained from the Medical Superintendent and previous Medical Records was used to collect information regarding emergency cases in pre, intra and post COVID 19 pandemic.

Table 1: **Distribution of emergency cases during pre, intra and post pandemic**

cd.no	Diagnosis	Pre-pandemic n%	Intra-pandemic n%	Post-pandemic n%
00	Poisoning	13(18.6)	9(33.3)	14(14.1)
01	Respiratory Tract Infection	4(5.7)	3(11.1)	10(10.1)
02	COPD	10(14.3)	2(7.4)	3(3.0)
03	CVA	6(8.6)		3(3.0)
04	HTN	3(4.3)	2(7.4)	11(11.1)
05	Cellulitis	--	--	--
06	Bronchitis	1(1.4)	1(3.7)	1(1.0)
07	Hydrocele	--		1(1.0)
08	Hernia	2(2.9)		4(4.0)
09	Diabetes mellitus	5(7.1)	4(14.8)	5(5.1)
10	Snake Bite	3(4.3)	1(3.7)	1(1.0)
11	Heart Failure	6(8.6)	3(11.1)	4(4.0)
12	Asthma	--	1(3.7)	3[3.0)
13	Gastritis	1(1.4)	--	1(1.0)
14	Appendicitis	2(2.9)	--	6[6.1)
15	Fracture / Dislocation	2(2.9)	--	9[9.1)
16	Pneumonia	1(1.4)	--	4(4.0)
17	Seizures	1(1.4)	1(3.7)	2(2.0)
18	Abscess	5(7.1)	--	13(13.1)
19	Ear infection	1(1.4)		4(4.0)
20	Chronic Kidney Disease	4(5.7)		--

Table 01 shows the majority of diagnosis during pre, intra and post pandemic 6(8.5%) CVA, 10(14.3%) COPD, are higher during pre-pandemic comparative of intra and post pandemic. 14(14.1%) poisoning, 11(11.1%) Hypertensive, 9(9.1%) fracture, 13(13.1%) abscess are higher in post pandemic comparative of pre and intra pandemic.

Minority of diagnosis during pre , intra , post pandemic 1(1.0%) bronchitis , 1(1.0%) snake bite , are lower during post pandemic compared to pre and intra pandemic, 1[1.4%] pneumonia are lower during pre-pandemic compared to post and intra pandemic.

Table 2: Association between demographic variable of emergency cases and post pandemic diagnosis

| Demographic variables	X^2	Df	P value
Gender	19.3	18	0.37
Area of living	68.56	18	0.007*
Occupation	62.05	54	0.211
History of medical condition	246.87	72	0.001*
History of surgical condition	70.918	42	0.034*

Table 2 Shows that chi square test for independence shows there was statistically significant association between area of living, history of medical condition and history of surgical condition with diagnosis of post pandemic where **p** value is <0.05 .

Figure: 1 spearman rank correlation between history of medical condition and diagnosis of post pandemic COVID 19
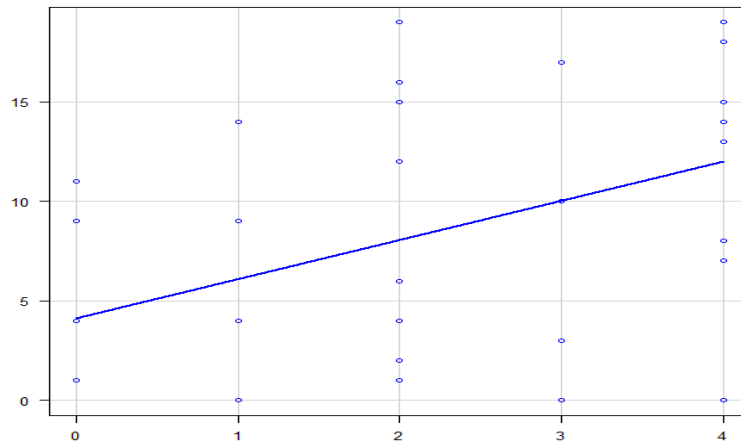
Spearman rank correlation as shown weak positive correlation between post pandemic diagnosis and history of medical condition where rho value is 0.42

Figure 2: Spearman rank correlation between history of surgical condition and diagnosis of post pandemic COVID 19
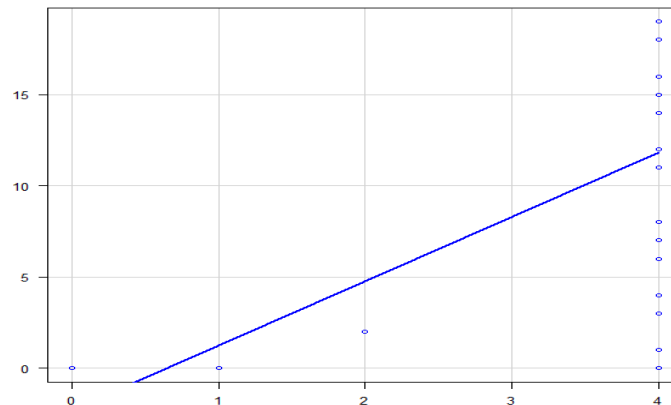
Spearman rank correlation as shown weak positive correlation between post pandemic diagnosis and history of surgical condition where rho value is 0.328

DISCUSSION

The data were analyzed based on the objectives and assumptions formulated for the study. Socio-demographic data containing characteristics of reported emergency cases was analyzed using frequency, percentage, mean and standard deviation; association between outcome variables and selected socio-demographic variables was analyzed by chi square test.

- Large part of samples were 66 [66.7%] from Area of living Rural

- Mass of samples 45 [47.9%] Occupation in others

- Greater number of samples 39 [40.2%] has history of medical condition in others

- Superiority of samples 55 [94.8%] has history of surgical condition in others

- Best part of samples 52 [19.7%] Aged 35 in years.

Majority of Sample distribution   based on diagnosis during pre, intra and post COVID-19 pandemic.

- 6 [8.5%] CVA, 10 [14.3%] COPD was higher during pre-pandemic comparative of intra and post pandemic.

- 14 [14.1%] poisoning, 11 [11.1%] Hypertensive, 9 [9.1%] fracture, 13 [13.1%] abscess were higher in post pandemic comparative of pre and intra pandemic.

Minority of Sample distribution   based on diagnosis during pre, intra, post pandemic

- 1 [1.0%] bronchitis, 1 [1.0%] snake bite, was reported during post pandemic compared to pre and intra pandemic.

- 1[1.4%] pneumonia was reported during pre-pandemic compared to post and intra pandemic.

Association

Association between demographic variables and post pandemic shows that chi square test for independence shows there is statistically significant association between area of living, history of medical condition and history of surgical condition with diagnosis of post pandemic where **p** value is <0.05 .

Correlation

- Spearman rank correlation has shown weak negative correlation between post pandemic diagnosis and area of living where rho value is 0.489.

- Spearman rank correlation as shown weak positive correlation between post pandemic diagnosis and history of medical condition where rho value is 0.42

- Spearman rank correlation as shown weak positive correlation between post pandemic diagnosis and history of surgical condition where rho value is 0.328.

CONCLUSION

- The study was concluded that majority of reported emergency cases was 99 during post COVID-19 compared to intra 27 and pre 70 COVID-19 pandemic.

- Majority of reported cases 14 [14.1%] poisoning were higher in post pandemic comparative of pre and intra pandemic.

- Very minority 1 [1.0%] bronchitis, 1 [1.0%] snake bite, was reported during post pandemic compared to pre and intra pandemic.

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