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RESEARCH ARTICLE

Management perspective of COVID-19 patients from L1 till L3 level hospital: An observational study

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ABSTRACT

Background: The coronavirus (CoV) specifically known as CoVs disease (COVID)-19 spread from Wuhan city of China to the whole world and created havoc worldwide. It is an RNA virus of family beta- CoVs, and it is third CoV infection after Middle East respiratory syndrome and subacute respiratory syndrome. **Aim and Objective:** The objective of this study was to assess the status of COVID-19 patients in the study area. **Materials and Methods:** A hospital-based cross-sectional study was conducted in Government Medical College, Azamgarh, on the subjects either suspected or confirmed with COVID 19 tests for March 20, 2020, till the submission of this research. Oral consent was taken from all the patients. The total number of patients included in the study is 81 who were declared as COVID positive patients admitted in the isolation ward after taking throat and nasal swab followed by reverse transcription-polymerase chain reaction technique. Out of 81, 73 (90.12 %) were male and 8 (9.88 %) were female and the age varies from 8 years to 95 years with the mean age of 35.48 years. Out of total patients, 1 was referred due to critical illness, two were shifted to L1 hospital, and 27 were discharged in satisfactory conditions. **Results:** The majority of patients (61.00%) were asymptomatic and the patients who were having symptoms presented sore throat and cough (32.00%), fever and cough 19%, sore throat, headache and body-ache (16.00%), cough, sore throat and chest pain (12.00%), and vomiting and pain abdomen (0.06%). Radiological investigations have suggested mild acute respiratory distress syndrome (ARDS) in almost (10.00%), and some subjects show changes in chronic obstructive pulmonary disease. There were 2 patients who showed severe changes of ARDS (<6.00%). **Conclusion:** The present study concludes that most of the patients were not much literate, and it was a challenge to make them understand the sensitivity of infection spread. The patients who showed symptoms were lesser; maximum was presented as sore throat, cough, and fever followed by other minor symptoms.

KEY WORDS: Coronavirus Disease-19; RNA Virus; Reverse Transcription Polymerase Chain Reaction; Acute Respiratory Distress Syndrome; Chronic Obstructive Pulmonary Disease

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INTRODUCTION

The coronavirus (CoV) specifically known as CoV disease (COVID)-19 spread from Wuhan city of China to the whole world and created havoc worldwide. It is an RNA virus of family beta-CoVs, and it is third CoV infection after Middle East respiratory syndrome and subacute respiratory

syndrome (SARS). The total positive cases till June 4, 2020, worldwide are 6.6 million, out of which 3.17 million have recovered (https://www.worldometers.info/coronavirus/). In India, the data are continuously increasing and crossed over 2.17 million and out of those, around 49% are active, 48% recovered, and approximately 3% died (https://www.worldometers.info/coronavirus/). The total test performed is 42,718 until that date. The created scenario varies state wise in terms of confirmed cases, active cases, recovered cases, and death rate. Most of the cases in India are asymptomatic which is challengeable to community and difficult to deal with the situation; moreover, the history given by patient is also questionable in view of their travel history, contact, and symptoms. As the lockdown is getting loosen, the COVID-positive patient has enhanced in numbers and even the complexity in their signs and symptom also varies although the WHO guidelines states, the patients who admitted in the hospital would be under this category partially or completely; severe acute respiratory infection – an acute respiratory infection with a history of fever or measured temperature >38°C, and cough onset within 10 days.[1] The other criteria were also kept in mind while taking in patient; acute respiratory illness and at least one of the following: (1) Close contact with a confirmed or probable case of SARS-CoV-2 in the 14 days before illness onset and (2) worked or attended a health care facility in the 14 days before the onset of symptoms, where patients with hospital-associated SARS-CoV-2 infections were reported, but sensitive and specific definition for community-based surveillance remain elusive. The social questions, such as need for quarantine children, minimum period of quarantine, and its mental and socio-economic costs, remain poorly explored.[2] Even the treatment of COVID-19 is mostly supportive based on the organ systems affected and includes intensive care unit or high dependency unit versus general wards, which should be decided early on in the course of the disease, considering the high mortality rate. Patients requiring hospitalization were managed with broad-spectrum antibacterial antibiotics and glucocorticoids only.[3] Here, the questions raise that do we really need to get panic with created data or try to understand the positive patients' clinical presentation to fight and live with CORONA like other viral diseases? To cope up with all these situation, the present study is planned and try to give a review of our institution how we have to handle the patients in an isolation ward and how they have presented clinically which will create a data for future reference to understand the patients behavior and criticality with their management. In this hard journey, government guidelines have been kept on changing, so there was much manipulation done at the institutional level. Initially, there was a 20-bedded isolation ward and 16-bedded quarantine setting. With our continuous effort on patient care, later the government made it 100 (80-bedded isolation+20 intensive care unit [ICU]), and finally, it was declared as COVID dedicated hospital of 425 bedded which was divided as 397 isolation ward, 20 ICU, 05 Post-operative bed, 02 beds for OT, and 01 in the labor room.

Research Question

What is the pattern of symptomatic and asymptomatic COVID patients in a population and extent it creates morbidity and mortality?

Aims and Objectives

This study aimed at assessing symptomatic and asymptomatic status of the COVID-19 patients in tertiary care center of Eastern Uttar Pradesh.

The Specific Objectives of the Study Were

- To assess the pattern of COVID patient in this area
- To find out educational and below poverty line pattern of study subjects
- To analyze the various symptoms of COVID patients and mortality and morbidity created by it.

MATERIAL AND METHODS

Study Design

A hospital-based cross-sectional study was conducted in Government Medical College, Azamgarh on the subjects either suspected or confirmed with COVID-19 tests for March 20, 2020, till the submission of this research.

Data Collection

The basic instrument of data collection was a personal interview method. Oral consent was taken from all the patients. The total number of patients included in the study is 81 who were declared as COVID positive patients admitted in the isolation ward after taking throat and nasal swab followed by reverse transcription polymerase chain reaction technique. Out of total patients, 1 was referred due to critical illness, 2 were shifted to L1 hospital, and 27 were discharged in satisfactory conditions. Out of 81, 73 were male and eight were female, and the age varies from 8 to 95 years with the mean age of 35.48 years.

Study Area and Duration

This study was conducted for a period of 3 months (March–May 2020).

Data Analysis

All the information of admitted patient was tabulated in Excel Sheet which includes their age, sex, symptoms, or asymptomatic. If they are symptomatic, symptoms noticed were fever, cough, sore throat, headache, body ache, chest pain, vomiting, and abdomen pain. For the interpretation, the data were incorporated into SPSS software and analyzed statistically.

This study was ethically approved.

RESULTS

The findings of the present study are depicted in Figures 1–5 and Table 1.

DISCUSSION

The present study included 81 COVID patients which bifurcated into males 73 male (90.02%) and females 6 female (9.8%), and history of foreign travel is only 1%. The majority of patients 61% were asymptomatic and the patients who were having symptoms presented sore throat and cough 32%, Fever and cough 19%, sore throat, headache and body-ache 16%, cough, sore throat and chest pain 12%, and vomiting and pain abdomen 0.06%. The same pattern of symptoms is also documented by other researchers with a mild variation of clinical symptoms like Kaushik *et al*. reported cough as most common symptom (85.71%) followed by fever (78.57%), whereas Gupta *et al*. noticed fever and cough more (42.9 %).[4-6] The article published in China was deferent with us as Wang *et al*. and Huang *et al*., where fever was the most common symptom found (91.7%)[3,7] and Guan *et al*. (87.9%).[8]

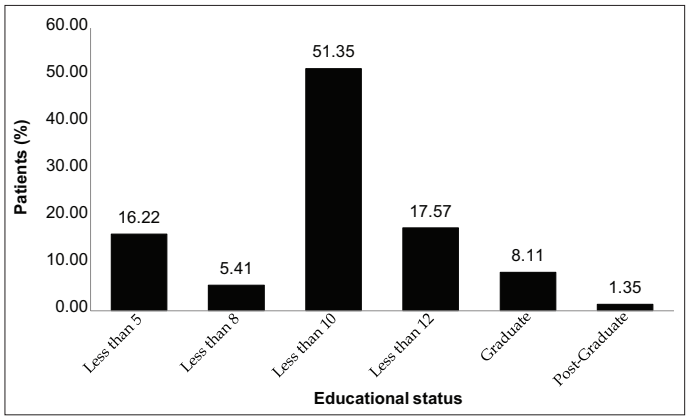

Figure 1: Distribution of patients according to educational status

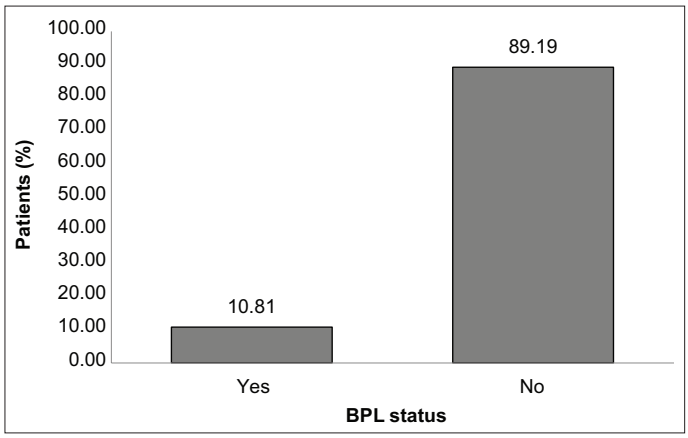

Figure 2: Distribution of patients according to below poverty line

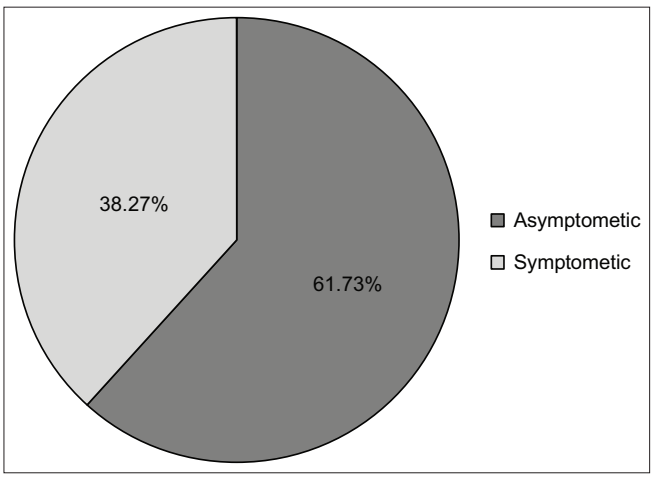

Figure 3: Distribution of patients according to asymptomatic and symptomatic

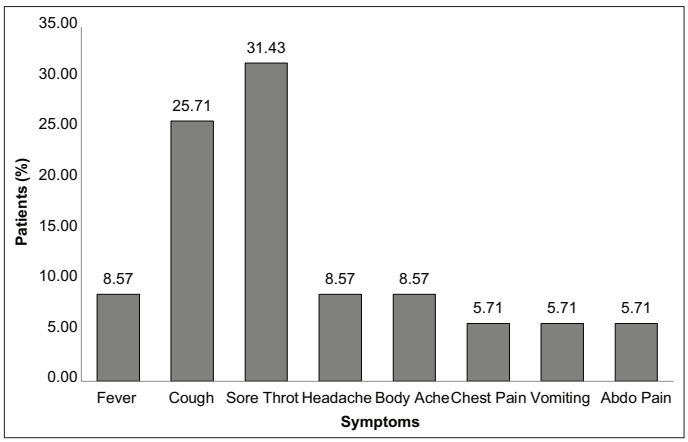

Figure 4: Distribution of symptomatic patients on symptoms wise

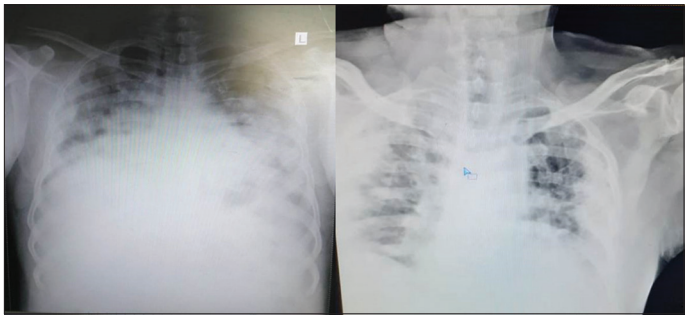

Figure 5: Chest X-ray posterior-anterior view shows changes in acute respiratory distress syndrome

Table 1: Treatment plan of patients

Medication	Prescription
Tab HCQ 400 mg BD	All
Tab oseltamavir 150 mg BD	All
Tab Vitamin C 500 mg BD	All
Tab azithromycin 500 mg OD	All
Tab pantaprazole 40 mg OD	All
Tab PCM 500	Sos
Tab odansetron	Sos
Syp lactulose	Sos
Tab Monteleukast + levocetrizine	Sos
Tab methylprednisolone 4 mg BD	Sos
Syp sucralfate	Sos

In all studies, gender biasness has been seen by COVID-19 pandemics as male get affected more than females, and the reason behind it might be their working habits, unhealthy behavior like smoking[9] travel and interactions with others. Other studies also support this fact. It has been observed that 6% of total patients were chronic obstructive pulmonary disease (COPD) which was comparatively more as other studies and the reason behind it might be the involvement of rural areas and low socioeconomic status.

Radiological investigations have suggested mild acute respiratory distress syndrome (ARDS) in almost 10% and some subjects show changes in COPD. There were two patients who showed severe changes of ARDS (< 6%) [Figures 1 and 2]. At the time of examination, some patients showed sinus tachycardia 50% and eosinopenia in <10% which might be due to increased hypothalamo–pituitory–adrenal axis discharge as in psychological stress.[10]

Problems Faced by Health care Workers

- In any pandemics, the main problem faced by health care workers is guidelines issued by the government which is frequently changed according to the situations
- Psychological burden on patients regarding their clinical symptoms, solitariness, and delay of test reports due to overburdened labs
- In initial days, the process of procurement was very slow for PPE Kits, mask, gloves and other required equipments but gradually it went well
- The fear in health care workers (Doctors, Staff nurse, Technician and Safaikarmi) was biggest hurdle which was motivated by various training programs and personal request
- As each district has to work as single unit, so there were many problems to collaborate and coordinate with district hospital due to work pattern deference, but slowly, it was managed and came at the same desk
- Michos *et al*. have nicely correlated the essence of *Bhagavad Gita* with current situation when the governments and health care workers were losing hopes all over world that we have to learn to detach ourselves from the results of our actions, and renunciate the desire for a particular outcome.[11]

Limitations

- Less number of patients
- Assembling the complete data due to change in guidelines frequently.

CONCLUSION

The present study concludes that most of the patients were not much literate and it was a challenge to make them understand the sensitivity of infection spread. The patients who showed symptoms were lesser; maximum were presented as sore-throat, cough, and fever followed by other minor symptoms. By analyzing the data, it can be noticed that mortality and morbidity are very less in the ratio of population of an area in the present situation, so if the population cooperates with government guidelines and health care workers' instructions, the situation is still under control. As a new institution in a rural area, we have followed all the guidelines and stood at the same platform along with well-equipped and multispecialty hospital in this COVID 19 pandemics which are reflected by it's up-gradation from L1 to L3.

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