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General Medicine

CLINICAL PROFILE OF COVID-19 PATIENTS ADMITTED IN A TERTIARY CARE COVID HOSPITAL-AN OBSERVATIONAL STUDY

Dr. S. Durga Prasad	Assistant Professor, Department Of Medicine, Siddhartha Medical College,Vijayawada
Dr. K.V. Seshaiah*	Associate Professor, Department Of Medicine, Siddhartha Medical College, Vijayawada. *Corresponding Author
Dr. K.S.S.S.Surya Prakash	Final year Post Graduate, Department of medicine, Siddhartha medical college, Vijayawada.
Dr. N.Lavanya	2nd year Post Graduate, Department of medicine, Siddhartha medical college, Vijayawada.
Dr. Ch.Akhil Reddy	2nd year Post Graduate, Department of medicine, Siddhartha medical college, Vijayawada.
Dr. K.Jayasreelakshmi	Final year Post Graduate, Department of Medicine,Siddhartha Medical college, Vijayawada

ABSTRACT **BACKGROUND:** Since the origin of Covid-19, a plethora of symptoms have been described in the past few months, which indicate involvement of multiple systems with much more impact on the respiratory system. **METHODOLOGY:** We retrospectively evaluated from the medical records of 100 Covid-19 patients diagnosed with RT-PCR. It was a cross-sectional observational study of Covid-19 patients admitted in our tertiary COVID care hospital, Vijayawada, Andhra Pradesh during the period of two months i.e.,01-04-2020 to 31-05-2020. **RESULTS:** We observed the different clinical symptoms with varying frequency in Covid-19 patients. In our study the clinical symptoms in the descending order of frequency were fever (59%), cough (48%), diarrhoea (6%), dyspnoea (4%), running nose (3%), headache (3%), chest pain (1%). These symptoms are not specific to covid-19 but similar to those found in other viral infections. **CONCLUSION:** Based on clinical picture, disease has been classified as mild, moderate and severe. More than 80% patients have mild disease and will recover.14% will have severe disease and 5% will progress to respiratory failure, shock and multiorgan dysfunction.1-2% are fatal.

KEYWORDS : Covid-19, RT-PCR, Non-specific Symptoms, Respiratory Failure

INTRODUCTION:

A respiratory virus has emerged in December 2019 from Wuhan city of china, which was named as Covid-19. Within few months it engulfed more than 200 countries worldwide. The outbreak was declared as Global pandemic on 11th March 2020. It also gained entry into India, which is the second most populous country in the world.

As on date positive cases in India crossed 77 lakhs, standing in second place in world next to united states, with death toll of more than 1 Lakh. National recovery rate is 89.20%, with fatality rate is1.51%. Critical cases account for 0.2% of total cases. Indian states which are severely affected are Andhra Pradesh, Telangana, Delhi, Karnataka, Maharashtra, Tamil nadu, Uttar Pradesh and West Bengal.

Genomic sequencing analysis indicated that Covid-19 is a form of beta corona virus. Covid-19 was found to be having similarity to bat corona virus and postulated that bats were the primary source.[1]

Covid-19 is the third corona virus that affected human population in the last 18 years. The other two were Severe Acute Respiratory Syndrome Corona virus(SARS Co-V) outbreak in 2002 and the Middle East Respiratory Syndrome (MERS Co-V) outbreak in 2012.[2]

Human to human transmission through droplets as well as through fomites is the principal route of virus spread. Usually 80% of infections are either mild or asymptomatic. In some patients ,illness may be severe requiring hospitalization and may lead to even death, especially in the elderly or in those with comorbid conditions.

The objective of our study was to describe clinical, demographic profiles of patients diagnosed as covid-positive admitted in our tertiary care state covid hospital.

MATERIALS AND METHODS:

This is a cross sectional retrospective study, using medical records of patients diagnosed as covid-positive, using RT- PCR, admitted in tertiary care state Covid hospital, Vijayawada, Andhra Pradesh, during the period of two months i.e., from 01-04-2020 to 31-05-2020. The study was approved by the institutional ethics committee of Government Siddhartha Medical College, Vijayawada, Andhra Pradesh. We studied the clinical course and demographic profile of total 100 patients.

INCLUSION CRITERIA:

Patients aged >18years, admitted and diagnosed as Covid-19 positive with RT- PCR test, with or without comorbidities were included in the study.

EXCLUSION CRITERIA:

Children, Pregnant mothers and RT- PCR negative individuals were excluded from the study.

DATA COLLECTION

Medical records of Covid-19 positive patients were analyzed. Demographic, clinical characteristics, including duration of hospital stay and number of symptoms in relation to age were obtained and tabulated. The diagnostic criteria were followed as per the guidelines issued by the National institute of virology (Pune).

STATISTICAL ANALYSIS:

Data was tabulated in Microsoft excel sheets. Data was presented as mean and S.D for continuous variables and as frequencies and percentages for categorical variables.

RESULTS

One hundred patients were included in the study over a period of time going from 01-04-2020 to 31-05-2020. Mean age of the patients was 54±12 years. There was male preponderance in Covid-19 cases(68%).

Table 1. Demographic profile of Covid-19 patients.(n=100)

VARIABLES		NUMBER	PERCENTAGE
AGE	<50 yrs	32	32%

	>50 yrs	68	68%
GENDER	Male	68	68%
	female	32	32%

Our study patients were categorized into two categories basing on the age as, < 50 years and > 50 years.

Table 2: Gender distribution of Covid-19 patients in relation to age.

Age	Males(n)	Females(n)	Total(n)
<50 yrs	20	12	32
>50 yrs	48	20	68

Including both males and females 68% were > 50 years. Evidence shows that aged persons are more at risk of comorbidities, leading to risk of increased morbidity and mortality in Covid-19 infection.

In our study of one hundred covid-19 patients, clinical presentation was heterogeneous, with varying frequency of different symptoms. Most common symptoms in our study were fever and cough. Some patients had more than one symptom at presentation.

Table 3: clinical profile of covid-19 patients.

Clinical symptom	No. of patients (n)	Percentage (%)
Fever	59	59%
Cough	48	48%
Diarrhea	06	06%
Dyspnea	04	04%
Headache	03	03%
Running nose	03	03%

All clinical presentations are not specific for Covid-19, but are common symptoms of most of the viral infections.

Table 4: Age Versus number and duration of symptoms

Age in yrs	Number of symptoms	Duration of symptoms in days
<50 yrs	01	05
>50 yrs	02	03

Our data showed that number of symptoms appear increasing as age advances which may account for early reporting of elderly patients. Early hospitalization and intervention with antiviral treatment reduces morbidity and mortality.

DISCUSSION

In our study most common symptoms were fever and cough. Other symptoms were of lesser frequency and six of our patients had diarrhoea. Our study showed male preponderance of 68%, with females of 32%. 32% patients were of < 50 years and 68% were of > 50 years.

Similar to our study, fever was the most common symptom in a report by Huang et al(91.7%)[3], and Guan et al (87.9%).[2]

Sudhir Bhandari, Abhishek Bhargava et al reported cough as the most common symptom(85.7%), followed by fever(78.57%), which was in contrast to our study.[4]

Nitish Gupta, Sumita Agrawal et al reported fever(42.9%), dry cough(42.9%) as the most common symptoms and breathlessness were seen in 4.8%, which correlates to our present study findings.[5]

Initial data from Singapore showed fever and dry cough were the most common symptoms and none of them in their cohort reported rhinitis or diarrhea.[6]

George M. Varghese, Rebecca John et al reported in their review article about frequency of symptoms as fever(80-90%), cough(60-80%), breathlessness (18-46%), fatigue(38%), arthralgias/myalgias (15%), sore throat (11-14%), headache(6-14%), chills(12%), running nose(5%), nausea, vomiting (5%), diarrhoea (2-10%).[7]

In our study, incidence of diarrhoea (6%), running nose (3%), headache(3%), almost nearly correlating with the above report.

Cheung et al reported in their review and meta-analysis, that 17.6% patients had GI symptoms in the form of anorexia, nausea, vomiting, diarrhoea, abdominal pain or discomfort. Stool tested positive for COVID RNA in 48.1%, including even after respiratory samples negative for viral RNA.[8]

CONCLUSION:

Even though most common symptoms are fever, cough, breathlessness in covid-19 patients, all of the symptoms are non specific and common for many viral infections. So high index of suspicion especially in the presence of travel/ contact history is important, for early intervention to reduce morbidity and mortality.

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