

**Original Article*****A Study on Clinical presentations of COVID-19 patients during first hospital reporting in Jahurul Islam Medical College Hospital, Kishoregonj***

*\*Chowdhury MRA<sup>1</sup>, Bhuiyan BU<sup>2</sup>, Islam K<sup>3</sup>, Hassan R<sup>4</sup>, Amin ASMT<sup>5</sup>, Kabir S<sup>6</sup>*

1. *\*Dr. Md. Rashed Alam Chowdhury, Associate Professor, Dept. of Medicine, Jahurul Islam Medical College Hospital, Bajitpur, Kishoregonj.*
2. *Prof. Dr. Bahar Uddin Bhuiyan, Professor and Head of Dept. of pathology, Jahurul Islam Medical College Hospital, Bajitpur, Kishoregonj.*
3. *Prof. Khalequl Islam, Professor, Dept. of Community Medicine, Jahurul Islam Medical College Hospital, Bajitpur, Kishoregonj.*
4. *Dr. Rakib Hassan, Assistant Registrar, Dept. of Medicine, Jahurul Islam Medical College Hospital, Bajitpur, Kishoregonj.*
5. *Dr. ASM Towhid Amin. Medical Officer, Dept. of Medicine, Jahurul Islam Medical College Hospital, Bajitpur, Kishoregonj.*
6. *Dr. Sazia Kabir. Medical Officer, Dept. of Medicine, Jahurul Islam Medical College Hospital, Bajitpur, Kishoregonj.*

***\*For Correspondence*****Abstract**

**Background:** *Corona virus disease-19 is a new contagious disease caused by severe acute respiratory syndrome coronavirus 2. The first case identified in Wuhan, Hubei Province, China on 8 December 2019. It has since spread worldwide, leading to an ongoing pandemic. The disease affected almost all countries of the world. Symptoms of Corona virus disease-19 are variable. Aim of the study was to see different aspects of clinical presentations of Corona virus disease-19 at first hospital reporting in Jahurul Islam Medical College Hospital of Kishoreganj.*

**Methods:** *A retrospective observational study of 100 adult patients with real time reverse transcription - polymerase chain reaction confirmed Corona virus disease-19 patients was done in medicine department of Jahurul Islam Medical College Hospital, Kishoregonj from April 2020 to March 2021. Patients with age less than 13 years and febrile patients other than Corona virus disease-19 were excluded.*

**Results:** *In this study, 25% of the study patients were within age range of 51-60 years age group. Highest age was*

84 years in the population and lowest age was 18 years. Male female ratio was 1.5:1 showing males (60%) affected more than females (40%). Among the clinical manifestations weakness (84%), fever (71%), cough (52%), loss of appetite (49%), body ache (45%), reduced or loss of smell (31%), respiratory distress (26%), gastrointestinal symptoms (like vomiting, abdominal pain and diarrhea) (24%), were the major symptoms. Only 3% patients had no symptoms. Percent saturation of oxygen in blood was more than 96% in 46% of study patients, 94-96% in 28% of study patients and less than 94% in 26% of study patients. Among the risk factors avoidance of Corona virus disease-19 safety protocol was in 47% patients. 44% patients were healthcare worker. Smoking accounted for 31%. 30% patients had previous history of lung disease like bronchial asthma, chronic obstructive pulmonary disease, pulmonary tuberculosis, bronchiectasis and diffuse pulmonary lung disease. 5% patients had history of exposure to real time reverse transcription - polymerase chain reaction positive Corona virus disease-19 patients. Among the co-morbid conditions Hypertension was present in 25% of study patients, ischemic heart disease 19%, Diabetes Mellitus 17%, chronic obstructive pulmonary disease 14%, bronchial Asthma 12%, chronic kidney disease 3%, pulmonary tuberculosis 2%, bronchiectasis 1% and diffuse pulmonary lung disease 1%. Most (74%) of the study patients were advised for home treatment. Percent saturation of oxygen in blood was less than 94% in 26% of the study patients those were transferred to dedicated Corona virus disease-19 hospital.

**Conclusion:** In this Corona virus disease-19 pandemic no symptom should be neglected. Prompt consultation, appropriate test and early, adequate and aggressive treatment should be instituted according to clinical manifestations and the severity.

**Keywords:** Corona virus disease-19, Kishoreganj, Clinical manifestations.

**Received:** 10.06.2021

**Acceptance:** 11.11.2021

## Introduction

In December 2019, a novel coronavirus emerged in Wuhan, Hubei Province, China, leading to a global pandemic. The virus, named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), causes a clinical syndrome termed corona virus disease 2019 (COVID-19). The first reports of an undiagnosed pneumonia in Wuhan on 8 December 2019 were followed by an alert from China to the World Health Organization (WHO) about a cluster of pneumonia cases on 30 December. Isolation of a novel coronavirus

occurred on 3 January 2020. On 30 January, the WHO declared a public health emergency of international concern, and a pandemic was declared on 12 March 2020. It has since spread worldwide; leading to an ongoing pandemic globally<sup>1,2</sup>. The disease affected almost all countries of the world. Any age group may be infected by coronavirus. Symptoms of COVID-19 are variable, but often include fever, runny nose, body ache, headache, weakness, cough, breathing difficulties, diarrhea and loss of smell and taste etc<sup>3-6</sup>. Symptoms begin one to fourteen days after exposure to the virus. Around one in five infected individuals does

not develop any symptoms<sup>7</sup>. It may be symptomless, mild, moderate, severe to very severe form may need to ICU support<sup>8</sup>. While most people have mild symptoms, some people develop acute respiratory distress syndrome (ARDS). ARDS can be precipitated by cytokine storms, multi organ failure, septic shock and blood clots<sup>9</sup>. Long-term damage to organs (in particular, the lungs and heart) has been observed. There is concern about a significant number of patients who have recovered from the acute phase of the disease but continue to experience a range of effects- known as COVID-19 for months afterwards. The effects include severe fatigue, memory loss and other cognitive issues, low-grade fever, muscle weakness and breathlessness<sup>10-13</sup>.

The virus that causes COVID-19 spreads mainly when an infected person is in close contact with another person<sup>14, 15</sup>. Small droplets and aerosols containing the virus can spread from an infected person's nose and mouth as they breathe, cough, sneeze or speak. Other people are infected if the virus gets into their mouth, nose or eyes. The virus may also spread via contaminated surfaces, although this is not thought to be the main route of transmission<sup>15</sup>. The exact route of transmission is rarely proven conclusively but infection mainly happens when people are near each other for long enough. It can spread as early as two days before infected persons show symptoms and from individuals who never experience symptoms. People remain infectious for up to ten days in moderate cases and two weeks in severe cases<sup>16</sup>.

Diagnosis depends on symptoms, history of contact, and investigations. Various testing methods have been developed to diagnose the disease. The standard diagnosis method is by real-time reverse transcription

polymerase chain reaction (rt-PCR) from a nasopharyngeal swab.

Preventive measures include physical or social distancing, quarantining, ventilation of indoor spaces, covering cough and sneezes, hand washing and keeping unwashed hands away from the face. The use of face masks or covering has been recommended in public setting to minimize the risk of transmissions. Several vaccines have been developed and various countries have initiated mass vaccination campaigns.

Although work in underway to develop drugs that inhibit the virus, the primary treatment is currently symptomatic. Management involves the treatment of symptoms, supportive care, isolation and home quarantine, antiviral drugs, hospital admission for oxygen, High Dependency Unit support and or ICU support as required. Death rates are 2 to 3 per cent in old age, co-morbid conditions like asthma, hypertension, diabetes, cardiovascular disease, chronic kidney disease, chronic liver disease and in Intensive Care Unit patients<sup>17</sup>.

## Materials and methods

A retrospective observational study was done in medicine department of Jahurul Islam Medical College Hospital, Kishoregonj from April 2020 to March 2021. Patients with age less than 13 years and febrile patients other than COVID- 19 were excluded. In the hospital patients of age 13 and above are considered as "adults" and admitted to the adult patient wards. A total number of 100 patients who had positive RT-PCR test for COVID-19, attended to outpatient department and admitted to indoor of medicine department of Jahurul Islam Medical College Hospital, were included in this

study. The medical records of the patients during the study period were identified from the department log book and the clinical records retrieved from the hospital record office. Some information was collected from the patients over mobile phone. Aim of the study was to see different aspects of clinical presentations of COVID-19 at first hospital reporting in Jahurul Islam Medical College Hospital of Kishoreganj. A standard protocol was prepared to collect the necessary information. Cases were recorded irrespective of age and sex. Qualitative data were expressed in the form of numbers and percentages. All calculations were carried out using a standard statistical package (SPSS version 19, Inc. in Chicago, USA).

## Results

A total number of 100 patients fulfilling inclusion criteria were studied over a period of 1 year. In this study, 25% of the study patients were within age range of 51-60 years age group followed by 21-30 years age group (23%). Highest age was 84 years in the population and lowest age was 18 years (Figure-1). Male female ratio was 1.5:1 showing males (60%) affected more than females (40%). Male outnumbered female as they have to go out for many reasons. RT-PCR test for COVID-19 was positive in 100% cases (Figure-2).

Table-I shows most of the patients presented with more than one symptom. Among the manifestations fever (71%), cough (52%), distaste or loss of appetite (49%), body ache (45%), reduced or loss of smell (31%), respiratory distress (26%), GIT symptoms (like vomiting, abdominal pain and diarrhea) (24%), headache (24%), chest tightness (22%), runny nose (18%) and sore throat (10%) were the major symptoms.

Weakness was present in most the patients (84%) during course the disease. 4% of the patients presented with altered level of consciousness. Only one patient developed short term memory loss. Only 3% patients had no symptoms but rt-PCR was done as they were exposed to COVID-19 patients.

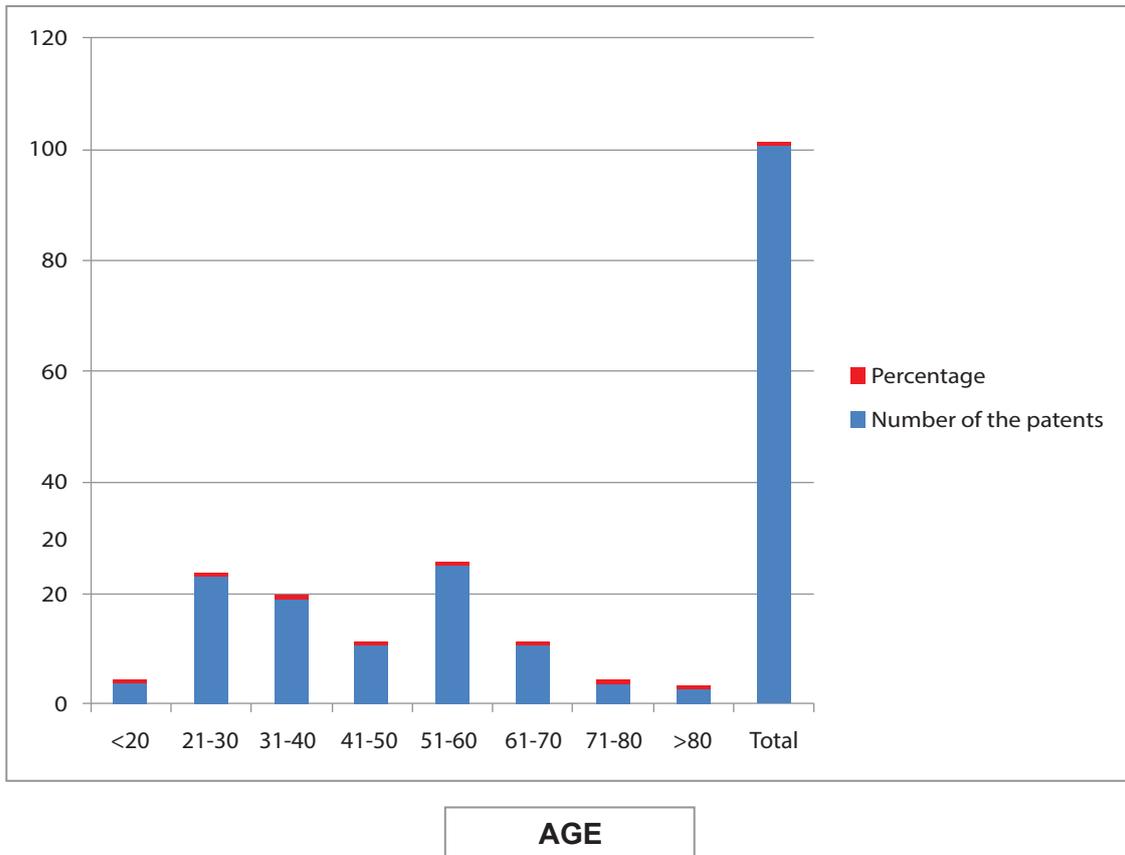
Percent saturation of oxygen in blood ( $SpO_2$ ) was more than 96% in 46% of study patients, 94-96% in 28% of study patients and less than 94% in 26% of study patients (Table-II).

In this study, 47% of the study patients did not follow safety protocol of COVID-19. 44% patients were healthcare worker those were exposed to COVID patients at any time of patient's service. Smoking accounted for 31% among risk factors. 30% patients had previous history of lung disease like bronchial asthma, chronic obstructive pulmonary disease (COPD), pulmonary tuberculosis, bronchiectasis and diffuse pulmonary lung disease (DPLD). 5% patients had history of exposure to rt-PCR positive COVID-19 patients (Table-III).

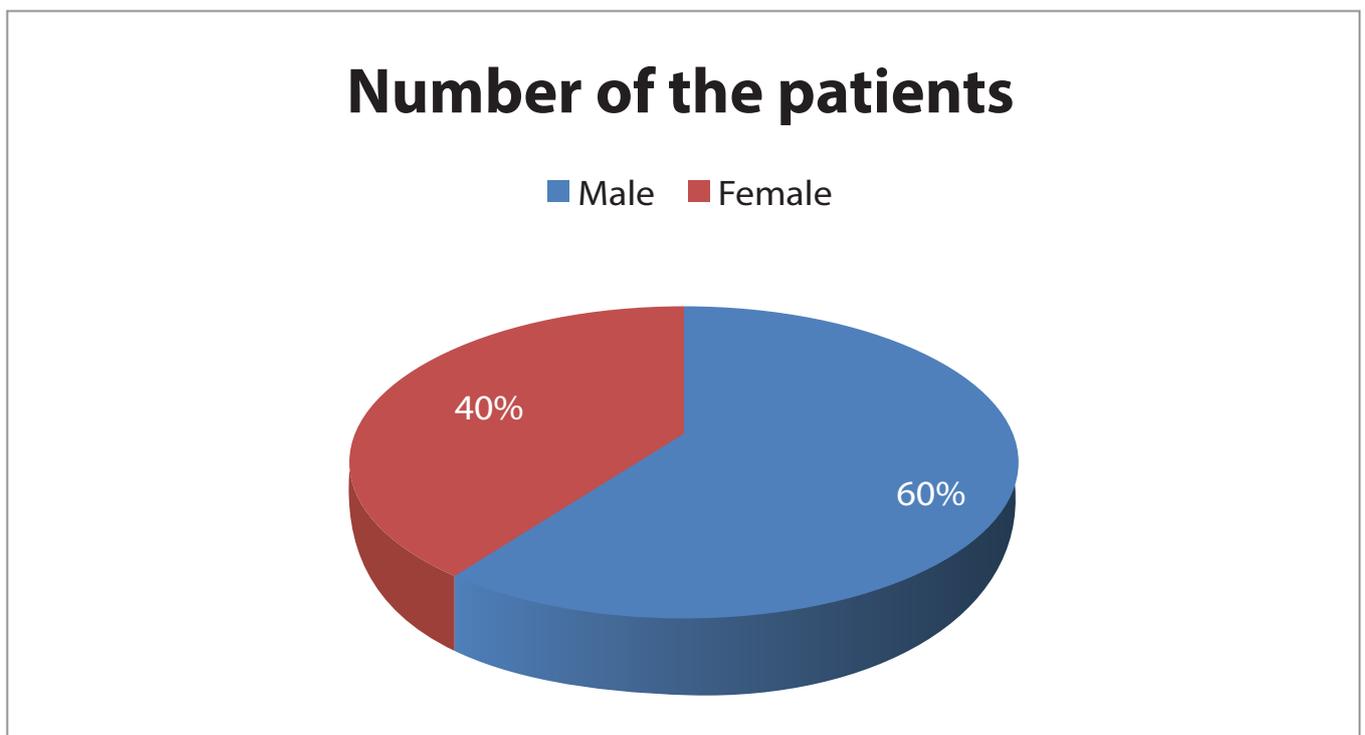
Among the co-morbid conditions' Hypertension (HTN) was present in 25% of study patients, ischemic heart disease (IHD) was in 19%, Diabetes Mellitus (DM) was in 17%, chronic obstructive pulmonary disease (COPD) was in 14%, Bronchial Asthma was in 12%, chronic kidney disease (CKD) was in 3% and other lung diseases were in 4% of study patients (Figure-3).

Most (74%) of the study patients were advised for home treatment. 26% of the study patients had  $SpO_2 < 94\%$  those were transferred to dedicated COVID-19 hospital.

**Figure-1: Age distribution of patients (n=100).**



**Figure-2: Sex distribution of patients (n=100).**



**Table-I: Clinical presentation of the patients (n=100).**

Symptoms	Number of the patients	Percentage
Weakness	84	84%
Fever	71	71%
Cough	52	52%
Distaste	49	49 %
Body ache	45	45%
Hyposmia /Anosmia	31	31%
Respiratory distress	26	26%
GIT symptoms	24	24%
Headache	24	24%
Chest tightness	22	22%
Runny nose	18	18%
Sore throat	10	10%
Altered level of consciousness	04	04%
No symptoms	03	03%
Short term memory loss	01	01%

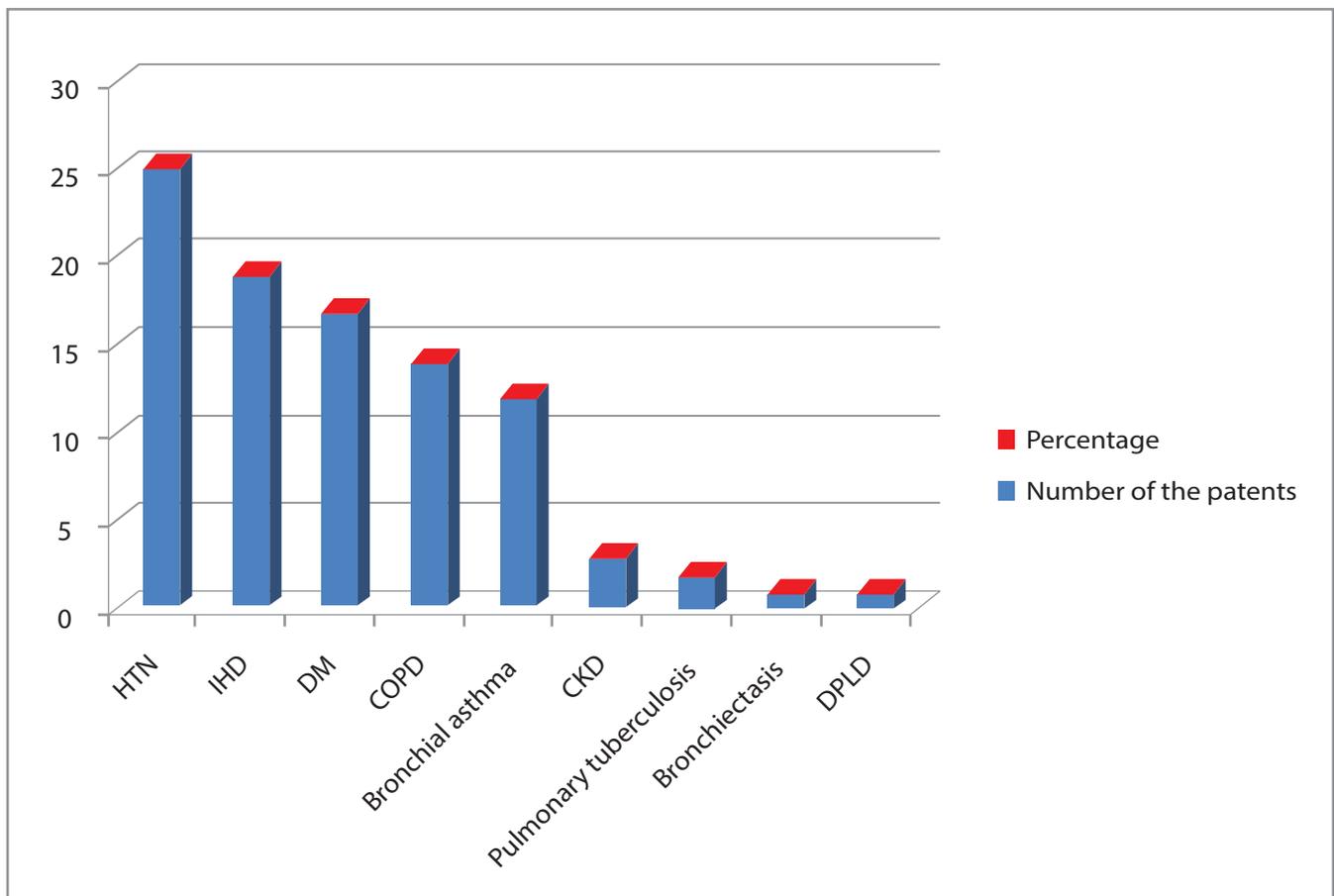
**Table-II: Percent saturation of oxygen in blood (SpO<sub>2</sub>) of the patients (n=100).**

SpO <sub>2</sub>	Number of the patients	Percentage
<90%	13	13%
91-93%	13	13%
94-96%	28	28%
>96%	46	46%
Total	100	100%

**Table-III: Risk factors of the patients (n=100).**

Risk factors	Number of the patients	Percentage
Avoidance of COVID safety protocol	47	47%
Occupation (Healthcare worker)	44	44%
Smoking	31	31%
Previous h/o lung disease like bronchial asthma, COPD, Pulmonary tuberculosis, bronchiectasis and DPLD	30	30%
H/O exposure	05	05%

**Figure-3: Co morbidities of the patients (n=100).**



## Discussion

COVID-19 Disease and its every clinical presentation have become very significant and also for the people of age above 60. In this study, 25% of the study patients were within age range of 51-60 years age group followed by 21-30 years age group (23%). Highest age was 84 years in the population and lowest age was 18 years. Most of the patients were in 5<sup>th</sup> decade in the study conducted by Chowdhury MA et al. in Bangladesh in 2020<sup>18</sup>. Schonfeld D et al. found Mean age 42.9±18.8 years in their study in Argentina in 2021<sup>19</sup>.

Male female ratio was 1.5:1 showing males (60%) affected more than females (40%). Male outnumbered female as they have to go out for many reasons. Male female ratio was 2.4:1 in the study conducted by Chowdhury MA et al. in Bangladesh<sup>18</sup>. Galvez-Barron et al. found 59.2% female patients in their study in 2021<sup>20</sup>. 50% patients were males in the study conducted by Schonfeld D et al. in Argentina in 2021<sup>19</sup>.

In this study, most of the patients presented with more than one symptom. Among the manifestations weakness (84%), fever (71%), cough (52%), distaste or loss of appetite (49%), body ache (45%), reduced or loss of smell (31%), respiratory distress (26%), GIT symptoms (like vomiting, abdominal pain and diarrhea) (24%) and headache (24%) were the major symptoms. Less common symptoms were chest tightness (22%), runny nose (18%) and sore throat (10%). 4% of the patients presented with altered level of consciousness. Only one patient developed short term memory loss. Only 3% patients had no symptoms but rt-PCR was done as they were exposed to COVID-19 patients.

All of these symptoms need 2 days to 2 weeks to develop after the exposure of the virus. According to WHO-China Joint report, pyrexia was found in 85% cases, dry cough was found in 67.7% cases, body ache and headache was found in 14.8% cases<sup>21, 22</sup>. The most frequent symptoms were fever (68.9%), dyspnoea (60.2%), and cough (39.8%) and confusion (11.7%) in the study conducted by Galvez-Barron et al. in 2021<sup>20</sup>.

Schonfeld D et al. found fever (58.5%), cough (58.0%), headache (45.4%), and sore throat (42.1%) as predominant symptoms<sup>19</sup>. On some recent other studies otolaryngologists reported sudden anosmia or hyposmia as a concurrent symptom of COVID-19 but this olfactory and gustatory complaints are observed more in European patients according to recent studies<sup>23,24</sup>. In our study 31% of the study patients had anosmia or hyposmia.

Among the risk factors, smoking accounted for 31% in this study. Smoking accounts for 65% among predisposing factors in the study conducted by Chowdhury MA et al<sup>18</sup>.

Among the co-morbid conditions Hypertension was present in 25% of study patients, IHD was in 19%, Diabetes Mellitus was in 17%, COPD was in 14%, Bronchial Asthma was in 12%, CKD was in 3% and other lung diseases were in 4% of study patients. Frequent coexisting conditions like hypertension (19.2%), diabetes (9.7%), asthma (6.1%) and obesity (5.2%) were the findings in the study conducted by Schonfeld D et al<sup>19</sup>. Among the co-morbid conditions Hypertension accounted for 37%, Bronchial Asthma 23%, Diabetes Mellitus 30% and COPD 20% in the study conducted by Chowdhury MA et al<sup>18</sup>. While some other studies showed diabetes, coronary artery disease, hypertension and bronchial asthma being more remarkable as the triggering factor respectively<sup>25</sup>.

Being a pandemic disease and so much versatility in clinical presentations in all over the world and in all patients, some symptoms need early approach of management, some need to cure after hospitalization and some can also be cured by home management (depends upon severity).

## Conclusion

COVID-19 is an extraordinary event in the history of the healthcare system. It has had an impact on the world in a rapid, universal, and powerful way, exposing deficiencies in both the resiliency of healthcare systems and the dissemination of best practices during an evolving situation. In this COVID-19 pandemic

situation no symptoms should be neglected. Timely consultation, appropriate tests must be done for diagnosis. Early, adequate and aggressive treatment should be instituted according to clinical manifestations and the severity.

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