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ORIGINAL ARTICLE

Impact of COVID-19 on chronic respiratory disease outcome survey in Pakistan

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ABSTRACT

Introduction: Pakistan has high prevalence of chronic respiratory diseases, especially bronchial asthma and chronic obstructive pulmonary disease (COPD).

Objectives: The main objective of the study is to find the impact of COVID-19 on chronic respiratory disease in Pakistan.

Material and methods: This cross sectional study was conducted in King Edward Medical University, Mayo Hospital Lahore during January 2021 to July 2021. Before and after the COVID-19 period were defined by a predetermined set of criteria in the form of a questionnaire.

Results: The data was collected from 314 respondents. According to the respondents, the survey also queried about the presence of respiratory comorbidities in patients who had tested positive for COVID 19. COPD was mentioned as a comorbidity by more than a third of those who responded, and several others, including bronchial asthma, ILD, and tuberculosis (TB), were also mentioned by many respondents.

Conclusion: It is concluded that because of the lockout's efficacy and the widespread use of masks outside the facility, the air was probably rather clean. As a result, both the number of people visiting an asthma outpatient clinic and the number of people being admitted to the hospital with acute severe asthma dropped.

Keywords: COVID-19, Respiration, Patients, COPD

INTRODUCTION

This year's first instance of COVID-19, which mostly affects the respiratory system of the body, was identified in Wuhan, China, in January. In fifteen nations, the COVID-19 virus has been connected to more than 1,000 fatalities. The US, Spain, Italy, China, Iran, the UK, the Netherlands, Canada, Sweden, Turkey, France, and Switzerland are among them [1]. This viral outbreak has ravaged every nation's healthcare system, increasing death and sickness risk [2]. The WHO designated COVID-19 a global pandemic on March 12, 2020, after it reached most nations outside China. WHO says [3]As of April 22nd, there were about 2,594,835 confirmed COVID-19 cases and 181,170 fatalities worldwide. COVID-19's devastating impacts are felt in both developing and developed nations, albeit poorer countries may be more affected [4].

During risk categorization for COVID-19 illness severity and worse outcome, chronic respiratory disorders were found as comorbidity [5]. COVID-19 exhibited respiratory comorbidities ranging from 1.5 to 17.7% for chronic pulmonary illnesses (excluding asthma); one research reported 14.5 percent for asthma [6]. Some studies have indicated that respiratory comorbidities are less common than in others, which is intriguing. Spiro metric testing results in the general population are lower than average, thus it's possible this is a real phenomenon [7].

The first case of COVID-19 in Pakistan was discovered on February 26 in Karachi, and the patient had visited Iran previously. Pakistan was able to conduct up to 30,000 nuclear tests a day during a six-week period, instituting lockdowns, suspending public transportation, and restricting international air and ocean trade [8]. There has been an overflow of cases that is rapidly growing due to the lockdown and inadequate follow-up of normal operating procedures in the country's healthcare systems (SOPs) [9]. "Smart lock-down" is a campaign started by Pakistani Prime Minister Imran Khan to reduce unnecessary mobility in the country's main cities and towns. To counteract COVID-19, Pakistan has also formed a National Command Operations Centre (NCOC), which brings together the military as well as the administration to produce and distribute low-cost masks throughout the country [10-11].

Objectives: The main objective of the study is to find the impact of COVID-19 on chronic respiratory disease in Pakistan.

MATERIAL AND METHODS

This cross-sectional study was conducted in King Edward Medical University, Mayo Hospital Lahore during January 2021 to July 2021. Predetermined definitions were used to create a structured questionnaire for the time periods "before COVID-19" and "during COVID-19." In all, 24 questions were asked on asthma, COPD, and ILD prevalence, control, exacerbations, hospitalizations, and outcomes. Asthma-related issues made up 14 of the questions in this survey. Asthma outpatient prevalence, asthma management, severe asthma admissions, and severe asthma hospitalisation outcomes were all associated before and after COVID-19. The questionnaire also contained questions about nebulization, Asthma-related data and ICS use during COVID-19. " The number of people that answered the survey questions varied from issue to topic.

Statistical analysis: The data was collected and analysed using SPSS version 20. All the values were expressed in mean and standard deviation.

RESULTS

The data was collected from 314 respondents. The questionnaire also asked participants about any respiratory comorbidities they had seen in people who had been diagnosed with COVID-19. Over a third of respondents had COPD, and a considerable number had bronchial asthma, ILD, and TB. As a result, the poll does not represent the whole COVID-19 treatment community. Because the data cannot be generalised, they provide the impression that COVID-19 patients have a significant burden of respiratory comorbidities.

Table 01: Number of pulmonologists who treated COVID-19 patients with other health problems related to their lungs

Disease entity	The percentage of pulmonologists who said they had respiratory comorbidities (%)
Bronchial asthma	45/249 (18.07)
COPD	76/204 (37.2)
ILD	22/190 (11.57)
Tuberculosis	31/189 (16.4)

Table 02: Impacts of the COVID-19 outbreak on COPD flare-ups and results

Overall, the number of people with acute COPD flare-ups who went to the emergency room (non-COVID)				
	Before COVID-19	During COVID-19	χ^2	*P*
None	20 (10.25)	56 (30.60)	55.091	<0.0001 Significant
1-5	86 (44.1)	100 (54.64)		
6-10	39 (20)	19 (10.38)		
>10	50 (26.6)	8 (4.37)		

Most instances of chronic obstructive pulmonary disease in Pakistan are caused by COPD. This study will look at two distinct types of COPD exacerbations: those that occurred before COVID-19 and those that occurred after COVID-19.

DISCUSSION

COVID-19, the most recent strain to emerge, is causing havoc and perhaps putting lives in danger in many parts of the world. According to our research, this is the first study examining Pakistani residents' viewpoints on the COVID-19. This study raised the bar high by using convenience and snowball sampling approaches [12]. According to the findings of this study, 64.8 percent of the participants correctly answered the bulk of questions related to COVID-19, as indicated by the results. In addition, their views and actions toward COVID-19 were at the pinnacle of excellence [13-15].

Participant attitudes toward COVID-19 were generally favourable; more than 70% of those polled believed that the virus will be well handled (74%), that Pakistan would be able to triumph over this awful disease (77.0%). According to the participants, Pakistan's government took extraordinary precautionary measures after COVID-19 arrived in the country. This upbeat mood may be attributed to this [16-18]. To begin with, the government halted all air operations and declared a state of emergency over most of the country. Even more disturbing was the fact that all educational institutions were closed because of the shutdown [19-20].

CONCLUSION

It is concluded that an effective lockout and regular use of face masks outside the facility indicate that this lockout was a success. As a result, both the number of people visiting an asthma outpatient clinic and the number of people being admitted to the hospital with acute severe asthma dropped. COPD and ILDs followed the similar pattern. COPD and ILD exacerbations were not influenced by COVID-19; however, asthmatic exacerbations were. For some reason, Indian pulmonologists followed worldwide agreement and maintained the same number of steroids given to asthmatic patients throughout the pandemic.

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