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Research Article

**GASTROESOPHAGEAL REFLUX DISEASE AS A RISK
FACTOR OF ACUTE EXACERBATION OF CHRONIC
OBSTRUCTIVE PULMONARY DISEASE**¹Dr Raja Gulam Mujtaba, ²Dr Umer Abid Mughal, ³Dr Iqra Idrees¹Abass Institute of Medical Sciences Muzaffarabad., ²Chandka Medical College Larkana,³Gujranwala Medical College Gujranwala.

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Abstract:

Objective: To assess the prevalence of the gastroesophageal reflux disease in the patients of chronic obstructive pulmonary disease.

Material and Methods: The design of this study was a cross sectional study and the duration of this study was from July 2019 to Feb 2020. 103 patients were enrolled in the study fulfilling the inclusion criteria and established diagnosis of the disease i.e., patients with age more than 40, with >20 pack years of smoking history and FEV₁/FVC < 0.7.

Results: In this study 35% of patients were in the age of 40-55 years and 65% were of age >55 years. The mean age of patients was 66.87±8.71, out of 103 patients 88% were males and 12% were females.

Conclusion: The study results shows that 42% of the patients of chronic obstructive pulmonary disease suffered from the gastroesophageal reflux disease as well. So, in order to put a control on the Exacerbations of the disease surveillance of the gastroesophageal reflux disease should be done of the each and every chronic obstructive pulmonary disease patient.

Keywords: Gastroesophageal Reflux Disease, Chronic Obstructive Pulmonary Disease, Pulmonary, Vagal Nerve Stimulation

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INTRODUCTION:

Chronic Obstructive Pulmonary Disease is one of the major health concerns of the developing and developed countries. It is predicted to be the third leading cause of disease burden of the world by 2030. It is characterized by the persistent and progressive limitation of the air flow to lungs and abnormal inflammatory response of the tissue of respiratory system to gases or irritating /noxious Particles [1]. The exacerbations determine the quality of life of a Chronic Obstructive Pulmonary Disease patient. The exacerbation is characterized by acute increase in frequency of cough, dyspnea, severity, change in the amount /color/smell of the sputum. The exacerbations are highly morbid and limit the activity of the patient badly [2,3], affecting the quality of life and cause burden on the patient economically, physically and Psychologically. There are a number of risk factors of the acute exacerbation of Chronic Obstructive Pulmonary Disease, one of them is Gastro esophageal Reflux disease. gastroesophageal reflux disease is characterized by reflux of the stomach contents into the esophagus due to lower esophageal sphincter incapability [4]. This may cause a number of pulmonary complications like aspiration pneumonia, chronic, cough, Bronchial asthma, fibrosis and Acute Exacerbation of Chronic Obstructive Pulmonary Disease. Vagal Nerve stimulation causing Broncho spasm and Micro Aspirations Contribute to Pulmonary complications [5].

A study done in Lahore shows 39% of the Chronic Obstructive Pulmonary Disease patient suffered from gastroesophageal reflux disease as well [6]. The percentage is quite high in a study done in Turkey and it showed that the patients who suffered from gastroesophageal reflux disease have more frequent exacerbations as compared to Non-gastroesophageal

reflux disease patients and they consequently are on intensive therapy for the Chronic Obstructive Pulmonary Disease [7,8]. This study is focused to explore and assess the frequency of gastroesophageal reflux disease in Chronic Obstructive Pulmonary Disease patients in order to highlight an important risk factors of the disease that may be helpful for the health care professionals to manage the disease appropriately and morbidity may be decreased.

MATERIAL AND METHODS:

The design of this study was a cross sectional study and the duration of this study was from July 2019 to Feb 2020. 103 patients were enrolled in the study fulfilling the inclusion criteria and established diagnosis of the disease i.e., patients with age more than 40, with >20 pack years of smoking history and FEV/FVC < 0.7. The frequency of the gastroesophageal reflux disease was evaluated by a preformed questionnaire. Four options were given ranging from none to always, to scale the frequency of the gastroesophageal reflux disease. Scoring of the answers were done as 0 for none and 4 for always. And patients having score more than 8 were considered gastroesophageal reflux disease positive. All patients fulfill GOLD criteria definition of the CORD were included in the study. Patients having asthma other pulmonary diseases and esophageal diseases like Achalasia, Gastric/Esophageal cancer and peptic ulcer.

RESULTS:

103 patients were enrolled for the study. Among them 35 % were 40-55 years of age and rest >55 years of age. 12% were females and 88% were males. 39% of the patients came positive with gastroesophageal reflux disease and 61% had no gastroesophageal reflux disease.

GENDER	NO OF PATIENTS	%
Male	91	88
Female	12	12

GASTROESOPHAGEAL REFLUX DISEASE	NO OF PATIENTS	%
Yes	41	39
No	59	61

DISCUSSION:

Chronic Obstructive Pulmonary Disease is major health concern of the world accounting more than 20% of the total burden of the diseases [9]. Gastroesophageal Reflux Disease is one of the risk factors of the acute exacerbations of the disease. A number of studies have been done on the topic and all show a correlation of the gastroesophageal reflux disease and chronic obstructive pulmonary disease [10,11]. The data of the study not only shows the correlation but also that the gastroesophageal reflux disease is the main cause of the exacerbations of disease-causing morbidity and poor quality of life [12]. The study was based on highlighting the gastroesophageal reflux disease as the major risk factor for acute exacerbation of chronic obstructive pulmonary disease. So that it may help healthcare professionals manage the disease in a better way [13].

In our study it was explored that 39% of chronic obstructive pulmonary disease patients suffered from gastroesophageal reflux disease. The results are in accordance with another study done in Karachi showing that 41% of chronic obstructive pulmonary disease patients suffered from gastroesophageal reflux disease [14]. The severity of the gastroesophageal reflux disease increases as the severity of the chronic obstructive pulmonary disease increases. There are more patients with severe chronic obstructive pulmonary disease having severe gastroesophageal reflux disease symptoms and this frequency increases as pack year history of smoking increases. Another study done in Iran shows that there is more use of acid suppressive drugs among chronic obstructive pulmonary disease patients than in control group.

CONCLUSION:

It is concluded that the frequency of gastroesophageal reflux disease is directly related to chronic obstructive pulmonary disease. So, every patient presenting with chronic obstructive pulmonary disease should undergo surveillance and sorted out for gastroesophageal reflux disease. So that, this treatable disease can be managed appropriately.

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