

Increased Chronic Obstructive Pulmonary Disease due to Gastric Reflux

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Editorial

Pulmonary Disease

A prevalent disease that can be prevented and treated, chronic obstructive pulmonary disease (COPD) is defined by increasing, ongoing airflow restriction. There are regional differences in the prevalence, morbidity, and mortality rates of COPD. According to the World Health Organization (WHO), there are 63.6 million symptomatic COPD patients globally. Research is being done to treat the condition and stop exacerbations, which could stop the disease's progression or reduce morbidity and death associated with it. Exacerbations have a negative impact on quality of life, lead to pulmonary function loss, and are expensive socioeconomically [1]. The majority of exacerbations are brought on by infections or environmental factors, although 30% are linked to unknown causes. In our pulmonology department's outpatient clinic and gastroenterology clinic, the study was carried out between January 2015 and May 2015. According to the inclusion/exclusion criteria, all patients who visited our pulmonology outpatient clinic during this time and qualified for the study were included in it. With 19 healthy volunteers serving as controls, we studied 24 patients with mild-moderate COPD. The control group was made up of healthy volunteers without any known comorbidities, respiratory or dyspeptic symptoms, or antireflux medication. The data for the control group were obtained from an earlier investigation conducted by the associated gastrointestinal clinic. According to the Global Initiative for Chronic Obstructive Lung Disease (GOLD) guideline criteria, the COPD patients had had it for at least a year and were using inhaler medication. Age between 18 and 85, mild-moderate COPD, and stable COPD for at least 4 weeks before to admission were the inclusion criteria for individuals with COPD [2-5]. Long-term oxygen use, noninvasive mechanical ventilation at home, systemic corticosteroid therapy, current antibiotherapy, a COPD exacerbation within the preceding four weeks of admission, regular use of proton pump inhibitors, H₂-receptor blockers, and current use of anti-acid tablets/solutions were the exclusion criteria. All of the study participants provided their informed consent. The subjects underwent 24-hour esophageal pH-impedance monitoring and esophageal manometry. Using manometry Medical Measurement Systems high resolution solid state manometry for COPD patients and conventional-ballooned dry system for controls, the position of the lower esophageal sphincter was identified. The results of the manometry were divided into four categories: normal, minor motility problems, ineffective motility, fragmented peristalsis, and significant motility abnormalities. Positive correlations were found between the total number of COPD exacerbations over the course of a year and proximal reflux extension brought on by microaspiration. While the average proximal reflux extension rates for COPD and control groups were comparable, acid reflux was more prevalent in COPD compared to weak acid reflux predominancy in controls [6]. Our research confirms that frequent COPD exacerbations may result from microaspiration brought on by proximal acid reflux. Our study groups' differences in age and sex are a drawback. Men and older adults are more likely to have COPD, however it might be challenging to obtain senior patients who are comorbidity-free to act as controls for invasive

diagnostic techniques. Our findings are consistent with the literature on the high frequency of GER in COPD, even after taking into account the contentious data on the association between GER prevalence and older age. However, research with younger control groups that are comparable to ours can be found in the literature. On the other hand, our study's primary objective was not to compare the presence of GER in healthy controls and COPD patients. Our main goal was to ascertain whether COPD exacerbation rates and GER prevalence were associated. Along with COPD, proximal GER is frequently reported. To evaluate proximal and distal reflux, dual-channel pH catheter devices with two electrodes are employed, according to the data in the literature. Because more data is accessible with this method than the prior methodology, ambulatory 24-h pH impedance study is more beneficial in assessing reflux. The rate of proximal GER in the literature ranges from 20 to 52.6%. 22 (92%) of the COPD patients in our cohort had proximal reflux extension ranging from 1 to 50%. Since proximal reflux is not well defined, we employed the proximal reflux extension rate in our analysis. According to the authors, there were significantly higher GER symptoms in the group with worse spirometric characteristics and hyperinflation. Because we covered moderate and mild stage COPD, there may be less symptomatic patients as shown by our GERD questionnaire as a result. Additionally, the majority of questionnaire-based studies in the literature confirm that COPD exacerbations are more common among individuals with symptomatic GER. Similar to this, we discovered a positive correlation between the GerdQ score and the total number of COPD exacerbations in the previous year [7-9]. The 24-hour pH impedance investigation revealed pathologic acid reflux in 17 patients (73.9%), which was confirmed by the results. Additionally, we used GerdQ to assess if COPD patients had GERD symptoms. According to GerdQ, only 5 (20.8%) (3 with acid reflux, 1 with weak acid reflux, and 1 without an impedance result) patients in our study fell into the high probability of GERD group. Among 17 patients with pathologic acid reflux according to impedance study, only three patients (17.6%) had symptomatic GER according to GerdQ and SAP positivity was only 17.4% among overall patients with COPD. Therefore, GER symptoms or symptom-based questionnaires may not reflect the exact rate of GER in COPD. High resolution esophageal manometry (HRM) and an ambulatory 24-hour pH-impedance investigation were performed on 23 COPD patients. One patient had to be omitted because he could not tolerate having the 24-hour pH-impedance research equipment fitted and was bleeding from the nose [10]. We also performed gastroesophageal endoscopies when these examinations revealed any pathology, while mildly sedated

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with intravenous midazolam and local anaesthetic provided by lidocaine oral spray (23 patients in COPD group). According to the Los Angeles method, esophagitis was categorised. In conclusion, even in mild-to-moderate stages of COPD, we discovered a substantial prevalence of gastroesophageal reflux in patients. This was done using ambulatory 24-h pH impedance. Additionally, there was a correlation between the annual COPD exacerbations and the proximal reflux extension rate. For patients who experience frequent COPD flare-ups or whose COPD has not been controlled, we believe that additional research into GER via an endoscopy or a pH study is warranted.

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