A Study to Assess the Knowledge, Attitude and Practice about Management of Acute Exacerbation of Chronic Obstructive Pulmonary Disease amongst EMS Professionals in Pune, India

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Abstract

Background: Chronic Obstructive Pulmonary Disease (COPD) is one of the common, slow progressive disorder the respiratory system, considered an important cause of morbidity and mortality across the globe. Although being a chronic disability, COPD presents with acute exacerbations in the form of breathlessness and cough. Knowledge regarding about diagnosis of COPD, appropriate titration of Oxygen and effective management are essential to prevent mortality and morbidity due to COPD.

Objective: To assess the Knowledge, Attitude and Practice level about management of Acute Exacerbation of COPD among EMS Professionals.

Methodology: The study was conducted amongst 100 Emergency Medical Professionals in Pune, India. A previously tested and validated KAP questionnaire prepared by Sylvia Saade et al[2] was utilized for the study. The questionnaire was administered through online mode after obtaining informed consent from the respondents.

Discussion: The analysis of data shows EMS professionals are aware of the aetiology, pathophysiology and clinical features but require more training in management aspects of COPD. In terms of attitude towards COPD, broad agreement was found amongst respondents that COPD patients must quit smoking and passive smoking contributed to COPD. However, opinion amongst respondents with respect to recommendations regarding exercise was divided. In terms of Practices in COPD, broad consensus was found amongst the respondents on the usage and precautions regarding metered dose inhalers (MDI).

Conclusion: The study finding point towards a healthy degree of knowledge, attitude, and practice with regards to COPD amongst EMS professionals. Although the finding do red flag areas of improvement which can be focused upon in future training session. The study is limited by number of respondents yet attempts to provide a broad view on Knowledge, attitude and Practices in COPD.

Keywords: *COPD, Acute exacerbation, EMS professionals, Knowledge, Attitude and Practices.*

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Introduction

Chronic Obstructive Pulmonary Disease (COPD) is one of the common, slow progressive disorder of the respiratory system, considered an important cause of morbidity and mortality across the globe[1,2]. COPD is projected to be the third leading cause of death by the

year 2030 globally and the second leading cause of death after Road Traffic Accidents in India[3].

Although being a chronic disability, COPD presents with acute exacerbations in the form of breathlessness and cough. This can present as medical emergencies requiring hospitalizations and pose an increased risk of mortality[4].

In early phases of management of acute exacerbation of COPD, sufficient Oxygen must be administered to prevent hypoxemia, but if given in excess it can cause hypoventilation or dangerous hypercarbia. This can lead to fatality. A study by Michael. A. Austin *et al*[5] suggested that routine use of titrated Oxygen in prehospital setup for acute exacerbation of COPD significantly reduce mortality rate compared to high flow Oxygen therapy.

Emergency Medical Professionals are trained to administer Oxygen preemptively in Cardiovascular or Respiratory emergencies to ward off cardiacor respiratory failure, respectively. A study by Goktalay *T et al*[1] emphasized importance of training to the primary care providers for early detection, effective treatment and prevention of complications in case of COPD.

Hence, Knowledge regarding about diagnosis of COPD, appropriate titration of Oxygen and effective management are essential to prevent mortality and morbidity due to COPD.

Objective: To assess the Knowledge, Attitude and Practice about management of Acute Exacerbation of COPD amongst EMS Professionals.

Methodology

The study was conducted amongst 100 Emergency Medical Professionals in Pune, India. A previously tested and validated KAP questionnaire prepared by Sylvia Saade et al[2] was utilized for the study. The original 37 item questionnaire was meant for pharmacists. Only 23 items relevant to the Emergency Medical Professional were retained.

The twenty-three-item questionnaire comprised of three parameters –nine items testing Knowledge of which 4 items were open-ended questions and had to be answered within 25 to 30 words while the remaining 5 items were close ended requiring yes/no answers. Six items measuring Attitude and Eight items measuring Practice related to management of Acute Exacerbation of COPD required response in Likert scale method. All items were required to be mandatorily filled. The questionnaire was administered through online mode after obtaining informed consent from the respondents. The respondents were given two days to fill the questionnaire and revert. Any queries pertaining to questionnaire was clarified during data collection.

All 100 respondents reverted with completely filled questionnaire. The data was tabulated and statistically analyzed with the help of SPSS version 23.

Results

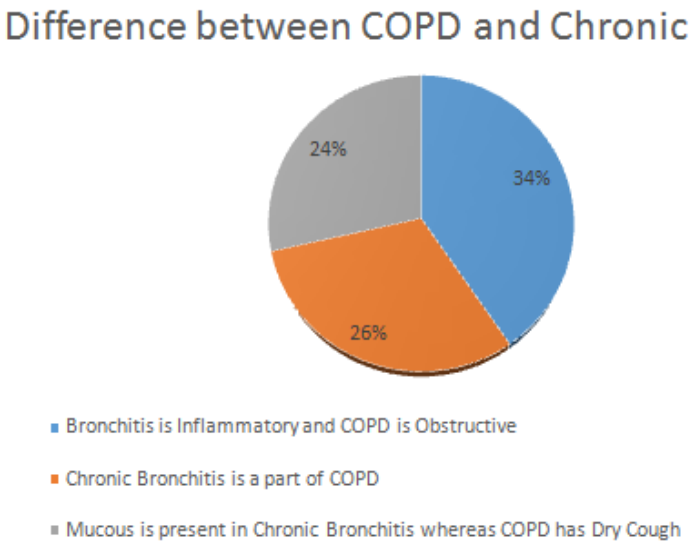

Figure 1

As shown in figure 1. and indicated about difference between COPD and Chronic Bronchitis, 34% of the respondents were of the opinion thatchronic bronchitis was inflammatory while COPD was of Obstructive Pathology.

26% respondents considered Chronic Bronchitis to be a subtype of COPD .

24% stated that COPD presented with dry cough while chronic bronchitis presented with mucoid cough.

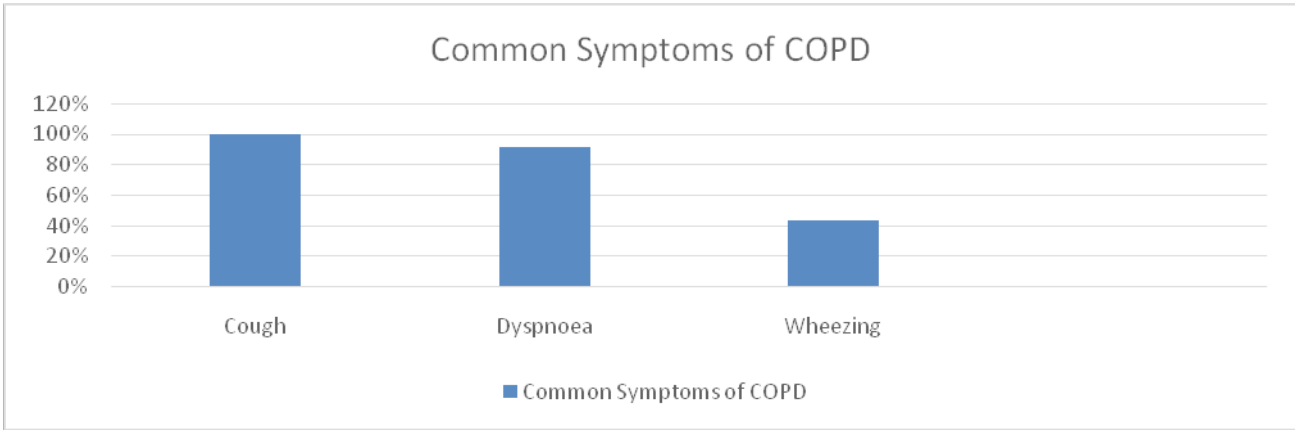

Figure 2.

As seen in figure 2. respondents stated cough, Dyspnea and Wheezing as common symptoms of COPD.

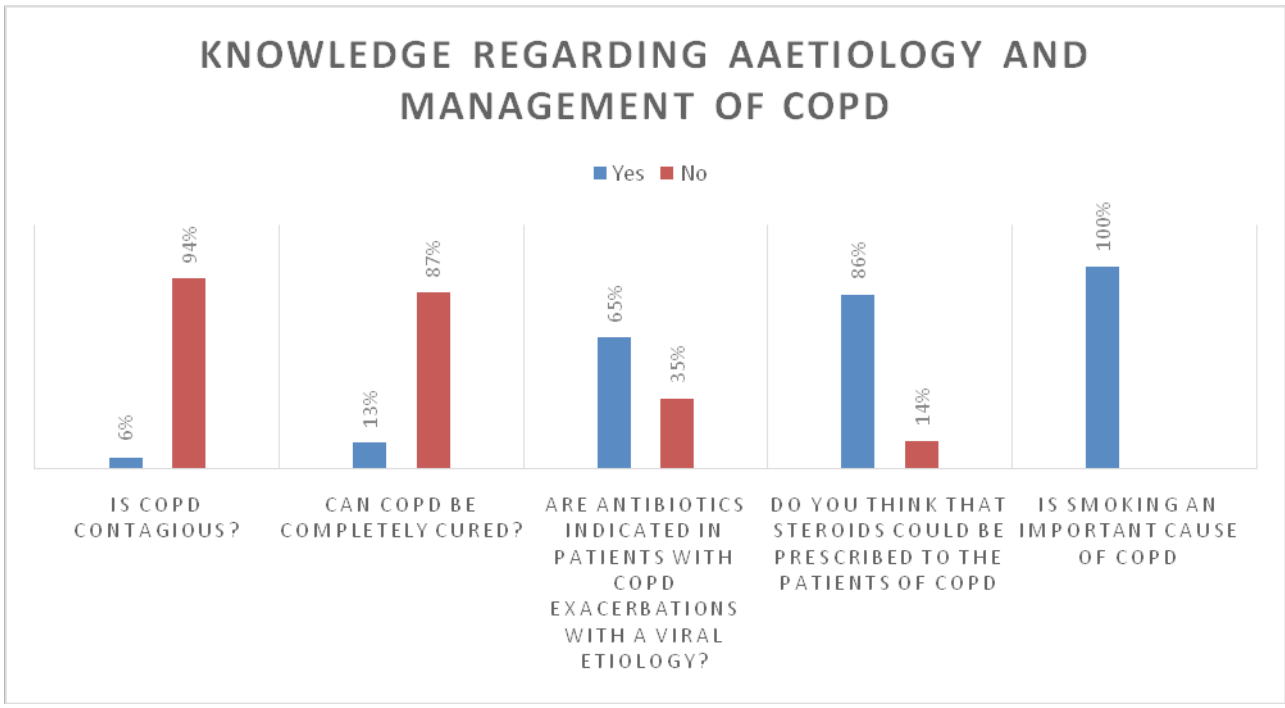

Figure 3.

As shown in figure 3. On the items pertaining to Knowledge regarding aaetiology and management of COPD, as many as 94% respondents felt COPD is not contagious while 87% respondents were of the opinion that COPD cannot be completely cured.

65% believed antibiotics are recommended in acute exacerbation of COPD due to viral aetiology while 86% felt that steroids could be prescribed to COPD patients.

All the respondents attributed smoking to be an important cause of COPD.

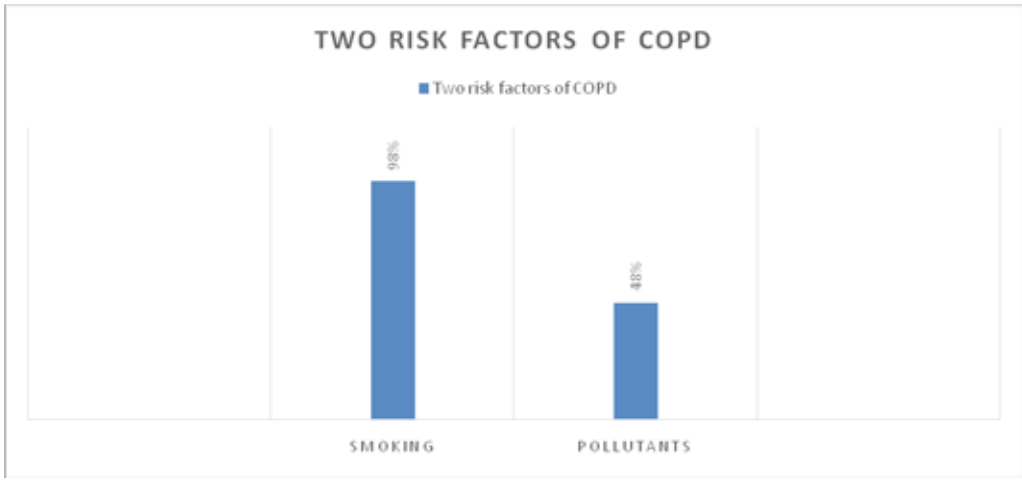

Figure 4.

As seen in figure 4, respondents stated smoking and pollutants as risk factors of COPD.

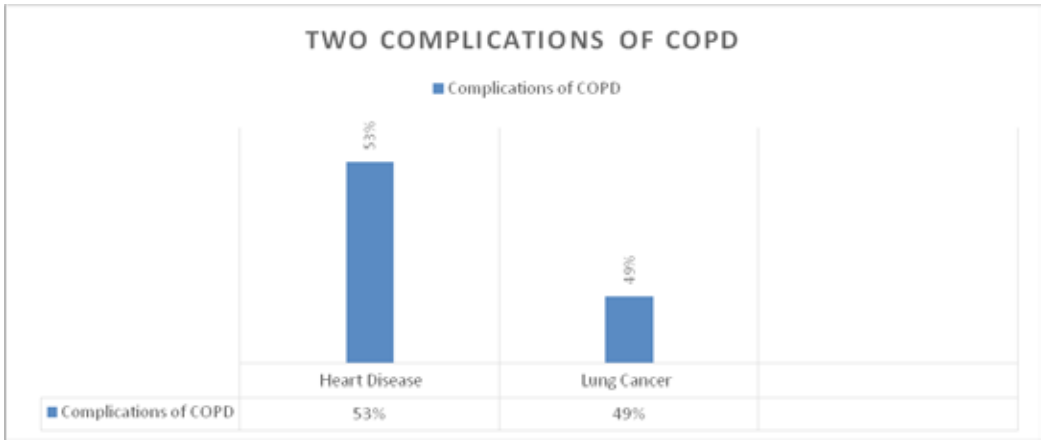

Figure 5.

As seen in figure 5, respondents stated the Heart disease and Lung cancer were common complications of COPD.

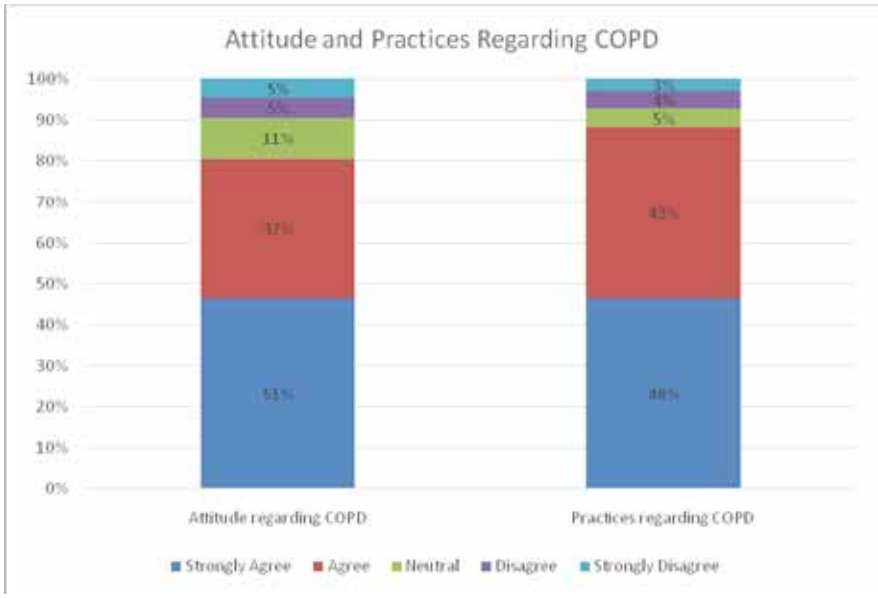

Figure 6.

As seen in figure 6. Broad agreement was found amongst respondents in parameters pertaining to attitude and practices regarding COPD.

Discussion

Most of the respondents were able to correctly differentiate between COPD and Chronic Bronchitis based on clinical picture. They were aware of the common symptoms of COPD. More than half of the respondents stated correctly that COPD is a non-communicable disease and has no permanent cure. All the respondents considered smoking to be an important cause and risk factor contributing to COPD. This shows that the respondents had a clear idea and in-depth knowledge regarding the aaetiology of COPD. In terms of Knowledge regarding management of COPD, most of the respondents correctly stated that steroids could be prescribed to COPD patients. However, more than half of the respondents incorrectly recommended antibiotics for acute exacerbation of COPD due to viral aaetiology. The analysis of data shows EMS professionals are aware of the aaetiology, pathophysiology and clinical features but require more training in management aspects of COPD.

In terms of attitude towards COPD, broad agreement was found amongst respondents that COPD patients must quit smoking and passive smoking contributed to COPD. Majority of the respondents agreed that inhalers and humidifiers are useful in acute exacerbation of COPD and there is requirement of long-term treatment in COPD patients. However, opinion amongst respondents with respect to recommendations regarding exercise was divided.

In terms of Practices in COPD, broad consensus was found amongst the respondents on the usage and precautions regarding metered dose inhalers (MDI). Majority of respondents believed that counselling the patient about worsening of situation and admission to tertiary care hospital during an exacerbation was essential.

Conclusion

The study finding point towards a healthy degree of knowledge, attitude, and practice with regards to COPD amongst EMS professionals. Although the finding do red flag areas of improvement which can be focused upon in future training session. The study is limited by number of respondents yet attempts to provide a broad view on Knowledge, Attitude and Practices in COPD.

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