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A short review on Chronic obstructive pulmonary disease (COPD): Symptoms, Diagnosis, Prevention and Treatment

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ABSTRACT
In this review discussing about the chronic obstructive pulmonary disease(COPD),in which the patient those are under this condition shows the symptom like changes in airway. It has a chronic and progressive disease. It affects the endothelial function. When COPD induce the endothelial dysfunction, it causes the development of atherosclerosis.Due to affect the endothelial function it increased risk of pulmonary hypertension and cardiovascular risk. COPD is the specific illness and condition whereaffect the physical activity and daily life. COPD can be diagnosed by spirometry. Chronic obstructive pulmonary disease (COPD) is a reversible disease of lung that is the major cause of mortality worldwide. Majorly elderly or middle age affected with COPD. The people which are under COPD condition should not be smoke. Chronic obstructive pulmonary disease includes the chronic bronchitis and emphysema.

Keywords:COPD, Endothelial dysfunction, Spirometry, Atherosclerosis, Emphysema, Chronic bronchitis

I. INTRODUCTION

Chronic pulmonary diseaseaffects the both lung and organ.COPD is characterized by decreasein the breath it is a progressive disease.[1]COPD responsible for air way abnormalities and enhance chronic inflammatory response due to affected both lung over few airs which rise up symptom such as inflammation in throat, production of saliva and hyperventilation acute excavation are define increase sputum,hyperventilation from diagnostic. [2]Widely COPD is the fourth major cause of temporality with more than three million passing away per year.[3] Chronic obstructive pulmonary diseaseis delineated as an untreatable multisystemic inflammatory disease.[4]In United states of America approximately 23 million population are estimated to tolerate form the disease COPD consider more than 119,000 death in year 2000. [5] Generally recognized presentation includes the cardiovascular dysfunction osteoporosis mental disorder. [6]In few studies,ithasdescribed rise up the of many cytokines' mediator. [7, 8] Other have explored the declaration of adhesion molecule in circulating neutrophil and endothelial cells in COPD patients.[9]COPD can be identified with list of physiology of abnormal specifically changes activated by exposure to inhaled adulterant cigarette smoke. It causes the airway inflammation by activation of inflammatory cell.[10]

Symptoms

- **Impact of COPD symptoms on sleep:**Breathingdisturbancewith COPD resulting hypoxia which are accosted with cardio disorder.[11]Due to disturbance of sleep leads to difficulties to rise up in the morning.[12]
- **COPD morning symptoms:**Disturb sleep
- **Impact of COPD symptoms on anxiety and depression:**It has been distinguished patient with COPD bad psychological functioning that lack mantel health knowledge.[13]
- Shortness of breath.
- Excess sputum.
- Frequent coughing.

Prevention:

a) By decreasing the exhibition to tobacco, smoke and other indoor and outdoor pollutants preventable the cases of COPD.[14]
b) Other type of smoking also is smoke that has been exhaled or breathout by a person smoking. [15, 16]
c) Rule of government and health agency,antismoking committee can reduce the smoking rate by telling the side effect of smoking. [17]

Diagnosis:

The patient which has the symptoms like cough, sputum production should be consider the diagnosis of COPD. Spirometry requires for

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diagnosis a post bronchodilator forced expiratory volume in one second/forced vital capacity less than equal to 0.7which suggest the airflow limitation(table1).Spirometric has used to prove the health risk factor. [18]

Severity	Postbronchodilator Fev1/fvc	fev1%pred
At risk	Greater than 0.7	Greater than equal to 80
Mild COPD	Less than equal to 0.7	Greater than equal to 80
Moderate COPD	Less than equal to 0.7	50-80
Severe COPD	Less than equal to 0.7	30-50
Very sever	Less than equal to 0.7	Less than 30

Table-1 Spirometric classification of chronic obstructive pulmonary disease

Treatment:

The main aim to treat the chronic obstructive pulmonary disease are:

- Daily physical activities
- Reduce the smoking

Treatment is based on clinical trial which include highly selected population. [19]

- Phosphodiesterase-4 inhibitor.
- Roflumilast inhibit the phosphodiesterase in currently published trial roflumilast improve the lung functionand reduce the risk of COPD. [20] [21]

II. CONCLUSION:

It is the disease which directly effects the human body into the lungs. This disease can be damage both the lungs. It can be prevented by avoiding smoking and the things which can be damage/affect the whole organs of the human body, directly or indirectly. Chronic obstructive pulmonary disease is associated with high level of systemic inflammation and pulmonaryinflammation. Medication has the potency to improve survival function and quality of life.It is characterized by progressive and irreversible airflow limitation. COPDcan be diagnosis by test spirometry via measuring of breath.

Conflict of Interest; The authors declare that the review was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest

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