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A REVIEW STUDY ON CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) BY AYURVEDA PERSPECTIVE

*Dr. Daljeet Kaur¹, Dr. Dharmendra Kumar Mishra²

¹Assistant Professor, Department of Kayachikitsa, Dayanand Ayurvedic College , Jalandhar,
Punjab

²Associate Professor, Department of Kayachikitsa, Sardar Patel Institute of Ayurvedic

Medical Sciences and Research Centre Lucknow

*Corresponding Author's E Mail id - docdaljitmdkc@gmail.com

ABSTRACT

Over the past 20 years, the prevalence of chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis, has been steadily increasing. COPD is the fourth leading cause of death. The rapid socioeconomic expansion that resulted in a change from traditional to modern lifestyles may be the main factor. From Ayurveda point of view, COPD can be termed as, disorder of Pranavaha Srotas, as etiological factors and clinical features described in Ayurvedic classics for Pranavaha Srotodushti are nearly similar with those of COPD and occurs usually in the prolonged conditions of Kasa or Tamaka Shvasa. Risk factor includes exposure to air pollution, second-hand smoke and occupational dusts and chemicals, smoking, cold weather etc. which are also mentioned in Ayurvedic classics "Rajasa Dhoomvatabhyam Shitathanambusevanam Rukshanna Vishmashanat". Identification, reduction, and control of risk factors to prevent the onset of COPD are important steps towards developing strategies for prevention of COPD. References regarding life style modification along with treatment principle & formulations mentioned in Ayurveda like Haritakyadi Modaka, Vyaghri Haritaki Avleha, Pipalyadi Gutika, Agatsya Haritaki Leha etc. can be adopted for the prevention and management of COPD.

KEYWORDS - Ayurveda, COPD, Life style modification, Pranvaha Srotodushti, Prevention,

INTRODUCTION -

In India, COPD is the second most common lung illness after pulmonary tuberculosis. The disorder is more common in middle-aged patients than in those under 35. COPD is a leading source of morbidity and mortality, accounting for an estimated 2.75 million deaths in 2000, making it the fourth leading cause of death worldwide. COPD has a significant financial impact on society and healthcare, in addition to its high rates of morbidity and mortality. It is equally prevalent in rural and urban areas. The global initiative for Chronic obstructive lung disease (COLD) defines COPD as a disease characterised by progressive development of chronic airflow limitation that is not fully reversible and is used to describe a number of conditions, which include Chronic bronchitis, emphysema and small airway disease¹. Chronic bronchitis is characterised by chronic cough with expectoration for at least 3 months of the year for more than 2 consecutive years. Emphysema is defined as permanent abnormal distension of the air space distal to the terminal bronchioles². In Ayurveda respiratory diseases occur due to involvement of Pranavaha Srotas where cough, breathing difficulties, disturbed respiratory pattern occurs. Though it is impossible to correlate COPD with any single condition of Pranavaha Sroto Dushti, but advanced condition of Doshika Kasa and Tamaka Shvasa may result into COPD.

AIMS AND OBJECTIVES:

To review COPD from Ayurvedic and modern science point of view and to plan life style modification along with its treatment principle & formulations.

MATERIAL AND METHODS:

Relevant Ayurvedic and contemporary literature, online resources, etc., were searched in order to meet the goals and objectives. Here is a description of the search results.

DISCUSSION

Aetio-pathogenesis: According to Ayurveda, unhealthy eating habits and lifestyle choices are the root cause of all diseases. Etiological factor of COPD mentioned in classical and modern literature include diet articles, food habits and life style errors³.

Pathogenesis: In COPD, inhalation of toxic substances – particularly inhalation of tobacco smoke etc. causes inflammation of the lung tissue. If the typical protective and/or repair systems are overloaded or malfunctioning, the inflammation leads to tissue damage. Mucus hypersecretion, airway narrowing and fibrosis, parenchymal destruction, and vascular

alterations are the outcomes of lung tissue damage. These pathological changes lead to airflow limitation and the other physiological abnormalities resulting into clinical features of COPD

In classics also pathogenesis of Pranavaha Srotodusti described in regards of Kasa and Shvasa resembles the above mention description and can be summarized as due to indulgence in etiological factors, vitiated Prana and Udana situated in PranavahaSrotas enforces Kapha, resulting into obstruction of channels of Pranavaha. On the basis of these, it can be said that pathogenesis of COPD involves following steps⁴.

Smoking causes inflammation of the airway wall. Mucus secretary gland hypertrophy The number of ciliated cells in bronchi decreases as the number of goblet cells increases. reduced airway blockage and pulmonary flexibility due to enhanced mucus transport COPD

Clinical features: A history of heavy smoking or tobacco use, together with a persistent cough that produces phlegm and shortness of breath when exerted, are the main symptoms of chronic obstructive pulmonary disease (COPD).5 Cough occurs during cold weather, wheeze, tightness of chest, recurrent respiratory infection, dyspnoea; peripheral oedema secondary to over right ventricular failure, cyanosis, and percussion note is normally resonant, medium to coarse crepitation and rhonchi which change in intensity and location are other clue for diagnosis of COPD. The characteristic manifestations of the vitiation of Pranavaha Srotas are Atisristam- Atibaddhama (too long or too restricted respiration), Kupita (disturbed pattern of respiration), Alpa-alpam (shallow or frequent respiration) and Shashbdam Sashulam (respiration associated with sound and pain)⁶, which resembles the description of COPD. The patient with emphysema presents with long history of exertional dyspnoea with minimal cough associated with production of mucoidal sputum and may have asthenic body built, prolonged expiration with pursed lips. Crepitation may be present mostly in lower zone of lung. Most of clinical features described for COPD, are also mentioned in classical either as general symptoms or specific includes life style modifications and diet pattern, Shamana (pacification treatment) and Shodhana (biopurifactory methods). Considering this the management of COPD can be summarized under the headings of: **Avoidance of etiological factors**⁷: As said correctly, the greatest method to maintain good health is to avoid things that upset homeostasis and to stick to any program that suits you. Hence it can be said that finding out the causative factor for COPD in individual, such as to stop smoking, taking appropriate precautions in certain type of occupational environment,

avoiding close contact with people suffering from respiratory infection, exposure to excessive heat, cold and high altitudes, exposure to environmental irritants and day sleep.

Modification of lifestyle⁸: In most of the diseases, lifestyle changes, helps to reduce symptoms and improve quality of life like exercising regularly, taking fresh, warm diet which is low in saturated fat but rich in fruits, vegetables, and whole grain foods and maintaining a normal weight, to be in well ventilated hygienic environment. Similarly Nasya of two drops of Anutaila / Shadbindu Taila in each nostril daily may prevent coming in contact with irritant or pollutant with the nasal mucosa. Waking up early in the morning at regular time and taking glass of warm water early morning empty stomach and avoiding Irregular and untimely eating of food may help to prevent complication of COPD. Similarly due to importance diet articles may be done⁹: Use of Katu, Lavana, Ushna, Snigdha, Laghu, Ahara, vegetables including of gourd, bottle gourd, Spinach, Methi, garlic, ginger, Karvellaka, Patola, Shigruand pulses like Mudagadaal, Kulatha should be encouraged in the patients of COPD. However, excessive use of tomato, cauli flower, potatoes, preparation of rice flour, sweets, curd, whole milk, black gram, coconut oil, fermented and sour food articles and cold drinks, refrigerated food articles etc. shall be avoided in the daily diet.

Management of COPD: According to the patient's strength, timely and seasonal Shodhana (biopurification) should be carried out. For example, strong patients may receive Nasya therapy during the right seasons, as well as Vamana, Virechana, and Niruhabasti. This type of therapies alleviates Kapha at and may dry up excess mucous secretions in the Pranavaha Srotasa (respiratory system). Medications: Patient already suffering from COPD should be treated with medication along with life style modifications which are mentioned here after. Single drugs: Ardraka, Ela, Haridra, Trikatu, Pippali, Ashvagandha, Agnimantha, Ajmoda, Ajaji, Guduchi, Ativisha, Aragvadha, Karanjabija, Daruharidra, Lashuna, Rasona, Hingu. Preparations¹⁰: Kaphketurasa, Gojihvadi Kvatha, Dashmula Kvatha, Chitraka Haritaki Avleha, Choshath Prahari Pippali, Tamra Bhasma, Mahalakshmi Vilas Rasa, Loknath Rasa, Vyoshadi Churna, Sarpi Guda, Shringyadi Churna, Haritakyadi Modaka, Pippalyadi Gutika, Sitopaladi Churna, Talishadi Churna, Vyaghri Haritaki Avaleha. Rasayana: Pippali Rasayana, Chyavanaprasha, Agtsya Haritaki, Vyaghri Haritaki, Haridra Khanda, Ashwagandha, Guduchi etc. can be used as Rasayana. Yogasana & Pranayama¹¹: Practice of Pranayama i.e Kapalbhati purifies the Nadi. Depending upon the type of Pranayama performed, the flow of pranic energy may be increased or decreased in either one or more of the major Nadi: Ida, Pingala,

or Sushumna Nadi. While Ayurveda understands the role of Pranayama in regards to Prana, Tejas, and Ojas and their corresponding effects on the mind, relaxation along with conscious breathing of almost any type improves the functioning of the respiratory system .Simple diaphragmatic breathing increases the volume of air moving through the lungs on inhalation and exhalation. It reported that practice of Pranayama and meditation enables patients to take some control over autonomic function, offering the patient an opportunity to relax and dilate the bronchial passages at the onset of an asthmatic episode. This may also benefit patients with additional breathing challenges such as chronic bronchitis. Yoga: Yogik practices rehabilitate varies vital organs and make them functionally more competent. Bhujangasana, Savasana, Shalabhasana, Paschimotasana is useful Asana for PranavahaSrotas as it accelerates the blood circulation of the lungs and thus increase the vital capacity of lung.

CONCLUSION:

As a chronic, progressive illness that causes irreversible alterations, COPD requires early diagnosis and appropriate treatment. A careful diet, dietary pattern changes, and lifestyle adjustments along with the prudent application of Rasayana can significantly contribute to the prevention or advancement of COPD.

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