



Review Article

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MANAGEMENT OF CHRONIC BRONCHITIS BY AYURVED PERSPECTIVE (SHRINGYADI CHURNA): A REVIEW

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ABSTRACT

Chronic obstructive pulmonary disease or chronic obstructive airway disease are very commonly terms are used in pathological condition I which chronic, partial or complete obstruction of the airways at any level from trachea to smallest airway resulting in functional disability of the lungs. Chronic bronchitis is a common condition defined clinically as persistent cough with expectoration on the most days for at least three month of the year for two or more consecutive year due to Rhino virus and Adenovirus. The cough is caused by over secretion of mucus. The condition is more common in middle aged male then females; approximately 20% of adult men and 5% of adult women have chronic bronchitis associated features with cough, Expectoration, Dyspnoea, Haemoptysis & fever. In Ayurveda it is very well co-related with Kaphaja Kasa and its management by Sharangdhar through Shringyadi Churna. It has very rich kaphnaghana property, katu (Punget), tikta(Bitter), kashay Rasa and ushana veerya so also a Chedan properties as well as prevent the formation of free radical and over production of mucous and specially very effective in children. The aim of this article is to gain absolute knowledge about Shringyadi churna in the management of Chronic Bronchitis.

Keywords: Bronchitis, Dyspnoea, Shringyadi churna, free radical.

INTRODUCTION

Chronic bronchitis comes under the chronic obstructive pulmonary disease or chronic pulmonary obstructive airways disease are more commonly used clinical terms for a group of pathological conditions which chronic, partial or complete obstruction to the airflow at any level from trachea¹ The cough is caused by overproduction of mucus. In spite of its name, chronic inflammation of the bronchitis not a prominent features. Chronic bronchitis is a common condition defined clinically as persistence cough with expectoration on most days for at least three month of the year for two or more consequence years.²Three factors contribute to the increase thickened of the bronchial wall, (1) Infiltration of the submucosa by chronic inflammatory cells. (2) marked hypertrophy of mucosal smooth muscle cells and (3) Marked hyperplasia of the mucus gland.³Mucoid sputum production found in Chronic simple bronchitis , persistent or recurrent sputum production found in chronic muco-purulent bronchitis and chronic asthmatic patients who suffer from bronchitis, experience severe dyspnoea and wheezing during acute respiratory tract infections.⁴In Ayurveda bronchitis is correlated with Kaphaj Kasa⁵ Due to irritation, bacterial infection, any tumor, allergen, chemical, dust, smoke resulting the inflammation in respiratory tract than mucous gland secrete excessive amount of mucoid after then afferent fibers of vagus nerve stimulate the medulla by impulse then cough would be produced.⁶Acharya Shushruta, Ast. Hri. Madhavnidan and Sharngdhra also described about Kasa in his own text book. The term Kasa is derived from Kasnat-Kasah which is classified in dry or wet cough.⁷ The condition is more common in middle aged male than females; approximately 20% of adult men and 5% of adult woman have chronic bronchitis.

Associated features with cough, Expectoration, Dyspnoea, haemoptysis & fever. In Ayurveda its management by Sharangdhar through Shringyadi Churna.⁸ It has very rich kaphaghana property, katu, tikta, kashay Rasa and ushana veerya so also chedan properties as well as prevents the formation of free radical and over production of mucous and especially very effective in children.

Etiopathogenesis

The two most important etiologic factors responsible for majority of cases of chronic bronchitis are; cigarette Smoking and atmospheric pollution. Others contributory factor are occupation, infection, familial and genetic factors.¹

(1) Smoking: Smoking causes broncho-constriction, sluggish ciliary movement,, increase, airway resistance, hypertrophy of the mucous gland, increase number of Goblet cells and hypersecretion of the mucous.

Yet only 10-15% of the smokers develop COPD.1 year is equivalent to smoking 20 cigarettes a day for 1 year.⁹

(2) Atmospheric pollutions: Due to industrial fumes and dust⁴ as well as sulfur dioxide are main causes of air pollution which are responsible for chronic bronchial irritation and increase resistance to the airflow.⁹

(3) Infection: Bacterial, viral and mucoplasmal infection do not initiate chronic bronchitis but usually occur secondary to bronchitis.¹ The role of infection is uncertain, but it appears that once it develop chronic irritation is mentioned and progresses to emphysema. The main organisms are *H.influenzae*, and

Streptococcus pneumoniae. *Mycoplasma pneumoniae* may also be involved.⁹

(4) Occupation: Workers engaged in certain occupations such as in cotton mills, plastic factories are exposed to various organic, inorganic dust which contribute to disabling chronic bronchitis in such individuals.¹

(5) Familial and Genetic factors: There appears to be a poorly defined familial tendency and genetic predisposing to develop disabling chronic bronchitis.¹ Associated with Alpha-antitrypsin deficiency may also be present.⁹

CLASSIFICATION OF CHRONIC BRONCHITIS

It is further divided in following four types

- Simple chronic bronchitis
- Chronic recurrent muco-purulent bronchitis
- Chronic obstructive bronchitis
- Chronic asthmatic bronchitis⁹

PATHOLOGICAL CHANGES

Grossly – The bronchial wall is thickened, hyperemic and edematous. Lumina of the bronchi and bronchioles may contain mucous plugs and purulent exudates.¹

Microscopically – Due to chronic irritation, mucous glands undergo hypertrophy which is the main pathological finding in chronic bronchitis. The ratio between the thickness of Gland and thickness of bronchial wall is called Reid Index. (Normally-0.26 it become 0.59).⁹The bronchial epithelium may show squamous metaplasia and dysplasia. There is little chronic inflammatory cell infiltrate. The non-cartilage containing small airways show goblet cells hyperplasia and intra-luminal and peribronchial fibrosis.¹

Mucus:- Mucous secretion is enormously increase due to hypertrophy of mucus gland and proliferation of Goblet cells. Secretion of mucus gland mainly contributes to the sputum volume, while that of Goblet cell is responsible for airway obstruction.

CLINICAL FEATURES

Onset is insidious, usually in the 5th or 6th decade of life¹⁰

- Cough with expectorations
- Smoking cough
- Winter cough
- Fever
- Shortness of breath
- Sputum with purulent character
- Emphysema¹⁰
- Anorexia
- Indigestion
- Coryza
- Nausea & Vomiting
- Heaviness in Body⁵

INVESTIGATION

- **Blood count** – Leucocytosis (acute infection), Polycythemia (Long standing)
- **Radiological** – Wide ducts of mucus glands are seen in big sized bronchi.
- **Bacteriological culture of sputum** – Gram negative organism less commonly seen¹¹.

Table 1: Respiratory Function Abnormalities¹²

Sl. No	Test	Chronic bronchitis
01	FEV	
02	VC	
03	FEV/VC	
04	TL _{co}	
05	K _{co}	
06	TLC	
07	RV	

METHODS OF ENQUIRIES

- Frequency.
- Duration
- Time of occurrence (day or night)
- Character – Sudden, Kshoba-yukta (irritant),
▪ Vegapurita
- Expectoration– Present or absent.
- Anubandha – Chardi (vomiting), raktasthivana, ruja (Pain), Jwara (Fever), swasa¹³.

Table 2: Management by Ayurveda Perspective

Drug Name	Latin Name	Action
Karkatshringi ¹⁴	<i>Pistacia integerrimama</i>	Kaphavata shamak, Shothhara Deepan, KaphNihsaraka, Kaphaghn
Prativisha ¹⁵	<i>Aconitum palmatum</i>	Tridoshar, Kaphpitta shamak, Deepan pachan, Sothhara
Pippali ¹⁶	<i>Piper longum linn.</i>	Kaphavata shamak, Deepana, Jwaraghana, Kasahara, Shwashara, Hikkani-grahana

DISCUSSION

Pranvaha srotas (Respiratory System) considered as respiratory system because its main function is concerned with ucchwasa (expiration) and nihswasa (inspiration). Through the pranavaha srotas mula is hridaya and mahasrotasa.¹⁷Kasa is disease of Pranvaha srotasa, that which takes out vayu (from chest) through the throat with sound is called Kasa. Cough is a physiological process which is characterized by explosive expectoration following a deep inspiration. It is a defensive reflex which help to clear the lower respiratory tract and protect the entry of foreign matters.¹⁸ Kasa is sudden and variable expiratory thrust of dosha through the mouth with phonation of bronze due to vitiation of prana and Udana vayu (shu.u.t. 52/5)¹⁹. Drug Shringyadi Churna has reach property. In this 66.66% drug are ushana veerya so it very much kapha shamak properties& also prevent the formation of free radical and Keton bodies. Due to Tikta rasa Karkatshringi and Prativisha has a Shothhara property which is also useful to reduce the Red index which is diagnostic feature of chronic bronchitis. Tikta – Kashay Rasa 20-20% which is also Kaphanisaraka , Kaphagn, Hikkani-grahana (hiccoughs) properties. Always use a pippali like a Anupan because single use of this drug can Tridoshas Vardhak due to Snigdha & Ushana guna it increases Kapha & Pitta dosha as well as Vata dosha. Laghu Guna is 42.8%, Ruksh guna is 28.57%, Tikshana is 14.28% it is also Kaphahara properties. Karkatshringi is the drug which is use frequently in various compound preparation for Kasa, Swasa, Hikka because its expelled the stored cough and also prevent to formation of new cough.66.66% drug are Kaphavata shamak and 33.33% drug are tridosha shamak. Ushana veerya is also help to control the vata dosha. Vata dosha is mainly responsible for this disease but kapha is also involve because it is a Shothatmak vikriti and

Soth is a Rasapradosaj vikar and Mala(Waste product) of the Rasa dhatu is kaph so that Kapha is essentially involved.

CONCLUSION

Described by Acharya sharangdhara Shringyadi churna which has Karkatshringi (*Pistacia integerrima*), Prativisha (*Aconitum palmatum*) and Pippal (*Piper longum linn.*) has Kaphavata shamak, Jwaraghana, Kasahara, Shwashara, Hikkanigrahana, Tridoshhar, Kaphpitta shamak, Deepan pachan, Sothhara, KaphNihsaraka, Kaphaghna. Due to all above properties which is very helpful to treat the disease that's why Shringyadi Churna is very much effective in the management of Chronic Bronchitis associated with Honey.

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