A Critical Review on the Etiopathogenesis and Treatment of Kaphaja Kasa (Chronic Bronchitis)

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ABSTRACT

Kasa is one of the most common Vikara which makes the patient to consult a physician. Kasa is one of the pranavaha srathodusti janita vyadhi which hinders the normal life style. Kaphaja Kasa is a type of Kasa dominated by Kapha and Vatadusti. Ayurveda texts explains the Nidana, Samprapti and treatment of Kaphaja Kasa in detail in many contexts. Chronic bronchitis is a pathological condition characterized by the chronic cough and excessive mucous secretion in the tracheo bronchial tree. Cigarette smoking, environmental pollution, unaccustomed occupational surroundings are major causes of chronic bronchitis. Even though it is not life threatening, but on triggering causes may lead to acute exacerbation of symptoms and may need immediate intervention. Kaphaja Kasa can be best compared with chronic bronchitis. The mucolids, expectorants and cough suppressants are failing to relieve the chronic bronchitis, so there is a major role of Ayurveda in treatment of Kaphaja Kasa. Here an attempt is made to review causes, pathogenesis and treatment of Kaphaja Kasa w.s.r. to chronic bronchitis.

Key words: Kaphaja Kasa, Chronic bronchitis, Mucolids, Expectorants.

INTRODUCTION

Kasa is one of the pathological conditions explained in many contexts of Ayurveda texts. Kasa may develop as an independent disease, may be a Lakshana associative to other disease, sometimes may develop as Upadrava of a disease. Kasa is broadly classified as Ardarakasa and Shushkakasa. Understanding and differentiating the Kasa is most important to treat the condition effectively. Contemporary understanding of respiratory airway diseases, focal and diffuse lung diseases can be studied parallel with understanding of Kasa.

Chronic bronchitis is characterized by cough associated with sputum on most days for at least 3 consecutive months for more than 2 successive years. The initial symptoms are repeated attacks of productive cough which shows a steady increase in severity during the winter months and present all the year round with recurrent respiratory infections.[¹]

According to estimates from national interviews taken by the national center for health statistics approximately 9.5 million people or 4% of the population were diagnosed with chronic bronchitis. In one study acute bronchitis affected 44 of 1000 adults annually. Chronic bronchitis is more prevalent in people older than 50 years.[²]

Ayurveda explains different approaches to treat the Kaphaja Kasa. Nidanaparivarjana, Shamanoushadhi and Shodhana are different modes of treatments. These different modes of treatments have shown clinical efficacy in many institutional clinical trials. In contemporary medical system mucolytics,
expectorants and antibiotics are the choice of treatment in chronic bronchitis. As disease is chronic, patient has to use these medicines for long duration. Due to disease modification from time to time has created resistance to these medications, so Ayurveda have major responsibility to treat this condition.

**Etiology of Kaphaja Kasa (Chronic Bronchitis)**

*Nidana* of any disease can be classified as *Samanya* and *Vishesha*. Charakacharya had not explained the *Samanya* for *Kasa*. As *Kasa* is one of the *Pranavaha* *Srotho Dustijanita Vyadi* and have similarity in etiopathogenesis with *Hikka* and *Shwasa*, so *Pranavahasrothodusti Nidana* and *Hikka-Shwasa Samanya Nidana* can be considered as *Kaphajakasa Samanya Nidana*.

Intake of Guru, Abhishyandi, Madhura, Snigdha Ahara, Divaswapna and Achesta are explained as *Kapajakasa Vishesh na Nidana*.[3] These will act as *Dosha Hetu*, *Vyanjaka Hetu*, even *Uthpadhaka Hetu*. These causes will set the *Samprapthi* of *Kaphaja Kasa* and sometimes these will also act as triggering factors leading to exacerbation of symptoms.

Cigarette Smoking, Occupational exposure like exposure to dust, coal mining, cotton textiles etc. Ambient air pollution, Respiratory Infections are considered as major causes for chronic bronchitis.

*Raja, Dhuma, Sheeta Snana* and intake of *Sheetambu* are explained as *Hikka-Swasa Nidana*.[4] These can also be considered as cause for *Kasa*. The long term indulge in these *Nidana* will cause the *Kasa* and these will also act as triggering factors.

**Samprapti of Kaphaja Kasa**

*Samprapti* of *Kaphaja Kasa* can be divided as *Avasthika Samprapti* and *Vega Kalen Samprapti*. The causes have tendency to vitiate both *Vata* and *Kapha*. *Udana Vata* and *Kaphadusti* is initial stage of *Samprapti*. Function of *Udanavata* will be obstructed by *Kapha* and these *Dosha* will take *Stanasamshraya in Urah*, *Kantha* and *Shiras*.

At *Vegakala Vyanjakahetu* like *Raja, Dhuma, Shithambu* will precipitate the *Samprapti* leading to *Aardra/Kaphaja Kasa Vega*, where *Kasa* is associated with *Nishtivana*.

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### Etiopathogenesis of Chronic Bronchitis

Chronic Bronchitis is defined clinically as persistent cough that produces sputum for at least three months per year in two consecutive years. It is classified under the broader heading COPD because of the core pathological process of the obstruction to the airflow which is not fully reversible. WHO recognized and stated this disease as one of the major illness of the respiratory system with increasing incidence and mentioned it under ICD 10 section J42.[5]

Etiological factors causes thickened, edematous, hyperaemic bronchial wall which reduces lumina of the bronchi and bronchioles which contain mucous or muco purulent exudates. The main pathological changes that takes place in the trachea bronchial tree are the hypertrophy, hyperplasia and fibrosis i.e. hypertrophy of the mucous secreting cells, hyperplasia of the goblet cells in the respiratory tract, and luminal or peribronchial fibrosis.[6]

Adding on to above pathology there will be decrease in the ciliated cells which will reduce the efficient transport of the increased mucous in the airways. Here airflow limitation reflects both mechanical obstruction in the tracheo bronchial tree as well as the reduced elastic recoil.[9]
Productive cough usually exacerbate after colds during winter season, which show steady increase in severity and duration with successive years until cough is present all the year round.

There after development of exertional breathlessness with morning cough and wheeze which is due to increased bronchial obstruction by the inflammatory pathology and repeated respiratory tract infection in the tracheo bronchial tree. Breathlessness is aggravated due to various etiological factors such as infection, cigarette smoking and atmospheric condition.

**Types of Chronic Bronchitis**

This classification is based on the severity of the illness or the extent of involvement of the pathological changes, thus it can be classified into,

a) Simple Chronic Bronchitis

b) Mucopurulent Bronchitis

c) Chronic obstructive Bronchitis

**Clinical feature of Kaphaja Kasa**

Kasavega (cough) is cardinal symptom of Kasaroga, which will be present in all types of Kasa. The differentiating symptoms of Kaphaja Kasa help to make more precise diagnosis. Clinical symptoms of Kasa can be again divided as Avasthika Lakshana and Vegakalen Lakshana. Even symptoms can be segregated as Sarvdiheka Lakshana and Urdvajathrogatha Lakshana.

**Bahala Madhura Snigdha Ghana Nishtivana**[8]

This is the Pratyatama Lakshana of the Kaphaja Kasa. The disease Kapahja Kasa will be with expectoration. Where relatively more quantity of sputum will be produced comparing to Vataja and Kaphaja Kasa. The character of sputum will be Ghana, Snigdha and Madura. These Lakshana are in accordance with Kaphadosha Guna like Guru, Manda, Snigda, Slakshna, Sandra etc.

**Mandagni**[9]

Dravyatha and Gunatha Kaphadusti in Aamashaya will lead to Mandagni.

**Aruchi**[10]

Vata, Pitta and Kapha separately or all together when lodge in Jihwa and Hridaya or due to non availability of Manoanukula Ahara intern causes Aruchi.

**Chardi**[11]

Vitiated Kapha which will produce the excessive act of coughing which in turn produce increased abdominal pressure which will cause expulsion of the contents outside from the stomach.

**Pinasa**[12]

According to commentator Dalhana Pinasa is Prana Vayu Prakopa Janitha Vyadhi. In Kaphaja Kasa due to the Pranavaha Srototo Dusti and vitiation of PranaVayu, the patient may suffer from Pinasa.

**Gaurava**[13]

This is feeling of the heaviness which is due to the increase in the quality of the Kapha such as Guru, Snigdha, and Picchila Guna. This can be understood as heaviness of the body or the heaviness of the chest due to increased secretion in the Pranavaha Srotas.

**Asyamadhurya / Mukhapralepa / Kantaupalepa**

Sweetness in the mouth is distinct indicative of Kaphadosha. Increase in the Picchilaguna Vriddhi in the Kapha Dosha will cause adherence in the oral cavity or the pharynx. [14],[15],[16]

**Kasamanoruk Vaksha**[17]

Even though Kapha is predominant Dosha in Kaphaja Kasa, there will be involvement of Vata also. Sthanasamshraya of Vata in Urah, Kanta, Shira will lead to the symptoms like pain in chest region, head ache and sore throat.

**Shiroruja**[18]

From Vegavarodha there will be a Prakupita Vayu which intern gets Pratiloma Gati of Vayu gets Sanchita in Murdhavaha Siraas and causes Shiroruja.

**Kanthakandu**[19]

The Kleda and Sheetatwa produced by Karmatmaka Vriddhi of Kapha leads to these symptoms.
Swarabheda[20]
The Gala Talulepa by the aggravated Kapha and vitiation of Udana Vayu is responsible for the Swarabheda.

Chikitsa
In treatment of Kaphaja Kasa there is a need of different mode of approaches at different stages. Most of time multi treatment protocol has to be adopted.

Nidana Parivarjana
It is most important aspect of treatment. Person with Kaphaja Kasa has to avoid triggering factors like smoking, dust inhalation etc. some time person has to make some modification in his occupations to avoid these Nidana like mask wearing; avoiding Air Conditioned environment etc. patient should be more conscious during cold/winter seasons and during travel to cold atmosphere.

Samshamana
There are many single drugs, Kastoushadhi and Rashoushadis are indicated for Kaphaja Kasa. These have Katu, Ushna, Tiksha, Sukshma, Chedana, Kaphanissaraka, Kasagna Guna. Trikatu, Pippali, Kantakari Avaleha, Agasty Haritaki , Kapha Ketu Rasa, Agastyavaleha, Vyghri Haritaki Avaleha are beneficial in Kaphaja Kasa. Pippali and Agasthya Harithaki Yoga can be used as Rasayana in Kaphaja Kasa.

Shodhana
The first line of Shodhana in Kaphaja Kasa is Vamana. Vamana will expel the Dushita Kapha and relive the Aavarana to Vata giving more and effective result in Kaphaja Kasa. The Virechana can be planned in Vata, Pittanubandha. Here Vata should be controlled to relive Vedana in Urah and Parshva. Nasya Karma is helpful because the Sthnasamshraya is in Urdhva-jatrugata. Virechana and Nasya have minimal role in Vegakalen and Bahudosha Kaphaja Kasa. In Avasthika Kala these can be adopted as per the Yukthi of physician.

If Bahudosha and Amashyagatha Kaphaja Lakshana are noticed Sadhyovamana can be adopted rather than classical Vamana.
Kavalaghr, Dhunapana are also helpful in condition of Kaphajakasa. After the Vamana Tikshana Dhunapana will helpful in Kaphajakasa.

CONCLUSION
Kaphaja Kasa is one of Pranvaha Srothodusti Janita Vyadhi where Kasavega is associated with Bahala Ghana Nishtivana. Kaphaja Kasa can be studied parallelly with contemporary understanding of chronic bronchitis. The causes and symptomatology of both Kaphaja Kasa and chronic bronchitis mimics each other so these can be best correlated. Nidana Parivarjana, different Shamnoushdhi and different modes of Shodana will help in treating the Kaphajakasa. Probably these Shamana drugs act as cough suppressant, expectorants and mucolytic. In future scope there is a need to prove the action of these Shamana drugs clinically and pharmacologically.

REFERENCES


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