



## AN OUTLOOK OF COUGH IN CONTEXT OF KASA ROGA IN AYURVEDA

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## ABSTRACT

Ayurveda is the most ancient and traditional system of medicine in India. The Ayurvedic system of medicine is based on many centuries of experience. It maintains our physical and mental fitness with prevention and cure of diseases. Now a day, many persons of all age groups are suffering from Kasa Roga. In the present era Kasa is the most common disease affecting a large aged population. Kasa is one of the Pranava Strotodusthijanya Vyadhi. The vitiated Prana Vayu along with Udana Vayu which further gets aggravated in association with other Doshas and expelled out forcefully with a „coughing sound“ like the broken bronze vessel, called as Kasa. In this disease, Pran Vayu gets Udan Gati. Due to Pratiloma Gati (Reverse direction) of Prana Vayu, Apan Vayu gets Urdhwa Gati (Upward direction) and make obstruction in Prakruta Gati (Normal direction) of Udan Vayu result in obstruction and Pran Vayu gets expelled out by mouth. Ayurveda is the most ancient and traditional system of medicine in India. The Ayurvedic system of medicine is based on many centuries of experience. It maintains our physical and mental fitness with prevention and cure of diseases. Now a day, many persons of all age groups are suffering from Kasa Roga. Vaman, Virechana, Basti, Nasya, Raktmoksha, Sthanika Abhyang, Sthanika Nadi Sweda, Dhumpana & Ayurvedic Shaman Ausadhi are the treatment of Kasa.

**KEYWORDS:** Kasa, Cough, Vataja Kasa, Pittaj Kasa, Kaphaj Kasa, Kshayaj Kasa, Kshataj Kasa.

## INTRODUCTION

Ayurveda is one of the world's oldest holistic medical systems. Science of Ayurveda has evolved from the contemplative minds of ancient seers for the intension to heal all the humanity. It deals with the dynamic changes and effects, which occurs in the body and explains methods to manage these changes. Disease can be caused by two factors internal and external. With external contributing to over 80%. Outside factors include mostly infections and infestations, allergens, food and environment. Main internal factors include body immunity, genotypic susceptibility and physiological state of peculiarities at different stages of life. The Prana and Udana Vayu are responsible for normal functioning of Praanava srotas. The vitiation of these can lead to manifestation of Kasa (cough). Vatajakasa which is characterized by Lakshanas like Shuska Gala, Shuskakasa with Shuskaalpakapha, Swarbheda, Parshvashool, Shriashool, Urashool & Dourbalya<sup>1</sup> are explained in Ayurvedic texts.<sup>[1]</sup> The respiratory system is involuntarily, the most vulnerable system in the body. It is always at the risk of being exposed to all kind of air born infections and irritants like pollution, dust, chemical fumes etc with the process of respiration. Acute respiratory infections in India have increased from 32.76 mn in 2013 to 40.3 in 2016, rising consistently over the past five years. Kasa derived from the word kas, ie gathi

shatana1 which means falling movement. According to Gangadhara it is kasri which means shabda kutsanya. Kasa is a pranava srotos vyadhi having origin in amashaya. There are five types of kasa namely, vataja, pittaja, kaphaja, kshayaja and kshataja. Ayurveda is one of the world's oldest holistic medical systems. Science of Ayurveda has evolved from the contemplative minds of ancient seers for the intension to heal all the humanity. It deals with the dynamic changes and effects, which occurs in the body and explains methods to manage these changes.

## Historical review

The historical review of disease Kasa in Poorva Kala (Early time) (Veda Kala, Puran Kala and Samhita Kala), Madhyam Kala (Middle time) and Adhunik Kala (Modern time). Kasa is separate disease entity was described by Charak and Sushruta Nidan of Panchavidha (Five types) of Kasa in his famous treatise Charak Samhita and Sushruta Samhita dealing with the signs, symptoms, complication and prognosis.<sup>[2]</sup>

## Nirukti

Acharya Charaka defines Kasa as - Release of obstructed Vayu with the production of abnormal sound is called as Kasa. This may be dry (without secretions) or productive (with secretions)<sup>[3]</sup> Acharya Sushruta defines Kasa as -

Production of a typical sound obtained from broken bronze vessel is the cardinal symptom of the disease.<sup>[4]</sup>

### Nidana (Etiological Factor)

Nidana (etiology) of Kasa mentioned in the classics can be categorized as Samanya and Vishesh Nidana. Samanya Nidana mentioned by Acharya Sushruta and Acharya Madhava are Dhoom, Dhooli, Raja, Vyayama, Rukhsya Anna Sevan, Bhojanvimargaman, Chavathuvegavarodh, Vishesh Nidana.<sup>[5,6]</sup>

### Samprapti of Kasa

Acharya Charaka explained the Samprapti (pathogenesis) of Kasa,<sup>[7]</sup> as because of Vata Prakopa, downward movement of Pranavayu is obstructed and thus attains upward movement with Udana Vayu and localised in throat and chest. Obstruction at chest and neck region forces them to get filled up in the channels of head and neck. After that sudden extension or jerky movement in areas of Hanu (temporomandibular joint), Manyu (neck) and the whole body accompanied by contraction of thoracic cage and eyes leading to increase in the intrathoracic pressure, all directed towards glottis. Then there is Forceful expulsion of air because of the sudden opening of glottis producing a typical sound is called Kasa which is either dry due to absence of sputum or accompanied with sputum. In Ashtanga Sangraha Acharya explained that due to Vata Prokopa, Apana Vayu is obstructed and it attains upward movement.<sup>[8]</sup>

Nidana-----Avasthika Samprati Udana Vata & Kapha Dushti -----Kaphavruta Udana-----Sthana Samshraya in Urah, Kantha,-----Shira Vega Kalena Samprati KaphajaKasa.

**Table 1: Showing the Samprapti ghataka's of kasa.**

<b>Dosha</b>	Kapha, Vata
<b>Dushya</b>	Rasa
<b>Agni</b>	Jatharagnimandya
<b>Ama</b>	Jatharagni mandyajanyaama
<b>Strotas</b>	Pranavaha & Rasavaha
<b>Srotodusti</b>	Sanga
<b>Udbhavasthana</b>	Amashya
<b>Sancharasthana</b>	A Rasayani (Strotas)
<b>Adhishtana</b>	Urahpradesha

### Involvement Of Vata In Kasa Pranavata

This is located primarily in head, brain and upper part of the body. It is associated with sensory perception, intellectual, sensory functions, thoughts and respiration particularly inhalation as well as other downward movements that flows into the body like swallowing, respiration, sneezing.<sup>[9]</sup>

### Udana vata

It governs the upward movement of the body. This vayu is crucial in maintaining memory and proper speech patterns.<sup>[10]</sup> Located in the area of diaphragm and thoracic cavity, it also interacts with the downward

flowing prana to regulate breath, particularly exhalation. The other activity also highlights the role of Valsalva maneuver, straining against forced expiration,<sup>[11]</sup> is performed moderately forceful attempted exhalation against a closed airway, usually done by closing one's mouth, pinching one's nose shut while pressing out as if blowing up a balloon.<sup>[12]</sup>

**Apana vata:** It is based in the colon and pelvic cavity. Its primary movement is downward and outward of the body, governing the movement and absorption of material through the colon and the excretion/expulsion of faeces, urination, semen and menstruation.<sup>[13]</sup> It is concerned with the involuntary movement and Valsalva maneuver as said in udanavata.

**Cough reflex:** Cough reflex has got both sensory (vagus) and motor path way.<sup>[14]</sup> Cough receptors in epithelium of respiratory tract sensitive to both mechanical and chemical irritants. Trachea and bronchi especially larynx and carina are more sensitive to irritants. When cough receptor triggered impulse travel via internal laryngeal nerve, branch of superior laryngeal nerve to the vagus and to the medulla. Efferent pathway comes with relevant signals from cortex-medulla to glottis, intercostal muscles and expiratory muscles via vagus, superior laryngeal nerve.

### Investigations

Laboratory investigations help the physician to confirm the diagnosis, though much can be diagnosed based on the clinical signs and symptoms.

1. Routine blood investigations like TLC, DLC, AEC, Hb%, ESR helps to rule out Anaemia and eosinophilia, etc.
2. Sputum smears examination.
3. Culture of sputum wherever necessary.
4. Chest Radiograph may help to indicate the presence and extent of inflammation.
5. Bronchoscope or laryngoscope may be used to inspect the interior of bronchi and larynx, when a physician can't come to a conclusion with Radiograph.

### Purvarooopa (Premonitory Symptoms)

Acharya Charaka mentioned Shooka Poorna Gal Asya (sensation of in throat and mouth), Kanthe Kandu (itching in throat), Bhojyanam Avarodh (obstruction to the normal flow of food).<sup>[12]</sup> In addition to these Purvarooopa (Premonitory symptoms), Sushruth has mentioned Kanth Kandu, Bhojanavrodha, Gala Talu Lepa (coating in the throat & palate), Arochaka (anorexia), Swasabda Vaishmya (hoarseness of voice), Agnisada (reduced appetite) etc. Madhav Nidana mention Purvarooopa (Premonitory symptoms) same as Charaka.

### Types of Kasa: (According to Brihatrayee and Laghutrayee)

1) Vataj Kasa 2) Pittaj Kasa 3) Kaphaj Kasa 4) Kshaja Kasa 5) Kshataja Kasa. Kshaja Kasa & Kshataja Kasa are produced by aggravation of all of the Trioshas.

### Roopa (Symptoms)

**Table 2: Showing Roopa (symptoms) of Doshaja Kasa.**

Vataj Kasa	Pittaj Kasa	Kaphaj Kasa
Hridayashoola (chest pain)	Mukha-kantha Shushka (dryness of Mouth and throat)	Nisthivateghanam Kapha (secretion of sticky mucous)
Murdhashoola (Headache)	Jwara (fever)	Kanthe Kandu (itching in throat)
Parshwashoola (pain in flanks)	Aruchi (anorexia)	Utklesh (Nausea)
Udarashoola (abdominal pain)	Chardi (vomiting)	Peenasa (coryza)
Shankhashoola (pain in temporal region)	Urovidah (burning in chest)	Murdhashoola (Headache)
Kasatishushkamev (Dry cough)	Pandu (anaemia)	Mandagni (indigestion)
Prasaktvegastu (continuous bouts of cough)	Pitta Nisthivan (Yellow Sputum)	Guruta (heaviness in body)
Bhinnaswara (Hoarseness of voice)	Trishna (thirst)	Vaman (vomiting)
Ksheena Bala (Loss of strength)	Bhrama (vertigo)	-

### Chikitsa

In treatment of kaphajakasa 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 KaphajaKasa 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 Rashushadis are indicated for KaphajaKasa. These have Katu Ushna, Tikshna, Sukshma, chedana, kaphanissaraka, kasagnaguna. Trikatu, Pippali, Kantakari Avaheha, Agastya Haritaki Avaleha are beneficial in Kaphaja Kasa. Pippali and AgastyaHaritaki Yoga can be used as Rasayana in kaphajakasa.

**Shodhana:-** The first line of Shodhana in KaphajaKasa is Vamana. Vamana will expel the DushitaKapha and relieve the Aavarana to Vata giving more and effective result in KaphajaKasa. The Virechana can be planned in Vaata, Pittanubandha. Here Vata should be controlled to relieve Vedana in Urah and Parshva. Nasya Karma is helpful because the Sthnasamshraya is in

Urdhvajatrugata. Virechana and Nasya have minimal role in vegkale and Bahudoshaja Kaphajakasa. In Avasthika Kala these can be adopted as per the Yukthi of Physician. If Bahudoshaja and Amashyagatha Kaphaja Lakshana are noticed Sadhyavamana can be adopted rather than classical Vamana. Kavalagraha, Dhumapana are also helpful in condition of Kaphaja Kasa. After the Vamana Tikshana Dhumapana will be helpful in Kaphaja Kasa.

**Sadhya Asadhyata:** In Ayurveda, Diseases that can be cured are often referred to as Sadhya (curable). Asadhyata (uncurable), as the name suggests is exactly opposite to Sadhya (curable). According to Acharya Charaka - All the Doshaja Kasa are Sadhya (curable) because they are due to single Dosha. If Kasa is present in aged person then it is said to be Yapya. Yapya is type of Asadhyata, in which the treatment applied affords relief to the patient, but within a short span, relapse again. Pathya - Apathya: Acharya Charaka has stated Pathya (wholesome) as a synonym of Chikitsa (treatment), it shows the importance of Pathya (wholesome) in Ayurvedic way of treating any disease. He had also given equal importance to Pathya Vihara (wholesome lifestyle) along with Pathya Aahara (wholesome diet). According to Ayurveda, most of the diseases develop because of the faulty and unhealthy eating habits, along with the day to day activities and seasonal regimes. By following Pathya (wholesome) and avoiding Apathya (unwholesome) in the primary stage of any disease can treat that disease.

### Pathya in Kasa

**Table 3: Showing Pathya Aahara and Vihara.**

	Pathya Ahara	Pathya Vihar
VAATAJ KASA	Shali, Yava, Godhuma, Shastika Gramya, Anupa mansa Vastuka, Amla Arnal, Ikshurasa	Snaihika Dhumapana
PITTAJ KASA	Draksha, Pippali, Triphala Ikshurasa Ghrita	Godhuma Virechana
KAPHAJ KASA	Laghu anna, Laja, Yava Ushnodaka, Sura Madhu	Swedana

**Apathya Aahara Vihara****Table 4: Showing Apathya Aahara and Vihara.**

	<b>Apathya Aahara</b>	<b>Apathya Vihara</b>
Vaataj Kasa	Kashaya, Katu, Tikta Rasa, Laghu, Rooksha, Sheeta	Ati Vyayama, Sheeta Jala Snana, Vegavidharana
Pittaja Kasa	Katu, Amla, Lavanaa Ushna, Vidahi Ushna	Kale Aatapsevana
Kaphaja Kasa	Madhura, Amla, Lavana, Snigdha, Guru	Divaswapna, Asyasukham

**CONCLUSION**

- Though cough is considered as just a symptom
- In modern science but it is considered as diasee in ayurveda. Types of the kasa can be understood on the.
- Basis of nature of cough and Sputum production. Kaphajakasa can be corelated to Chronic Bronchitis based on Nidana, samprati and lakshana. First and Foremost nidana told by our acharyas.
- For the manisfestation of kasa is raja and dhuma which initiate the pathological process in pranavahasamprati and even Chronic bronchitis manifests in those who are Chronic smokers and because of continous exposure to dust at work.
- Nidana Parivarjana, different Shamnoushdi and different modes of Shodhana 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.

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