



MANAGEMENT OF BRONCHIOLITIS- THE AYURVEDIC WAY- A CASE STUDY.

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ABSTRACT

Bronchiolitis is an acute viral infection of the lower respiratory tract. It is the most frequent lower respiratory tract infection in infants. Bronchiolitis has considerable morbidity and mortality. *Kaphaj kasa* described in ayurvedic literature can be correlated to bronchiolitis in modern pediatric. Its signs and symptoms are mentioned in detail in the *Samhitas* along with its management. The present study is that of 4 month old infant diagnosed as *Kaphaj kasa* (Bronchiolitis) and successfully managed with *Ayurvedic* formulations.

KEYWORDS: Bronchiolitis, *kaphaj kasa*, ayurvedic formulations.

INTRODUCTION

Bronchiolitis is an acute infection of the lower respiratory tract, affecting mainly infants under 2 years of age, with a peak between 3-6 months. *Kasa vyadhi* is described in *ayurveda* in detail. It has 5 subtypes.^[1] Amongst the 5 sub types mentioned *kaphaj kasa* has signs and symptoms that can be correlated to that of bronchiolitis. Bronchiolitis is the most frequent lower respiratory tract infection in infants. It is increasing in terms of prevalence, severity or acuteness and mortality. Bronchiolitis has considerable morbidity and mortality.^[2,7]

RSV is the most common etiological agent accounting for at least half of the cases. Other viruses detected in nasopharyngeal secretions from children are rhinovirus, parainfluenza, borivirus, adneovirus, and coinfection has been described.^[3]

Bronchiolitis is an acute, infectious, inflammatory disease of lower respiratory tract that often is preceded by coryza and result in obstruction of small airways.^[2,3] The obstruction of wall of the bronchioles is secondary to oedema, mucus, and cellular debris. All of them together with bronchospasm increase the resistance of the small airways, leading to air trapping, overinflation and ultimately atelectasis.

Signs and symptoms of bronchiolitis include

Coryza, fever maybe mild or absent, decreased fluid intake. Wheezing, Tachypnea, nasal flaring, chest retractions and hyperinflammation of lungs.^[2,3,7]

Ayurvedic concept of *kasa vyadhi*

Ayurveda describes etiological as well as preventive and treatment measures of *kasa vyadhi*. *Kaphaj kasa* a subtype of *Kasa vyadhi* is elaborated in all *samhitas* with detailed description of its signs and symptoms and its management. *Kaphaj kasa* is almost comparable to bronchiolitis.

Etiogenesis of *kasa vyadhi*

Kasa vyadhi is caused by either aggravated *vata* and *kapha dosha*.^[1,4] When the *kapha dosha* is aggravated it causes obstruction in the channels. This leads to disturbance in the normal path of *vayu* as a result signs and symptoms of *kasa* are seen.

CASE STUDY

The present case study is a successful management of bronchiolitis with *ayurvedic* formulations.

A male infant of age 4 months weighing 7 kg, resident of Pune, was reported to the OPD department of *Kaumarbhritya* at Shet Tarachand Ramnath Charitable Hospital, with the following complaints

Cough, Nasal discharge and difficulty in feeding since 2 days. Along with the above signs and symptoms the informant complained of dyspnea and nasal flaring on and off since a month.

General examination

Afebrile, Rhinitis- watery discharge, Moist skin, noisy breathing.

Systemic examination

Respiratory System: No nasal flaring, mild subcostal chest retractions seen, no xiphoid retractions noted. B/L wheezing on auscultation of lungs. Respiratory rate: 58/min.

CVS: S1 & S2 heard normal, pulse rate 120/min, regular, good volume.

CNS: Conscious, oriented, restless and anxious. Reflexes were normal.

Brief history

The patient had above complaints since one month on and off, the patient was admitted for cough, dyspnea and severe chest retractions at the age of 2.5 months for 5 days. The exacerbation of signs and symptoms occurred mostly during the night time along with noisy breathing.

Patient had taken medications and nebulization but relief was only for a short period, symptoms continued to occur, frequency of the appearance of signs and symptoms was also increased. A slight change of weather or diet triggered acute exacerbations of the disease. Also detailed history revealed patient was hospitalised for these complaints at the age of 2.5 months for a period of 5 days.

Family history: No history of any allergic condition.

Lab investigations: Haemogram, urine routine were within normal limits.

Diagnosis: *Kaphaj kasa* (Bronchiolitis)

Treatment given: The following treatment was given to the patient for a period of 3 months.

Sitopladi churna 60mg, *Abhrak bhasma* 30mg, *Laxmivilasrasa* 30mg, together with *madhu* thrice a day for a period of 3 months.

After the initial treatment of 3 months patient was given *Haridra khanda* 1.25 gms twice a day with mother's milk for one month.

Shwaskaschintamani 30mg twice a day for a period of one month.

DISCUSSION

In Bronchiolitis there is obstruction of the bronchioles due to mucus and debris. Mucus is the result of inflammatory process that occurs in the bronchioles.

While treating bronchiolitis we can correlate the etiogenesis of the disease to that of *Kaphaj kasa* mentioned in the *samhitas*. Etiological factors cause the vitiation of *vata* and *kapha*. This vitiation causes obstruction in the normal path of *vata*. The *kapha* in form

of mucus also causes obstruction of the normal path of *vata dosha*. Also etiological factors result in *aam utpatti*.

Vata is responsible for all catabolism.^[1,5] Unbalanced *vata* leads to disturbance in the respiratory tract. Also the blockage of channels cause impaired nutrition of the respiratory system leading to narrowing or alteration of the bronchioles.

Kapha and *vata* are vitiated an acute exacerbation occurs due to damage to the epithelium. This leads to mucous production by the damaged epithelium. Thus drugs acting on strengthening the respiratory system as well as those which relieve spasm, balance the vitiated *kapha* and *vata* are needed for the treatment of bronchiolitis.

Probable mode of action

Sitopladi churna is *dipan pachan* and it works at the GIT where the *aam* is formed. It contains *sitopala* that makes the drug sweet in taste and palatable for an infant. *Pippali* present in *Sitopladi churna* is anti-inflammatory and immunostimulatory. It promotes uniform air passage in the lungs. *Piper longum* is a powerful stimulant of the digestive as well as the respiratory system and shows a rejuvenating effect on lungs. It enhances metabolism and increases the bioavailability of other drugs.^[8]

Abhrak bhasma: *Abhrak bhasma* is said to be *yogavahi*, *shukshma* and works on *vatahinish* i.e. the channels. It provides strength to the respiratory system and decreases inflammation i.e. narrowing of bronchioles. Owing to the *shukshma guna* it reaches the terminal ends of the respiratory system. This results in providing strength to the bronchioles and the damaged epithelium.

Lakshmvilas rasa: Expectoration of the mucous produced by the damaged epithelium is aided by *Lakshmvilas rasa* as it contains drugs like *dhaturabeej* and *bhanga beej* which aid this action. It provides strength to the respiratory system because it contains drugs like *bala*, *atibala*, *nagbala* and *vidari* etc. (*pranvaha strotas*) which have *balya* effect. Thus providing necessary strength to the respiratory tract.

Shwaskas chintamani rasa: It contains drugs that are mucolytic and spasm relievers. Thus results in relieving spasm of the bronchioles. Its contents provide strength to the respiratory system owing to *balya* effect.

Haridra khanda: *Haridra khanda* contains *haridra* which has properties of *lekhan* and *kledshoshan* due to its *tikta ras*, *katu vipaka* and *ruksha ushna guna*.^[6] Thus breaks the pathophysiology of the disease. *Cucurmin* also has anti-allergic activity, it inhibits the production of histamine. Its anti-inflammatory activity has also been proved.^[9] Being *ushna* in *guna* it is given with milk to the patient here and also mother's milk being *satmya* to children mother's milk is used as *anupan*.^[6]

OBSERVATIONS

After the completion of this treatment plan the patient showed no signs of distress, wheezing had disappeared, anxiety and other symptoms were not found. There was appropriate weight gain and achievements of milestones. No acute exacerbations of the disease was observed or the patient required any hospital stay.

CONCLUSION

Ayurvedic management is helpful in treating *Kaphaj kasa* (Bronchiolitis).

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