

PREVENTION OF RECURRENT RESPIRATORY ILLNESS IN CHILDREN BY AN AYURVEDIC REGIMEN: A CASE STUDY

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ABSTRACT

The aim of Ayurveda is prevention of disease and maintenance of the health. According to Ayurveda all kinds of diseases are treated by Nidanaparivarjana. It is one of the best protective feature of Ayurveda, which aids in prevention of disease in Pediatric age. The recurrent respiratory tract infection is common problem in paediatric practice. Parental concern around recurrent respiratory infections contribute significant towards doctor visit. The prevalence of respiratory tract infections in children accounts for around 30% which itself shows the need for work in this system of body. The most important cause of death of children below 5 years of age is pneumonia causing 18% of deaths below 5 years of age, also the morbidity of respiratory illnesses is grossly 70%. The case study discussed here is of 4-year male child,

who had recurrent respiratory infections and frequently received treatment but, had temporary relief and relapses were frequent. Then he came to Ayurvedic OPD and was given an Ayurvedic regimen (i.e Abhrak bhasma, Sitopladi churna and Shwaskaschintamani rasa). The child had significant relief from signs and symptoms of recurrent respiratory infections. The recurrence or the frequency of disease was found markedly reduced. Ayurvedic management proved to be beneficial in this case of recurrent respiratory illness.

KEYWORDS: Recurrent respiratory tract illness, Nidanaparivarjana, pneumonia, Ayurvedic regimen.

INTRODUCTION

The aim of Ayurveda is to provide better health to every human being. It emphasizes the importance of preventive medicine along with curative procedure to give a holistic approach towards healthy living. Children usually suffer a lot when it comes to respiratory ailments, around 1/3rd children die in our country due to respiratory illnesses, so their management needs a different approach altogether. According to World Health Organization (WHO) data, any child under 5 years of age could present with 4 to 8 episodes of respiratory infections per year affecting mainly lower respiratory system.^[1] Respiratory infections are considered as recurrent from three episodes of acute infections during a six-month period. Respiratory illness like common cold, difficulty in breathing, cough, wheezing is most commonly present in children. It occurs because of airway inflammation & child airway are small and narrow, making it easy for them to fill & get blocked with mucus. Respiratory system considered as the prime victim of hypersensitization in most of circumstances. Thus, respiratory tract illness accounts to about more than 50% of patients attending Paediatric OPD. Available treatment like mucolytic, expectorant, bronchodilators and now the use of inhaler cannot completely cure the patient and frequently use of these drugs can cause many health hazards. Therefore, the study was planned to make available an effective Ayurvedic regimen with more targets and less side effects. Among many of Ayurvedic preparations on recurrent respiratory illness, the combination of three drug i.e. Abhrak bhasma (as an anchor sheet of treatment), Sitopladi churna & Shwaskaschintamani rasa was given as an Ayurvedic regimen was selected for this study.

AIMS – Prevention of recurrent respiratory illness in children by an Ayurvedic regimen.

OBJECTIVES

1. To Study the efficacy of Ayurvedic regimen in the prevention of recurrent respiratory illness in children.
2. To study the course of illness of recurrent respiratory illness in children
3. To prepare an Ayurvedic line of treatment according to samprapti of disease.
4. To analyse results.

METHODOLOGY - To fulfil the aim and objectives of the study this work has been carried out in the following phase wise manner.

1. Conceptual study
2. Case study

3. Discussion

4. Result and conclusion.

Conceptual study

Recurrence of respiratory infections during first year of life has an impact on Broncho-alveolar as well as the vascular development of the lungs. This could lead to average and long term after effects. Sometimes the type or severity of infection, family history or physical examination provides a clue that the immunity system not functioning properly in the children. Some factors such as atopy or asthma, gastroesophageal reflux and structural anatomic factors contribute to the risk for infection during childhood.^[2]

Airway obstruction is caused by mainly

1. Oedema and inflammation of membrane lining the airways
2. Excessive secretion of mucus, inflammatory cells and cellular debris
3. Spasm of smooth muscle of bronchi.^[3]

CASE STUDY

A male patient of 4 years old, reported to the Kaumarbhritya OPD of government Ayurvedic Hospital, Osmanabad with following complaints since 2 years

Recurrent episodes of

- Cough
- Running nose
- Dyspnoea Associated complaints
- Pallor ++
- Nonspecific Anorexia

History of past illness – H/O Recurrent respiratory illness since last 2 years. An average of 2 to 3 episodes of Recurrent respiratory illness per month No H/O any other major illness or any surgery.

Drug history – Frequent use of antibiotics, mucolytic/ bronchodilators, antihistamics drugs.

Family History- H/O Allergic Rhinitis to Grandfather

Birth history

1. Antenatal – nonspecific

2. Natal – Full Term Normal Delivery, at hospital, Baby Cried Immediately After Birth, birth wt. – 2.5 kg

3. Postnatal – No H/O neonatal jaundice & seizure no H/O NICU Admission.

Immunization History – Regular All vaccines given as per age.

Anthropometry

- Height - 100 cm
- Weight - 13.9 kg
- Head Circumference - 50 cm
- Chest Circumference - 49 cm
- Mid Arm Circumference - 15 cm

Diagnosis (Clinical and Investigation)

- Clinically on the basis of signs and symptoms.
- CBC with ESR
- Chest X-ray

His lab reports are summarised below

1. CBC - Hb% - 11.2 gm/dl

TLC - 7.8×10^3 / ul

DLC – N52 L43 M4 E3 B1

2. ESR – 10 mm at the end of one hour

3. LFT - Total bilirubin – 1.0 mg / dl

Direct bilirubin – 0.6 mg / dl

Indirect bilirubin – 0.4 mg / dl

SGPT – 22 U/L

SGOT – 40 U/L

5. Chest X ray PA view – normal

Assessment criteria and observations

Assessment was done on basis of following table and severity was recorded as

Nil = 0

Mild = +

Moderate = ++

Severe = +++

Criteria	3 rd day 14/8/22	7 th day 18/8/22	30 th day 10/9/22	90 th day 6/11/22	180 th day 4/2/18
Weight	14.02 kg	14.1 kg	14.4 kg	14.38 kg	14.8 kg
Appetite (As per Simplified Nutritional Appetite Questionnaire – SNAQ) (15)	Score –12	Score – 12	Score – 14	Score – 16	Score – 17
Total days of any other treatment taken	No	No	No	No	No
Total no. of days of Hospitalization if any 0	0	0	0	0	0
Frequency of Nebulization(days)	0	0	0	0	0
No. of episodes of respiratory infections	0	0	0	0	0
Nature of episode					
Cough	G1	G0	G0	G0	G0
Sore throat	+	0	0	0	0
Running nose	+	0	0	0	0
Respiratory rate	24/min	20/min	22/min	22/min	20/min
Wheeze / Rhonchi	Monophonic wheeze on rt. Midzone and lower zone	0	0	0	0
Crackles / Crepitation	0	0	0	0	0

Cough gradation

G0	No cough
G1	Occasional
G2	Frequent
G3	Cough disturbing daily activities.

Wheezes

Lobes	Monophonic	Polyphonic
Rt.	On rt. Midzone and lower zone	-
Lt.	-	-

Crepitation

- 1) Fine
- 2) Coarse

SELF DEVELOPED DIAGNOSTIC CRITERIA

- 1) Seasonal aggravation.. ++

- 2) Aggravation by specific food.. +++++ (Dalda, cold, sour, fried articles)
- 3) H/o parental allergy (H1, H2).. +++++
- 4) H/o Asthma or allergy in Grandparents: ++
- 5) Inadequate wt. gain or/and prematurity..++
- 6) Repeated medications.. ++
- 7) H/o nebulization / Inhalation.. +++++
- 8) Proved investigations (Ig, IgE, Allergic tests)..+++++

SNAQ score < 14 or = 14 indicates significant risk of at least 5 % weight loss within six months.

1. My appetite is a. Very poor b. Poor c. Average d. Good e. Very	2. Food tastes a. Very bad b. Bad c. Average d. Good e. Very good
3. When I eat a. I feel full after eating only a few mouthfuls b. I feel full after eating about a third of a meal c. I feel full after eating over half a meal d. I feel full after eating most of the meal e. I hardly ever feel full	4. Normally I eat a. Less than one meal a day b. One meal a day c. Two meal a day d. Three meal a day e. More than three meal a day

Total Score = 14 / 24

Simplified Nutritional Appetite Questionnaire (SNAQ)^[4] (4) Date: 12/8/17 Name: XYZ
Sex: Male Height: 100 cm Weight: 14.1 kg Age: 4 years.

Administration Instructions Ask the subject to complete the questionnaire by circling the correct answer and then tally the result based upon the following numerical scale: a=1, b=2, c=3, d=4, e=5. The sum of the scores for the individual items constitutes the SNAQ score.

Ayurvedic Protocol used

Drug material

Drugs Quantity In the form of churna in

- 1) Abhraka Bhasma - 10 gms divided doses for 21 days.
- 2) Sitopladi Churna - 30 gms in the form of Churna in
- 3) Shwaskaschintamani Rasa -10 tablets. divided doses for 21 day

Duration

Duration of drug administration was three cycles of 21 days with a gap of 7 days after each cycle. The mode of drug administration was by oral route in the form of Churna Anupana – Honey.

Ayurvedic Regimen

Sr. No.		Shwaskaschintamani Rasa ^[5]	Abhraka Bhasma ^[6]	Sitopladi Churna ^[7]
1	Reference	Bhaishajya Ratnavali – Hikka, Swasa Chikitsa, p – 334	Rasa Ratna Samucchaya, p - 45	Charaka Chikitsasthana 8/103
2	Ingredients	Swarna bhasma, rasa, gandhaka, abhraka bhasma, Swarna makshika, mukta bhasma	Shuddha Abhraka	Sitopala, Vamshalochana, Pippali, Ela(cardamom), Twak (cinnamon)
3	Dosha karma	Tridosha hara (especially – kaphavat hara)	Tridosha hara	Kaphapittahara
4	Agni karma	Deepan	Deepan	Deepan
5	Strotokarma	Stroto vivarana, Lekhana	Pranavahastrotobalya	Strotoshodhan, Kapha lekhan
6	Anupana	Madhu	Madhu	Madhu

DISCUSSION

Ayurvedic regimen is combination of three drug which contain Abhrak Bhasma (as an anchor sheet of treatment), Sitopladi Churna & Shwaskaschintamani Rasa. Abhrak bhasma has following medicinal properties which are helpful in RRI, for example- Antiinflammatory, cardiogenic, powerful cellular regenerator, energy booster, immunomodulator, etc. Shwaskaschintamani Rasa is suvarnakalpa with kaphaghna, shwasaghna and rasayan action especially beneficial in shwasa and kasa. Being Pranavaha strotas balya it gives strength to respiratory tract and increase immunity as well. It's effect on tridosha is that, it balances Vata and Kapha. Sitopladi churna is one of the most widely used ayurvedic herbal medicine for respiratory diseases. The medicinal properties which are helpful in RRI are antitussive, immunomodulatory, anti-inflammatory, antimicrobial-antibacterial, bronchodilator, etc. Antihistaminic and anti-inflammatory activity has been proved which is helpful in treatment of recurrent respiratory illness.

RESULT

In above patient, the frequency of episodes of respiratory infections reduced. Frequency of nebulization reduced. As per Simplified Nutritional Appetite Questionnaire – (SNAQ),

appetite of patient increased. Frequent use of antibiotics, mucolytic/ bronchodilators, antihistamics drugs are reduced. The patient was followed for 6th month on 3rd day, 7th day, 30th day, 90th day and 180th day. Patient was relived from recurrent episodes of respiratory illness.

CONCLUSION

From above case study we can confirm say that it very important to have an Ayurvedic vichar in recurrent respiratory illnesses. Kapha dushti and Dhatu kshaya in recurrent respiratory illness is the prime thought which should be considered while treating the patient and proper ayurvedic interventions should be administered. Patient had significant relief recurrent episodes of respiratory illness by given ayurvedic regimen. Thus, Ayurvedic Regimen is beneficial in prevention and management of recurrent respiratory illness.

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