

2.6.2 Bronchial asthma (*Tamaka Śvāsa*)

Introduction

Bronchial Asthma is an inflammatory disorder of the airways characterized by increased responsiveness of the trachea and bronchi to various stimuli resulting in narrowing of the airways due to bronchial spasm and edema in bronchial mucous membrane. These changes are reversible either spontaneously or with medication. It may be acute or paroxysmal in type. Most asthmatic patients are diagnosed by triad episodic symptoms (wheezing, cough and dyspnoea). In older people, it is not easy to differentiate whether it is certainly a case of asthma, as these symptoms are also seen in other diseases because of poor respiratory function due to ageing. Bronchial asthma is increasing day by day with the increase in pollution levels and the stressful lifestyle. The prevalence of asthma in elderly people varies from 6.5 to 10%, however the incidence is dependent on environmental condition, occupational patterns, genetic configuration and dietary pattern of the population besides diagnostic criteria adopted by different investigators³². Bronchial asthma is similar to disease entity '*Tamaka Śvāsa*' described in *Ayurveda*. *Tamaka śvāsa* is a condition in which difficulty in breathing occurred due to the obstruction to *prāṇavāyu* due to vitiated *kapha*. According to *Ayurveda*, main causes of *tamaka śvāsa* are unwholesome diet (*vidāhī*, *guru*, *rūkṣa*, *abhiṣyandī* diet), exposure to allergen (cold air, dust, smoke etc.), excessive exertion etc., which are very close to etiology of bronchial asthma.

Treatment of asthma in older people needs much more attention and care. Corticosteroids can cause softening of bone resulting into fracture of fragile bones. Incidence of acquiring tuberculosis also increases in patients who are on corticosteroids.

Asthma is a heterogeneous disease, is broadly described in to two types

1. Allergic - often associated with a personal/ family history of allergic diseases like rhinitis, urticaria, eczema etc.
2. Idiosyncratic - there is no personal/ family history of allergy.

Aetiology

The causes contributing to attacks of asthma can be divided into two groups

1. Predisposing factors
 - Hereditary factors
 - Psychological factors - anxiety, frustration, fatigue, over exertion, sleeplessness
 - Endocrine cause - in women particularly before menstruation and perimenopausal period



- History of hay fever, urticaria, infantile eczema or migraine
2. Exciting factors
- Hypersensitivity to various allergens, such as moulds, powder, feathers, dust, pollen, dandruff and ingested allergens such as - wheat, milk, chocolate, potatoes etc.
 - Drugs and chemicals - Aspirin, gum acacia and Iodine
 - Infections of bronchial tree - Viral, bacterial
 - Climatic changes
 - Physical exertion

Pathogenesis

In asthma, hyperreactivity of the bronchi to various stimuli occurs due to infiltration of airways by eosinophils, activation of T-cell and production of cytokines as well as other mediators. An increase in mast cell numbers and desquamation of airway epithelium resulting inflammation, that causes remodeling of the airways with mucosal thickening and smooth muscle hypertrophy. Finally obstruction of airways due to narrowing of bronchioles causes increased airway resistance resulting difficulty breathing.

Clinical features

1. Wheezing
2. Breathlessness (Dyspnoea)
3. Productive cough
4. Shortness of breath, feels comfortable in the sitting position
5. Nocturnal awakening with dyspnoea and/ or wheezing
6. Feeling of tightness in the chest
7. Disturbed sleep
8. Symptoms aggravated by cloudy and rainy season cold waves and wind
9. Unable to expectorate the sputum (some times)
10. Occasional giddiness



Signs

On auscultation bilateral rhonchi /coarse rales/ crepitation may be heard throughout the entire chest.

Investigation

1. Complete haemogram
2. X-Ray chest (P.A. and Lateral view)
3. Absolute Eosinophilic Count (AEC)
4. Sputum examination
5. Spirometry
6. Serum IgE levels
7. Skin allergy test

Differential Diagnosis

Patients with above said symptoms and signs may be ruled out of the following

1. Disease from cardiac origin (presents with previous history of cardiac problems, increased jugular venous pressure (JVP) and pedal edema are seen)
2. Laryngeal edema
3. Upper airway obstruction by tumor
4. Chronic bronchitis
5. Eosinophilic pneumonias
6. Pulmonary tuberculosis

Management approaches

a. Prevention

1. Usage of *godhūma* (wheat), *mudga* (green gram), *kulattha* (horse gram) *yava* (*barley*), old rice, *paraval* (snake gourd), hot pungent diet, *rasona* (garlic), *haridrā* (turmeric), *ādraka* (ginger), *kṛṣṇa marica* (black pepper), *miśrī* (sugar candy), *guḍa* (jaggery), *tulasī* (holy basil), cow's urine, raisin, *śuṅṭhī* (dry ginger), *elā*



(cardamom), goat milk, honey, Luke warm water, fruits like *āmalakī* and *drākṣā* (grape).

2. Use lukewarm water
3. Regular practice of *yoga* and *prāṇāyāma*
4. *Virecana karma* in *śarada ṛtu*
5. Use of *cyavanaprāśa/ agastya harītakī* (1 teaspoon with milk in the morning) and *indukānta ghṛta* 2 teaspoon with milk after food especially in winter (if the patient is non- diabetic)
6. Avoid fish, heavy diet, *māṣa* (black gram), fried items, mustard leaves, cool drinks, ice-creams etc.
7. Avoid banana, lemon and guava fruit (if allergic to)
8. Avoid exposure to cold and humid atmosphere, smoke, dust and fumes, chilled water, stored food items, curd and curd preparations
9. Avoid excessive day sleep/ excess exercise
10. Avoid suppression of natural urges
11. Avoid use of tobacco in any form

b. Medical management

Line of treatment (*Ca. Ci. 17/71-77*)

1. ***Nidāna parivarjana* (avoidance of aetiological factors)** - Patients with bronchial asthma should avoid exposure to allergens and chemicals, allergic food articles, cold breeze, over exertion, anxiety etc.
2. ***Samśodhana cikitsā* (Bio-cleansing therapies)** followed by ***Śamana cikitsā* (Palliative therapy)** should be advocated.
 - i. External *Snehana* (oleation) with oil (preferably *Tila taila*, *Sarṣapa taila*, *Daśamūla taila*, *Karpūra taila*) mixed with *Saindhava lavaṇa*
 - ii. Internal *Snehana* (internal oleation) with medicated *ghṛta* (*Kaṇṭakārī ghṛta*, *Vāsā ghṛta* etc.) 50 ml with 2-3 gm *saindhava lavaṇa* daily for 3-7 days before *pañcakarma* (bio cleansing procedure)
 - iii. *Ekāṅga svēda* (hot fomentation), *sarvāṅga svēda* (steam bath) for 1-2 days
 - iv. *Virecana* (therapeutic purgation) with *Eraṇḍa taila* 10-20 ml at bedtime *virecana*



should be decided by physician according to the condition of the patient whether Śodhana (bio-cleansing) therapy is to be advocated or not

- v. Steam inhalation with *Tulasī*, *karpūra*, *haridrā*, menthol etc.

3. Drug Therapy

The following drugs/ formulations may act as expectorant, bronchodilator and immuno-modulator and helpful in asthmatic patients.

SINGLE DRUGS

Drug	Dosage (per dose)	MOA ^s / Vehicle	Duration*
<i>Haridrā</i> (<i>Curcuma longa</i> Linn.) <i>cūrṇa</i>	1-3 gm	Luke warm water	7 days
<i>Pippalī</i> (<i>Piper longum</i> Linn.) <i>cūrṇa</i>	1-2gm	Honey	7 days
<i>Śuṅṭhī</i> (<i>Zingiber officinale</i> Rose.) <i>cūrṇa</i>	1-2 gm	Honey	7 days
<i>Puṣkaramūla</i> (<i>Inula racemosa</i> Hook.f.) <i>cūrṇa</i>	1-3 gm	Water	7 days
<i>Tulasī</i> (<i>Ocimum sanctum</i> Linn.) <i>svarasa</i>	10 ml	Honey	7 days
<i>Ārdraka</i> (<i>Zingiber officinale</i> Rose.) <i>svarasa</i>	10 ml	Honey	7 days
<i>Vāsā</i> (<i>Adhatoda vasica</i> Nees.) <i>svarasa</i>	10 ml	Honey	15 days

COMPOUND FORMULATIONS

Drug	Dosage (per dose)	MOA ^s / Vehicle	Duration*
<i>Śrṅgyādi cūrṇa</i>	1-2gm	Honey	15 days
<i>Sitopalādi cūrṇa</i>	2.5 gm	<i>Ghṛta</i> / Honey	15 days
<i>Tālisādi cūrṇa</i>	2.5 gm	Honey	15 days
<i>Trikaṭu cūrṇa</i>	500 mg - 1 gm	Honey/ Warm water	15 days
<i>Gojihvadi kvātha cūrṇa</i>	10-20 gm	Water	15 days



<i>Daśamūla kaṭutraya kaṣāya</i>	15-30 ml	Honey	15 days
<i>Elādi vaṭī</i>	1.5gm	Honey	15 days
<i>Maricyādi vaṭī</i>	1.5gm	Chewable	15 days
<i>Kasturyādi guṭikā</i>	125 mg	<i>Jīraka kvātha</i>	15 days
<i>Lavaṅgādi vaṭī</i>	500mg - 1 gm	Warm water	15 days
<i>Gorocanādi vaṭī</i>	125 mg	<i>Ādraka svarasa</i>	15 days
<i>Vāsāvāleha</i>	6 gm	Milk/ Water	15 days
<i>Cyavanaprāśa</i>	12 gm	Water/ Milk	15 days
<i>Kaṇṭakārī avāleha</i>	6 gm	Milk/ Water	15 days
<i>Vyāghrīharītakī</i>	6 gm	Milk/ Water	15 days
<i>Kanakāsava</i>	5 - 10 ml	Water	15 days
<i>Indukānta ghṛta</i>	10 gm	Warm water/ Milk	15 days
<i>Śṛṅga bhasma</i>	125 - 250 mg	<i>ghṛta</i> / Honey	15 days
<i>Ṭaikaṇa bhasma</i>	125 - 250 mg	Honey/ Water	15 days
<i>Causaṭa praharī pippalī</i>	125 - 250 mg	Honey	15 days

The following *Rasāyana* medicines (rejuvenators) may be used to strengthen respiratory system (these may be employed for about 30 days and repeated after 4-6 months)

<i>Cyavanaprāśa</i>	1 spoon (15 -25 gm)	Before breakfast and at bedtime with milk boiled with 1gm <i>śuṅṭhī</i> / <i>haridrā cūrṇa</i> .
<i>Agastya harītakī Rasāyana</i>	1 spoon (15 -25 gm)	Before breakfast and at bedtime with milk boiled with 1gm <i>śuṅṭhī cūrṇa</i> / <i>haridrā cūrṇa</i> .
<i>Drākṣāvāleha</i>	1 spoon (15 -25 gm)	Before breakfast and bedtime with Milk boiled with 1gm <i>śuṅṭhī cūrṇa</i> .
<i>Indukānta ghṛta</i>	5 - 10 gm	With milk after food

^s MOA - Mode of administration

*Initially 2 times in a day after meal for 15 days followed by condition of patient and physician's direction



NOTE: Out of the drugs mentioned above any one of the drug or in the combination may be prescribed by the physician. The duration of the treatment may vary from patient to patient. Physician should decide the dosage (per dose) and duration of the therapy based on the clinical findings and response to therapy.

Kaṇṭhakārī (*Solanum xanthocarpum*)³³, *Śirīṣa* (*Albegia lebbeck*)³⁴, *Tvak* (*Cinnamomum zeylanicum*) *kvātha*, *Kaṭukī* (*Picrorhiza kurroa*)³⁵, *Vibhītakī* (*Terminalia belerica*) *phala cūrna*³⁶ have shown improvement in the asthmatic patients.

c. Yogic practices- The following *yogic* practices are beneficial in Bronchial asthma; however, these should be performed only under the guidance of qualified *Yoga therapist*. Duration should be decided by the *Yoga therapist*.

1. *Kuñjala* with lukewarm water, *Vastra dhauti*
2. *Sūrya namaskāra*, *Sarvāṅgāsana*, *Gomukhāsana* and *Śavāsana*
3. *Kapālabhāti*, *Bhastrikā*, *Sūryabheda prāṇāyāma*
4. Breathing exercises (hand stretch breathing, hand in and out breathing, tiger breathing)

Counselling - Advice the patient to

1. Sip a glass of hot water or tea during attack
2. Practice breathing exercises (*prāṇāyām*) regularly
3. Drink plenty of fluids
4. Use lukewarm water in place of cold water
5. Take light food in the night
6. Take freshly cooked diet articles preferably
7. Avoid excessive exertion/ emotional upset
8. Avoid allergic food
9. Avoid to reside in humid, damp, dusty and smoky atmosphere
10. Avoid tobacco and consumption of liquor
11. Avoid cool drinks, ice creams and refrigerated food items
12. Avoid cold items immediately after taking hot items



Indications for referral

1. Patients with severe attacks of asthma and not responding to therapy
2. Patient with acute respiratory distress/ failure
3. Status asthmaticus

COSTING DETAILS

Approx. costing of Bronchial asthma (Tamaka śvāsa)

S.No.	Medicine	Requirement	Unit	Rate in Rs.	Cost in Rs.
1.	<i>Haridrā cūrṇa</i>	30-60	gm	0.3	9-18
2.	<i>Pippalī cūrṇa</i>	30-60	gm	0.6	18-36
3.	<i>Śuṅṭhī cūrṇa</i>	30-60	gm	0.5	15-30
4.	<i>Puṣkaramūla cūrṇa</i>	30	gm	1.0	30
5.	<i>Tulasī svarasa</i>	300	ml	0.50	150
6.	<i>Ārdraka svarasa</i>	300	ml	1.00	300
7.	<i>Śṛṅgyādi cūrṇa</i>	30-60	gm	1.75	52-104
8.	<i>Sitopalādi cūrṇa</i>	75	gm	1.12	84
9.	<i>Tālīsādi cūrṇa</i>	75	gm	0.58	45
10.	<i>Trikaṭu cūrṇa</i>	60-120	gm	2.3	138-276
11.	<i>Gojihvādi kvātha cūrṇa</i>	300-600	gm	0.5	150-300
12.	<i>Daśamūla kaṭutraya kaṣāya</i>	450-900	ml	0.32	145-290
13.	<i>Elādi vaṭī</i>	45	gm	1.9	86
14.	<i>Maricyādi vaṭī</i>	45	gm	1.8	81
15.	<i>Kasturyādi guṭikā</i>	3.75	gm	10.8	40.5
16.	<i>Lavaṅgādi vaṭī</i>	45	gm	1.4	63
17.	<i>Gorocana vaṭī</i>	3.75	gm	21.6	81
18.	<i>Kaṅṭakārī ghr̥ta</i>	450-900.	ml	0.345	156-311



19.	<i>Vāsāvaleha</i>	180	gm	0.33	60
20.	<i>Cyavanprāśa</i>	360	gm	0.25	90
21.	<i>Kaṇṭakārī avaleha</i>	180	gm	0.36	65
22.	<i>Vyāghrīharītakī</i>	180	gm	0.36	65
23.	<i>Agastya harītakī rasāyana</i>	300-600	gm	0.30	90-180
24.	<i>Drākṣāvāleha</i>	300-600	gm	0.24	72-144
25.	<i>Kanakāsava</i>	375-750	ml	0.14	53-106
26.	<i>Śṛīṅga bhasma</i>	3.75-7.5	gm	2	7.5-15
27.	<i>Ṭaṅkaṇa bhasma</i>	3.75-7.5	gm	2	7.5-15
28.	<i>Causaṭa praharī pippalī</i>	3.75-7.5	gm	1.4	5.25-11

Approx. costing of Pañcakarma procedure in Bronchial asthma **

S.No.	Pañcakarma procedure	Days	Rate in Rs./ day	Cost in Rs.
1.	<i>Snehana</i> externally	1-2	200	200-400
2.	<i>Ekāṅga sveda</i>	1-2	100	100-200
3.	<i>Virecana Package</i> (including preparatory and post therapeutic procedures)	11	1000	1000

