

## AYURVEDIC INTERVENTION IN URAKSHATA /POST TUBERCULAR BRONCHIECTASIS-A CASE STUDY

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Chronic respiratory and allergic disorders are some of the disorders which have been successfully treated through Ayurveda. Pulmonary tuberculosis (PT) is one of the most important communicable diseases in the world. India is the highest PT burden country accounting for one-fifth (21%) of the global incidence (9.4 million cases). This problem is further magnified by the after-effects of the disease: post-tubercular bronchiectasis (PTBX). Bronchiectasis is a respiratory disorder in which there is excessive passage of sputum associated with episodes of haemoptysis. In Ayurveda this clinical situation can be comparable with *Uraکشتا*. This retrospective case was studied in a patient who was suffering from post-tubercular bronchiectasis. Patient was administered combination of herbomineral drugs (*Talishadi choorna*, *Vasaavhleha*, *Madhuyasthi choorna*, and *Godanti bhasma*) for a period of 8 months. A significant clinical and radiological improvement was observed after the 8 months of medication. Thus the combination of herbomineral drugs had showed significant efficacy in the successful management of bronchiectasis.

**Key words:** Bronchiectasis, *Rajyakshma*, tuberculosis, *Uraکشتا*

### INTRODUCTION

Both tuberculosis and bronchiectasis carry a significant burden worldwide in terms of morbidity and mortality, as well as financially, especially in the developing world. Epidemiological data for tuberculosis are now more readily available since the World Health Organisation declared it 'a global emergency' in 1993.

The coexistence of bronchiectasis and pulmonary tuberculosis (PT) has been known since the time of Laennec<sup>[1]</sup>. Post-tuberculous bronchiectasis is relatively common in patients who have had recurring tuberculosis<sup>[2]</sup>. Bronchiectasis is seen in 30–60% of patients with active post-primary form TB and in 71–86% of patients with inactive disease. In Ayurveda, signs and symptoms of *Uraکشتا* are very similar to bronchiectasis of modern medicine. The cardinal features of *Uraکشتا*

are cough with yellowish-black, foul smelling sputum and haemoptysis.<sup>[3]</sup>

Ayurveda also considers interrelationship between bronchiectasis (*Uraکشتا*) and tuberculosis (*Rajyakshma*). According to *Charaka*, *Uraکشتا* if not treated appropriately, may further lead to *Rajyakshma*.<sup>[4]</sup> In the present study, the combination of drugs which was given to the patient were *Talishadi choorna*, *Madhuyasthi choorna*, *Vasaavhleha*, and *Godanti bhasma*. The selected drugs are well known for having good efficacy in reducing productive cough and thus it was assumed that the above combination would also be useful in bronchiectasis.

### Case report:

A 50 year old male patient presents with chief complaints of chronic cough and ex-

cretion of massive amounts of sputum approx. 200-300 gm. /day for the last 25-26 years associated with intermittent haemoptysis. Patient had also experienced recurrent episodes of chest infection. Over the past 5 years he had developed shortness of breath. Patient had past history of Pulmonary Koch's and had already taken 4-5 courses of anti-tubercular drugs (ATT) from different medical practitioners.

There was no past history s/o systemic inflammatory disease, allergic disorder, whooping cough etc. He had no family history of lung disease. He had no heartburn, acid reflux, choking, or sinus symptoms.

Patient had no other significant medical problems like hypertension, diabetes mellitus etc.

No relevant personal history of smoking, tobacco chewing etc. was present.

#### Clinical examination

General Examination:

B.P.=130/700mmHg, P/R = 84/min,

Pallor<sup>+</sup> Icterus<sup>0</sup> Cynosis<sup>0</sup> Oedema<sup>0</sup>, lymph nodes<sup>0</sup>

#### Systemic examination:

CVS: S1 S2 Normal.

Chest: coarse crepitus present at the left lower zone of lungs.

P/A: Soft, No organomegaly, bowel sound -present

CNS: Conscious and oriented.

#### Investigations:

Total counts: TLC =7400/mm<sup>3</sup>, Platelet count= 158000/mm<sup>3</sup>, N<sub>64</sub>L<sub>32</sub>M<sub>02</sub>E, ESR=30

PFT: Pulmonary function testing demonstrated a decrease in lung capacity with mild airflow obstruction

Sputum: Sputum AFB was negative for pulmonary Koch's

X-ray chest PA view: His X-ray chest PA view taken on 16.01.2011 revealed little cystic lucency in Lt Lower zone s/o bronchiectatic changes.

#### Treatment Protocol:

Patient was given the following Ayurvedic treatment:

<b>Vasa avhleha</b>	<b>1 tsf Bid</b>
<b>Talishadi choorna</b>	<b>3 gm. Bid</b>
<b>Godanti bhasma</b>	<b>500 mgs bid</b>
<b>Madhuyasthi choorna</b>	<b>3 gm. bid with milk</b>

Ingredients of the drugs:

1. **Vasavleha:** as per the reference of *Bhaisajyaratnavali* [5]

*Vasa patra swaras* (juice is extracted from leaves of *Adhatoda*) – 2 part

Sugar: 1 part

Long pepper – ¼ parts

Honey -1 part

2. **Talishadi choorna:** as per the reference of *Sharangdhar Smhita* [6]

*Talisa patra* (*Abies webbiana*) – 1 parts

*Maricha* (black pepper) – 2 parts

*Shunti* (ginger) – 3 parts

*Pippali* (long pepper) – 4 parts

*Vamshalochana* (*Bambusa*) – 2 parts

*Ela* (cardamom) – ½ part

*Twak* (cinnamon) – ½ part

*Sharkara* (sugar) – 32 parts

**Apathya:** Patient was to advise not to take curd, rice, spicy food, excessive of tea, coffee, carbonated drinks etc.

**Total duration of treatment:** Total period of treatment was 8 months.

#### Results:

Over the period of 8 months, his symptoms improved gradually, although they did not resolve completely. After 8 months of treatment his sputum production was

declined to 15-20 gm. and had given history of blood tinged sputum only on two occasions in the last year. During the treatment patient did not have any episode of chest infection. Also he had significant improvement in cough.

His X-ray chest PA view was repeated and was found normal.

## DISCUSSION

Despite many advances in modern medicine, both tuberculosis and bronchiectasis remain significant Public health problems in the developing world. A significant proportion of Patients with pulmonary tuberculosis may develop bronchiectasis as a sequel to the disease. The modern management of bronchiectasis involves treatment of infection using antibiotics, treatment of inflammation, the use of expectorant medication, and postural drainage in order to clear accumulated lung secretions. However, this treatment is mostly conservative and only treats the symptoms without actually curing the disease.

Herbal medicines are known to have a specific action on the mucosa of the respiratory tract as well as the muscular walls of the airways in the lungs. These medicines have an anti-inflammatory effect and thereby reduce inflammation, congestion and the production of excessive fluids in the lungs. Ayurvedic medicines also reduce the damage to the airways and bring about a significant reversal in their dysfunction.

### Mode of action of combination of Ayurvedic drugs in bronchiectasis:

**Mucolytic and Antitussive effect of the drugs:** *Vasaka* (*Adhatoda*) helps to support the bronchial function with bronchodilatory, expectorant and mucolytic properties. Studies suggest that both the alkaloids of *Adhatoda* (*vasicine* and *vasici-*

*none*) are primarily well established as therapeutical respiratory agents [7]. *Vasicine* (*Adhatoda* alkaloid), produces *bromhexine* and *ambroxol*, which are widely used as mucolytic. Similarly, other drugs like *Pippali*, *Talisha*, *Maricha* and *Shunthi* acted as mucolytics. *Pippali* (*Piper longum*) is *katu*, *ushna* and *kapha-vatahar* and was therefore effective in reducing productive cough. [8] *Talisha* is *laghu ushna tikshna kapha-vata har* and primarily indicated in cold and cough. [9]. *Shunthi* and *Maricha* are *ushna*, *vata-kapha shamak* and hence were effective in reducing sputum formation. [10]

Anti-Haemoptysis effect of the drugs:

The combination of *Madhuyasthi* and *Godanti* were useful in controlling excessive bleeding in the patient of bronchiectasis. *Madhuyasthi* is *madhur* in *rasa*, *vata-pitta har* and thus was useful in suppressing haemoptysis.

### Antitubercular effect of the drugs:

Drugs like *Vasa* and *Pippali* acted as anti-tubercular agents and thus prevented patient from recurrent chest infection. According to several studies, *Vasa* (*Adhatoda*) may play an important adjunctive role in the treatment of tuberculosis [12, 13] and the clinical studies on *Pippali* (*Piper longum*) showed that isolated piperine has a better anti-mycobacterial activity when compared to Rifampicin. [14]

Thus, this combination was not only effective in reducing cough, suppressing haemoptysis and sputum formation, but was also useful in controlling recurrent chest infections by improving the immunity of the patient.

Though the above management is commonly advised by the Ayurvedic medical practitioners in chronic respiratory disorders, but through this case study it has

been tried to document such cases which are successfully treated through Ayurveda.

### CONCLUSION

In modern system of medicine, there is no definite treatment of post tubercular bronchiectasis which would be effective in reducing the symptoms.

Ayurveda has a significant role to play in the long-term management and treatment of bronchiectasis which ultimately leads to cure of the disease.

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