

## **Pulmonary Tuberculosis in Ayurveda and its Treatment**

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### **ABSTRACT**

*Tuberculosis is an infectious disease usually caused by bacteria *Mycobacterium tuberculosis* generally affects the lungs but can also affect other parts of the body (90% of the cases). The vision of the WHO regarding End TB strategy is of a world free of Tuberculosis by the year 2035. However, extensively drug resistant (XDR) tuberculosis (tuberculosis with resistance to isoniazid, rifampin, any fluoroquinolone and at least one injectable drug and complicated form of multidrug resistant (MDR) tuberculosis (i.e. tuberculosis with resistance to isoniazid and rifampin that does not respond to treatment or for which treatment is discontinued because of side effects) pose threat to the achievement of this goal because of the lack of effective treatment for these forms of the disease.*

**Keywords:** *Rajyakshma, Anuloma, Pratiloma, Medicated Ghee, Trirupa, Shadrupa, Ekadashaja rupa*

### **INTRODUCTION**

In Ayurveda Pulmonary Tuberculosis is called Rajyakshma, according to mythology, Moon was first affected by this disease, and hence it is known as Yakshma. It causes degeneration or destruction of body and having unexplained weight loss. This is caused by the emaciation of body tissues, hence the name kshaya. According to Ayurveda this is called as King of all diseases. It is also known as Rograja, Mahabala and Tapedik because the symptom complex of this disease is quite large and is difficult to treat also. Krodha, jwara, roga are all its synonyms and are known as dukkha-unhappiness. The same disease is also known as Shosha because all tissues are lost, means all functions of mind, body and speech are lost. It is also chronic, serious and many times fatal disease, which spreads from one person to another means aupsargika and Sankramaka [1].

### **Causes of Pulmonary Tuberculosis**

Depending on the type of Rajyakshma – The commonest cause is loss of Vyadhikshmatva or low immunity. Undue physical exertion disproportionate to the

strength, Suppression of natural urges, tissue ad ojas loss and irregular diet are four main causes of the disease. These causes create favourable background for *Mycobacterium tuberculi*, which are the main organism responsible for this disease. People living in congested atmosphere, and bad hygienic condition, having insufficient and improper diet leads to low strength and low immunity. This causes Rajyakshma. Hence poverty, over exertion, food that will not nourish the body and bad atmospheric conditions are the main causes of this disease.

All the above causes aggravate Vata, which stimulates Pitta and Kapha. This results in more secretion of these doshas. Kapha causes obstruction in various channels especially of rasa dhatu and joints in the body. This causes low tissue fire and formation of ama or toxins. Hence there is improper formation of rasadhatu and later on further tissue also. The main symptoms of the disease are found in the pranavaha srotas, however all channels, all doshas and all waste products get vitiated in this serious disease [2].

### **PATHOGENESIS [3]**

Sushruta has explained the pathogenesis in two types –

**Anuloma Kshaya** – Aggravation of Kapha (Pitta and Vata), leads to obstruction of all the channels. Due to this all the tissues from rasa to shukra are not formed properly.

**Pratiloma Kashaya** – Due to excessive indulgence in sex, shukra dhatu gets reduced, this in turn reduces all the remaining dhatus in backward direction from shukra to rasa. When a person takes up battle, studying, weight lifting, travelling on floor, leaping, jumping *etc.* or falls down or has injury or other exertive actions or actions disproportionate to strength, his chest gets wounded and vata gets vitiated, This again vitiates other two doshas and moves around the body. If it goes to head, it causes headache, located in throat, causes irritation of the throat, cough, and hoarseness of voice and anorexia, situated in the flanks causes pain, situated in rectum causes diarrhoea, situated in joints causes yawning and fever, situated in chest causes chest pain. Due to wound in the chest, the patient passes blood in the sputum

When due to bashfulness or disgust or fear, one suppresses the urge of flatus, urine and faeces, Vata gets aggravated. Then vata propels Kapha and Pitta upwards, obliquely and downwards and thus produces the disorders having symptoms of all three doshas, such as coryza, cough, hoarseness of voice, anorexia, pain in the side of the chest, headache, fever, pain in the shoulder region, malaise, frequent vomiting and diarrhoea.

Reduction in the tissues due to excess worry, eagerness, fever, terror, anger and grief and excessive indulgence in sex and fasting leads to loss of shukra and ojas. This results in excess dryness in the body leading to aggravation of Vata, which in

turn vitiates Kapha and pitta and produce another set of eleven symptoms viz. coryza, fever, cough, body ache, headache, dyspnoea, diarrhoea, anorexia, pain in the sides or flanks, feeble voice and distress in the shoulder. If these are not treated properly can lead to loss of life.

When person consumes foods and drinks irregularly, Vata vitiation takes place. This leads to vitiation of other doshas and obstruction in the channels. Hence all the tissues are not properly formed. Kapha vitiation produces coryza, salivation, cough, vomiting and anorexia. Pitta vitiation produces, fever, distress in shoulder, and blood in the sputum. Vata vitiation produces pain in the sides, headache and hoarseness of voice.

### **SYMPTOMS [4]**

**Sharirika:** Coryza, debility, understanding normal things as abnormal, wasting of body in spite of good food, excess growth of hairs and nails.

**Mansika:** Various dreams of water reservoirs, mountains and forests in state of drying and wasting, severe urge for sexual intercourse.

Also Dyspnoea, looseness in body, excessive sputum, dryness in the soft palate, vomiting, agnimandaya, cold, cough, excess sleep, sclera in the eye becoming more prominent, oedema on the face and legs, desire to eat meat and have sex and various dreams. If the aggravated doshas reach the upper part of the body, they produce chronic cold, kshudra shwasa, cough, aruchi, headache, burning in the back and hoarseness of voice. If they reach the lower part of the body they produce symptoms like diarrhoea or constipation.

In this disease, there is gradually drying out of the body tissues leading to emaciation of the body. According to

causative factors it has been divided in four types

- 1) Due to excessive exertion causes vitiation of all doshas leading to hoarseness of voice, pain in chest, cough with expectoration, haemoptysis and fever.
- 2) Due to suppression of urges, body ache, vomiting and diarrhoea is caused.
- 3) Due to excessive tissue loss, dyspnoea and pain in the chest is caused.
- 4) Due to improper diet, vomiting, anorexia and diarrhoea occurred.

According to the symptoms, it has been divided in three types –

- 1) **Three Symptoms Complex (Trirupa)** viz. Fever, Burning of hands and feet and pain in back and shoulder and back region.
- 2) **Six Symptom Complex (Shadrupa)** viz. Cough, fever, pain in the flanks, hoarseness of voice, anorexia and diarrhoea.
- 3) **Eleven Symptom Complex (Ekadasharupa)** viz. Coryza, cough, hoarseness of voice, anorexia, pain in the flanks, headache, fever, pain in the shoulders, body ache, frequent vomiting and diarrhoea.

#### **COMPLICATIONS [5]**

According to the Acharya Vagbhatta, Derangement of speech, pain in the chest, body ache, expectoration of the sputum, agnimandaya and bad smell from the mouth. However in practice many other complications like shwasa, pandu, weakness, fainting, oedema, udara roga, diarrhoea, grahani and mutrakriccha are seen. The patient in whom there is no fever, whose physical strength is good, who is capable of sustaining all procedures and who has good will power is easy to cure. Person with trirupa, shadarupa or ekadasharupa with loss of mansa and strength, the one who is consuming food in good amount but still getting weaker, there is oedema on the abdomen and in the

testes, who is suffering from urdhwa shwasa and mutrakriccha and the one who passes excessive urine is difficult for the treatment.

#### **TREATMENT [6]**

The patient, who has good strength and has excess of kapha dosha vitiation, should be given medicated emesis and medicated purgation. For those patients who are very weak, purification procedures should not be done but all tonification procedures viz, food (containing various types of meat, wheat etc.), drinks (various types of wines having tonyfying effect), massage with medicated oils of ashwagandha, bala etc. should be done. He should be given proper rest with meat soup of various animals. The environment should be kept pleasant and the patient should be kept in isolation. This should be aimed at alleviation of vata, increasing digestive and tissue fire. Removing obstruction and increasing the quality of all tissues and ojas. The patient should be given substances having santarpana, cool and avidahi quality. Taking in to consideration his strength of Agni, he should be given meat cooked with mild spices. He should also be given various Asaava and Arishta preparations which will increase his digestive fire. Alcohol has qualities has teekshana, ushna, vishada, and sookshma. It removes waste products from the channels and increase tissue fire. Various medicated ghee preparations should also be used for this purpose. In this disease, most of the tissues are weak and hence the strength of the body depends on the strength given by the purisha or faeces, hence it is advised not to give strong purgatives.

In this disease the localization of the disease is in the lungs, hence repeated examination of the lungs by X-rays and other methods is advised. According to the modern medicine use of Streptomycin, Isonex etc. is advisable. Although these are effective medicines, there are many side

effects also. Similarly many times patients become resistant to these medicines. Hence proper use of tonifying procedures as well as, tonifying foods and herbs should be used with these medicines.

#### **Prepared Powders [7]**

- 1) **Talishadi:** It contains Talishpatra, Marich, Shunthi, Pippali, Vanshalochana, Tvak and Sugar in a dose of 1 to 3 gm twice a day.
- 2) **Sitopaladi:** It contains Sugar, Vanshalochana, Pippali and Ela in a dose of 1 to 3 gm twice a day
- 3) **Lavangadi:** It contains Lavanga, Kankola, Ushira, Chanadan, Tagar, Jeeraka, Ela, Pippali, Nagkesara, Shunthi, Kapoora and Vanshalochana
- 4) **Karpuradi:** contains Karpura, Kankola and Tvak in a dose of 1 to 5 gm twice a day
- 5) **Ashwagandhadi:** Contains Ashwagandha, shunthi, Pippali, maricha, clove
- 6) **Drakshadi:** Contains Draksha, liquorice, dates, Ananta, vanshalochana, amlaki, Pippali, Ela and chandan.

#### **Medicated Ghee [6]**

- 1) **Gokshuradi:** Prepare decoction of Gokshura and Dashamula. Then add Pippali, Patola, Amalaki, Kutaki and Sariva, Milk and Ghee. Prepare medicated Ghee.
- 2) **Jivantyadi:** Prepare medicated ghee with herbs of Jeevaniya group
- 3) **Parashara:** Prepare decoction of Liquorice, Bala, Guduchi and Laghu Panchmula. Add Amalaki, Ghee, Milk, Curd and Butter. Prepare medicated ghee.
- 4) **Baladi:** Prepare decoction of bala, gokshura, kantkari and nimba, then prepared medicated ghee and add amlaki, draksha and pushkarmula, given in a dose 15gm per day.

- 5) **Pippalayadi:** It contains Pippali, pippalimula, chavaka, chitraka and shunthi.
- 6) **Dashmuladi:** Prepared medicated ghee with all ten roots which have antivata action.
- 7) **Koladi:** It contains kola, tvak, laksha and milk then add draksha, liquorice and Pippali.
- 8) **Khajuradi:** it contains Kharjura, draksha and Pippali.

#### **Medicated Avaleha [8]**

- 1) **Vasavaleha:** Prepare decoction of vasa and sugar. Prepare avaleha and then add Chaturjata and Pippali powder.
- 2) **Khanda-Pippalayadi Avaleha:** Prepare avaleha of pippali powder and cow's milk, sugar and ghee. Then add trikatu and Chaturjata.
- 3) **Agastyavaleha:** Prepare decoction of haritaki, dashmula, chitraka, pippalimula, apamarga, shati and shankhapushpi. Prepare avaleha by adding milk, ghee, sugar and then add honey and pippali powder.

#### **Chayavanprasha Avaleha [7]**

- 1) **Dhatripaka:** Any of these can be given in a dose of 10 gm per day.

#### **Prepared Medicine [8]**

- 1) **Mriganka Rasa:** It contains kajjali, mauktik and suvarna bhasma in a dose of 100 mg with ghee.
- 2) **Suvarna Bhupati Rasa:** Kajjali, oxides of iron, tamra, abhraka, iron, suvarna, kanta lauha and silver in a dose of 50 mg with fresh juice of ginger.
- 3) **Rajmriganka Rasa:** It contains mercury, oxides of tamra, suvarna and haratal should be given in a dose of 100 mf once a day.
- 4) **Chaturbhuj Rasa:** It should be given in a dose of 50 mg thrice in a day.
- 5) **Chaturmukha Rasa:** It contains kajjali, oxides of iron, mica and gold,

- trituated with kumara juice, decoction of trikatu, chitraka and triphala.
- 6) **Laxmivilas:** It contains rasasindura, oxides of gold, mica, vanga, kantlauha, teekshna lauha, munda lauha, naga, mauktika, triturated with juice of vatsanabh. The dose of all above preparation is 50 mg twice per day.
  - 7) **Vasantkusumakara Rasa:** It contains oxides of gold, silver, vanga, naga, kanta lauha, praval, mauktika and rasasindura. This mixture is triturated with cow's milk, vasa chandan, ushira, haridra and kasturi in a dose of 50 mg once in a day.
  - 8) **Swarnavasanta Rasa:** This is a mixture of oxides of gold, mica, makshika, vanga, pravala, shringa, makardhwaja, guduchi and vanshalochana.
  - 9) **Trailokya Chintamani:** It contains kajjali, oxides of diamond, gold, silver, copper, mauktika, haratal, manahshila and vaikranta, triturated with ginger and jambira.
  - 10) **Ashwagandha Oil:** It used for the purpose of Massage contains decoction of Ashwagandha, bala and laksha in addition sesame oil, curd and powders of musta, chandan, haridra, Kutaki and liquorice.
  - 11) **Chandanbala Lakshadi Taila:** It contains chandan, bala, laksha and ushira.
  - 12) **Kshayakesari Rasa** – 250 mg thrice in a day with raw sugar.
  - 13) **Mahakanakasundara Rasa:** It contains kajjali, naga, vanga, makshika, abhraka, kantlauha, mauktika, suvarna and hartala, triturated with tulsi and lajjalu juice in a dose 30 mg thrice in a day.
  - 14) **Kumudeshwara Rasa:** It contains kajjali, abhraka, hingula, manahshila and iron oxide, triturated with juice of Shatavari in a dose of 100 mg once in a day.
  - 15) **Panchamritakhya Rasa:** It contains oxides of gold, silver, copper, mercury, mica and vidanga and musta, triturated with decoction of nirgundi, dashmula, chitraka, haridra and trikatu.
  - 16) **Medicinal Wines:** These should be used for increasing digestive and tissue fire:
  - 17) **Drakshasava:** Prepare decoction of draksha in water, add sugar, honey, dhataki, kankola, cloves, jatiphala, maricha, Chaturjata, Pippali and chandan.
  - 18) **Pippalyarishta:** Prepare decoction of draksha and Pippali then add lodhra, dhataki, jiggery, Amalaki, chandan, haridra and shunthi.
  - 19) **Khajurasava:** Prepare decoction of kharjura and then add dhataki and sugar.
  - 20) These should be given in a dose of 15 to 20 ml before food.
- Emergency Medicine:** For Haemoptysis give any of the following:
- 21) **Mauktika Kamdugha Rasa** in a dose of 100 mg 3 to 4 times in a day.
  - 22) **Laksha Mixture** in a dose of 125 mg three times in a day
  - 23) **Kamdugha Rasa** in a dose of 250 mg 2 to 3 times in a day.
- For Diarrhoea [9]**
- 1) **Kanakasundar rasa** in a dose of 250 mg 2 to 3 times in a day.
- Pathya and Apathya [10]**
- 1) Food containing wheat, shasti, shali, milk, fresh butter, meat of jangala animals and deer, fruits having sweet taste, coconut and dates.
  - 2) Avoid congestive, crowded, unhygienic places, take fresh air and water and avoid smoking and alcohol.
- Similarly Pippali, saktu, kulattha, ginger, dadima, amalaki, meat of goat, seeds of coriander, milk of goat and its ghee is also beneficial in this disease.

## CONCLUSION

Pulmonary TB is curable, but it can be life threatening if a person does not receive right treatment.

Also latent TB can progress to active TB if a person does not receive preventive treatment. A doctor can determine whether a person is infected with TB bacteria using a skin or blood test. Anyone with symptoms of TB should see a doctor for testing.

Also, anyone who believes that they may have been in close contact with a person who has active TB should seek medical advice. In Ayurveda we have perfect treatment for PTB since Anti-tubercular drugs known so far are very toxic and various side effects, later become resistant.

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