**CASE REPORT**

**Ayurvedic Management of Interstitial Lung Disease**

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**ABSTRACT:**

Background: Interstitial Lung Diseases (ILD) are a group of diffuse parenchymal lung disorders, most of which cause progressive scarring of lung tissue associated with substantial morbidity and mortality as the scarring in ILD eventually affects the ability to breathe and get enough oxygen into the blood-stream. Prolonged ILD may result in pulmonary fibrosis. As there is no definite treatment for the disease, it has remained a great problem for the patients. Several conventional treatment modalities are in existence but not much comprehensive. Though the permanent cure for the disease is not available but Ayurveda can provide cost-effective and conveniently the better treatment which relieves the symptoms to a good extent and improves the quality of life of the diseased. In this article, a case study presented on a case of ILD. A 63 years old female, diagnosed case of ILD, attended Kayachikita OPD, with chief complaint of breathlessness since 2018 but severe from 1 month. Patient got admitted in IPD and treated on the Ayurvedic principles. At the time of discharge, symptomatic relief was found in breathlessness, effectiveness in FEV1 (Forced Expiratory Volume in 1 sec) and also maintained saturation, but no significant changes in X-Ray Chest was observed after treatment.

**KEYWORDS:** Interstitial lung disease, FEV1, Spirometry.

**INTRODUCTION:**

Interstitial Lung Diseases (ILDs) represent a large number of conditions that involve the parenchyma of the lung - the alveolus, the alveolar epithelium, the capillary endothelium, and the spaces between these structures, as well as the perivascular and lymphatic tissues. 1 There is no satisfactory treatment for interstitial fibrosis of the lungs. This progressive disease of unknown cause appears to be
increasingly common; perhaps chemical pollutants, viruses or moulds pollutants or viruses or moulds cause most cases. Interstitial Lung Disease is considered as Auto-immune disorder where corticosteroids, immunosuppressants and symptomatic therapy suggested for management and in worse cases continuous oxygen inhalation therapy and ventilator intervention is required. Lung transplantation in later stages which is inconvenient and costly treatment not only to the patients but also lead burden to the family. The survival rate is very low and the cases have a short span of life. The drug hazards and cost of hospitalisation is an another frustrating factor for middle class and poor patients. In our clinical practice, we have found that the Ayurvedic intervention in ILD may improve the condition of patients and their quality of life get better with Ayurvedic medications.

Aim - To assess the efficacy of Ayurvedic management of ILD.

OBJECTIVES:

To identify the therapy and compile the regimes having potential effect on the ILD.

Case Presentation:

A 63 years old female patient consulted in Outpatient Department of Kayachikitsa for

Chief Complaint:-

Breathlessness since 2018 but severe from last 1 month

Productive cough from 7 days

Loss of appetite from 7 days

History of Present Illness:

The patient was apparently asymptomatic before 1 month. Then she developed breathlessness on walking and took allopathic medicine from family physician. She mentioned having on/off breathlessness and weakness afterwards for which she used to take medicine on/off. Then from 1 month patient had severe breathlessness and productive cough for 7 days. On 2018 she diagnosed as a case of Interstitial Lung Disease. She was taking medicines but not getting satisfactory relief, diagnosed for Interstitial Lung Disease. The patient was on corticosteroids and broncho-dilator inhalers, immunosuppressant drugs for 3 months.

Past History:

H/O Pulmonary TB in 2012 (took AKT for 9 months) and get completely relief from it.

Examination of Patient:

1. General Physical Examination:-

Patient built was thin

Temperature -98°F

Weight - 46 kg

Height - 152 cm

B.P.- 110/70 mm Hg

Pulse rate- 88/min

SpO$_2$ – 89% (with oxygen cylinder on 4 lit/min)

Ashtavidha pariksha :-

Nadi : 80 bpm, reg. Vatapaitik

Mala : Normal

Mutra: Normal

Jihva- Coated

Sparsh- Normal

Drika- Normal

Akriti- Medium

Systemic Examination :-

CVS - NAD

CNS - NAD

Respiratory - B/L crepts present

Investigations :-

HRCT thorax(12 Oct 2018)-Impression: F s o changes of advanced interstitial lung disease seen in both lungs. Reactive mediastinal nodes are seen.

HRCT thorax(28 Nov 2020)-Impression: Diffuse bilateral septal and interstitial thickening is seen with areas of bronchiectasis. Diffuse area of micro and macrocystic honeycombing in bilateral lung parenchyma. Few areas of ground glass opacities in bilateral lung parenchyma.
RTPCR for COVID 19 – NEGATIVE
Rapid Antigen Test - NEGATIVE
CBNAAT – NEGATIVE
FEV1 – 32 % (28/11/2020)
Patient was on following medicines at the Time of admission

1. TAB SAAZ 500              0—1—1—1
2. TAB PREDMET 4            0—0.5—0

Treatment:
A combination of

1) Shwaskuthar Rasa250mg (2 tab) tds after food with luke warm water for 3 months.

2) Sitopaladi choorna 5gm
   + Yashtimadhu choorna 2gm
   + Shunthi choorna 2 gm
   + Tankank Bhasma 250 mg

1 tsp tds with honey before food for 3 months

3) Sanshmani vati250 mg (2 tab) tds after food with luke warm water for 3 months.

4) Parnaspanchak kwath  3 (40 ml) twice a day before meal with luke warm water 3 months.

5) Gandharv Haritaki Churna (4gm) is administrated orally at night with luke warm water 3 months.

6) Chagalyadi Ghrita  4 : 20 ml orally twice a day before food for 21 days.

Along with oral medications Panchkarma treatment Urapradeshi Salavan Snehan and sthanik Nadi Swedan.

Stanik Snehan: by Tila taila + Saindhav Lavana for 21 days.

Swedan: Nadi swedan (vapours of Dashmoolu decoction) for 21 days.

Table 1.
Pathya-Apathya:

<table>
<thead>
<tr>
<th>Pathya Apathya</th>
<th>Pathya</th>
<th>Apathya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>Kulatha, Yava, Raktshali</td>
<td>Flour of mash</td>
</tr>
<tr>
<td></td>
<td>Shigru, Karvellak, Aadrak</td>
<td>Fast food, uncooked food, Oily food, spicy food</td>
</tr>
<tr>
<td></td>
<td>Rason shodhit Takra</td>
<td>Milk, curd, ice-cream</td>
</tr>
<tr>
<td></td>
<td>Meat</td>
<td>fish</td>
</tr>
<tr>
<td>Behaviour</td>
<td>Pranayam, Yoga</td>
<td>Divaswap, Exposure to cold</td>
</tr>
</tbody>
</table>

Result:
The patient is symptomatically improved. The subjective parameters show improvement in the clinical symptoms. Also improvement in spirometrical values after treatment. But there is no deterioration in symptoms. So we can stated that, this treatment is effective in the ILD to prevent the further more complication. And study will be done on the large sample population.

Table 2.
Subjective Parameters (Before treatment and After treatment):

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathlessness</td>
<td>Grade 3</td>
<td>Grade 1</td>
</tr>
<tr>
<td>Productive cough</td>
<td>Severe</td>
<td>Mild</td>
</tr>
<tr>
<td>Loss of appetite</td>
<td>Present</td>
<td>Absent</td>
</tr>
<tr>
<td>Sp̄O₂</td>
<td>40 % (without O₂)</td>
<td>76 % (without O₂)</td>
</tr>
<tr>
<td></td>
<td>89 % (with O₂ on oxygen cylinder 4 lit/min)</td>
<td>95 % (with O₂ on Oxygen cylinder 2 lit/min)</td>
</tr>
</tbody>
</table>

Table 3.
X ray chest PA view interpretation (Before Treatment and After treatment):
Table 4.

**Spirometry values (Before Treatment and After treatment):**

<table>
<thead>
<tr>
<th>Spirometry (Normal Range of Forced expiratory volume (FEV1) is above 80)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Before treatment 28/11/2020</td>
<td>After treatment 18/12/2020</td>
</tr>
<tr>
<td>FEV1 = 32%</td>
<td>FEV1 = 49%</td>
</tr>
</tbody>
</table>

**DISCUSSION:**

The treatment principles applied for the management of this disease condition are *Vatkaphaghna Chikitsa*, *Srotovishodhan*, and *Vata shaman pacifying treatment*. The probable mode of action of these for mentioned can be explain as follows:

- **Shodhan chikitsa:**

  *Panchkarma* treatment *Urapradeshi Salavan Snehan* and *sthanik Nadi Swedan*.

  *Stanik Snehan*: by *Tila taila + Saindhav Lavan* for 21 days.

  *Swedan*: *Nadi swedan* for 21 days.

  Lukewarm *Til taila* mixed with *saindhav salt* is used for gentle chest massage, which is followed by fomentation by vapours of normal water. It is a very effective remedy for relieving bronchospasm.

  According to *Maharshi Charak*, due to *snehan-swadan* in ILD causes liquefication of *kapha and srotas* get *mrudu*.

- **Shaman chikitsa:**

  1. *Shwaskuthar Ras*:

     Composition: *Parad, gandhaka, vatsanabha, tankana, trikatu, manshila*

     *Shwasakuthara Rasa* acts through all its ingredients. Black pepper is a major constituent, it stimulate mucous membrane of the respiratory system. It helps in mucous drainage and imparts strength to alveolar mucous membrane. Aconitum ferox is antispasmodic in nature, hot and stimulant for mucous membrane. *Shunthi and Pippali* release the sputum. Real gar absorbs excessive secretion from the alveoli. Purified *Borax* is antispasmodic and removes *Kapha*. For better *Rasayana* and relieving effect, treatment for longer duration is required as the disease is chronic and incurable in nature.
2. **Sitopaladi choorna 5gm** + **Yashtimadhu choorna 2gm + Shunti choorna 2 gm + Takank Bhasma 250 mg**

Sitoplaadi, Yashtimadhu, Shunti and Tankan Bhasma given along with honey should be useful to calm down the extra mucosal secretion of upper respiratory tract (vitiated Kapha) in case of ILD where the vitiated kapha has been collected in lower respiratory tract, Shawas Kuthar should be used with Sitoplaadi, Yashtimadhu, Shunti and Tankan Bhasma. In case of chronic productive cough and chronic allergic bronchitis both shawas kuthar should be given along with Sitoplaadi, Yashtimadhu, Shunti and Tankan Bhasma.

3. **Parnaspanchak kwath**:

As the ILD is Vata and Kaphapradhan, it needs the Dravyas with Kashay Rasa. Majority of contents having Laghu and Tikshnaguna. So in general the drug is having Vata- Kaphaghna property. These eventually lead to Amachhedan and Agnisandhukshan Karma i.e. Deepan-Pachana. Kantakari has anti-inflammatory, expectorant property causing Bronchodilation. It also acts on Histamine release. Guduchi has immune-modulating property, controls IgE response to triggers. Shunthi has anti-allergic property. Bharangi is mentioned as Agrydraavya for Shwasavyadhi and has been proven as anti-histaminic, Mast cell stabilizer, Bronchodilator. Pippali has expectorant, digestive property and mentioned as Rasayana for Pranawaha Strotas. Pippali also has anti-allergic effect. Tulasi is anti-inflammatory and reduce bronchospasm.

4. **Gandharv Haritaki Churna**:

“काशनी चुंबकाण्ड ददायाल सकरभ्रद्री च बुद्धिस्मिन्।
वातश्चैवमहरसहंकृतमेवं च विरितवमेव्।” Ch. Chi 16/121

Gandharv Haritaki has property of virechana. As per shloka mentioned above virechana treatment is used in tamak shwas.

5. **Chagalyadi Ghrita**:

*Snehapana pacifies Vatadosha that subsequently decreases breathlessness and difficulty in walking after exercise. It also softens various body organs, thus decrease in pain was reported during Snehapana. Sneh also helps indisintegrating cumulated Dosha or Mala that helps in bringing the cumulated Doshas from Shakha (extremities) to Koshtha (gastro intestinal tract) for their easy expulsion.

*Just as water smears smoothly on oil applied utensil; in a same manner, Dosa smears easily in the oleates (oily or Snigdha) body which can be easily enters in Koshtha.*

**CONCLUSION:**

The consorted approach of management explored and explained in this article with case illustration in which significant improvement was seen therefore this case was thought worth documenting. The described protocol may be an effective therapy in managing this dreadful disease. But also further preclinical and clinical studies are required to prove the efficacy of proposed treatment.

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**CONFLICT OF INTEREST:**Author declares that there is no conflict of interest.

**SOURCE OF SUPPORT:** None

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