

## EFFECT OF PIPPALI VARDHAMANA RASAYANA IN INTERSTITIAL LUNG DISEASE- A CASE REPORT

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### ABSTRACT

**Background:** Interstitial lung disease (ILD) is a group of lung diseases affecting the interstitium. It may occur when an injury to the lungs triggers an abnormal healing response leads to scarring and thickening of the tissue around the air sacs (alveoli). This makes it more difficult for oxygen to pass into the bloodstream. Prolonged ILD may result in pulmonary fibrosis. It is one of the hazardous diseases affecting the life of the people and its treatment includes immunosuppressant therapy, corticosteroids, supplemental oxygen therapy and Lung transplantation in later stages which is inconvenient and costly treatment not only to the patient but also leads burden to the family. Though the disease is not curable but we can provide convenient, cost effective and a better way of treatment which relieves the symptoms and also improves the quality of life. In this study *PippaliVardhamana-Rasayana* (PVR) found to be effective and shows improvement in symptoms and general condition of the patient. **Aim:** To assess the efficacy of *Pippali Vardhamana Rasayana* in interstitial lung disease. **Material and Method:** A 55 years old female, diagnosed case of ILD, attended Panchakarma OPD (Outpatient Department)at IPGT & RA, Jamnagar, Gujarat, India. Patient got admitted in IPD (Indoor Patient Department) and PVR was given as a plan of treatment. **Result:** Symptomatic relief was found in Breathlessness, Joints pain etc. and ESR (Erythrocyte sedimentation Rate) but no any significant changes found in Chest X-ray after treatment.

**Keywords:** Ayurveda, Interstitial lung disease, *Pippali Vardhamana Rasayana*

### INTRODUCTION

Interstitial lung disease is one among the lung disorders in which the lung tissues become inflamed and then damaged <sup>[1]</sup>. The tissue around these air sacs is called the interstitium.

In people with interstitial lung disease, this tissue becomes stiff or scarred, and the air sacs are not able to expand as much <sup>[2]</sup>. As a result, not as much oxygen can get to the body caus-

ing shortness of breath in early stages but over the time condition worsens even with eating or talking. Weight loss, fatigue, and muscle and joint pain are also present in later stage [3]. The causes of ILD are auto-immune disease, hypersensitive pneumonitis, drug induced and occupational lung disease. In 2013 interstitial lung disease affected 595,000 people globally [4]. This resulted in 471,000 deaths [5].

As there is inflammation and scarring of the lung tissue and later on joint pain may occur. Conventional system of therapy can provide only symptomatic treatment but no rejuvenating therapy as Ayurveda can. *Pippali Vardhmana Rasayana* is that rejuvenating therapy [6] that can be helpful as *Pippali* has anti-inflammatory [7], anti-asthmatic [8], anti-rheumatic [9], anti-oxidative [10] and rejuvenate property [11], immune-modulatory [12] actions. So, this therapy can be useful in relieving the symptoms like shortness of breath and further damage to the lung tissue.

**AIM**

To assess the efficacy of *Pippali Vardhmana Rasayana* in the management of interstitial lung disease (ILD).

**MATERIAL AND METHOD-**

**CASE REPORT** – A 55 year old female came to the Out Patient Department (OPD) of Panchakarma with complaints of shortness of breath since 7 years increase more at late night and early morning, body ache and joints pain since 3 years. Patient also had history of Pneumonia and had been hospitalised for 21 days. The patient was diagnosed for Interstitial Lung Disease, possibility of non-specific interstitial pneumonia sub-acute hypersensitivity pneumonia in March 2014. The patient was on corticosteroids and broncho-dilator inhalers, immunosuppressant drugs for 2 years.

**TREATMENT PLAN** – The patient was treated with *Pippali* given in increasing dose starting from 3 (three) *Pippali* with *Pippali siddhaksheera* (medicated milk) increased up to 15 *Pippali* and then again tapered to 3 *pippali* for the duration of 9 days [Table 1].

**Table 1: Pippali Vardhamana Rasayana Chart given to the patient**

No.	No. of Pippali	Quantity of Pippali siddha ksheera	No.	No. of Pippali	Quantity of Pippali siddha ksheera
1	3	30 ml	6	12	120 ml
2	6	60 ml	7	9	90 ml
3	9	90 ml	8	6	60 ml
4	12	120 ml	9	3	30 ml
5	15	150 ml	Stopped		

**INVESTIGATIONS-**

Haematological (Hb, ESR), Radiological (chest X-ray) was done before and after the treatment.

**PATHYAPATHYA (DO’S AND DON’TS)-**

Patient was strictly advised to take boiled *Mung* beans (Split green grams) and rice during the treatment. Also she has been advised to avoid bakery items, tea and complex diet.

**CRITERIA FOR ASSESSMENT-**

After 9 days of *Rasayana* therapy (PVR) the patient was assessed on the basis of subjective parameters i.e. MRC scale of breathlessness [13], Visual analogue scale for joints pain [14], [15] and bodyache, use of inhalers and objective parameter i.e difference in haematological and radiological reports before and after the treatment.

**RESULT AND OBSERVATIONS:**

There was a satisfactory improvement found in the general condition of the patient after the treatment. The MRC scale of breathlessness [Table 2]reduced from Grade 5 to Grade 3 and duration of attacks of breathlessness reduced from every day (Grade 5) to once in a two week (Grade 2)[Table 3].

**Table 2: Medical Research Council Scale for Breathlessness**

Scale for Breathlessness	Grade
Not trouble by breathlessness except on strenuous exercise.	1
Short of breaths when hurrying on the level or walking up a slight hill.	2
Walks slower than most people on the level, stops after a mile or so, or stops after 15 min walking at own place	3
Stops for breath after walking about 100 yds or after a few minute on level ground.	4
Too breathlessness to leave the house, or breathlessness when undressing	5

**Table 3: Gradation Pattern of Duration of attacks of breathlessness**

	Grade
No attack	0
Once in a month	1
Once in two week	2
Once a week	3
Twice a week	4
Everyday	5

Use of Inhalers was also lessened from 4-5 times a day to 1-2 times a day. Before treatment there was very severe joints pain and body ache. There was improvement found, no joints pain and body-ache, after treatment subjectively. In objective criteria, ESR reduced from 96mm/hr to 32mm/hrbut there were no changes found in the X-ray chest before and after the treatment.

**DISCUSSION& CONCLUSION**

The term interstitial lung disease (ILD) refers to a broad category of lung diseases rather than a specific disease entity [16], [17].ILD gen-

erally involve the pulmonary interstitium to a greater extent than the alveolar spaces or airways, although exceptions exist. The interstitium is the area between the capillaries and the alveolar space. In the normal state, this space allows close apposition of gas and capillaries with minimal connective tissue matrix, fibroblasts, and inflammatory cells such as macrophages. The interstitium supports the delicate relation between the alveoli and capillaries, allowing efficient gas exchange. When responding to any injury, whether from a specific exposure (e.g., asbestos, nitrofurantoin, mouldy hay), an autoimmune-mediated in-

flammation from a systemic connective tissue disease (e.g., rheumatoid arthritis), or unknown injury (e.g., idiopathic pulmonary fibrosis), the lung must respond to the damage and repair itself. If the exposure persists or if the repair process is imperfect, the lung may be permanently damaged, with increased interstitial tissue replacing the normal capillaries, alveoli, and healthy interstitium.

These pathologic abnormalities can lead to profound impairment in lung physiology. Gas exchange is impaired due to ventilation-perfusion mismatching, shunt, and decreased diffusion across the abnormal interstitium. Work of breathing is markedly increased because of decreased lung compliance. Together, these physiologic impairments lead to the exercise intolerance seen in all of the ILDs. Unfortunately, if the initiating injury or abnormal repair from injury is not halted, progressive tissue damage can lead to worsening physiologic impairment and even death.

The use of *Pippali* in increasing and tapering doses is known as “*VardhamanaPippali*”. It is very effective because it can be administered in its maximum doses without any discomfort to the patient. *Pippali* has *Rasayana* and immuno-modulator actions. *Pippali* alleviates *Ama* (endogenous waste material), the factor responsible for development of autoimmune disorders in the body, resulting in the correction in immune system activities. Thus, because of all these actions together, it plays an important role in the *Samprapti-vighatana* (Agitating pathogenesis) of ILD.

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**Source of Support: Nil**

**Conflict Of Interest: None Declared**

How to cite this URL: Laveena Kumari Et Al: Effect Of Pippali Vardhmana Rasayana In Interstitial Lung Disease- A Case Report. *International Ayurvedic Medical Journal* {online} 2017 {cited May, 2017} Available from: [http://www.iamj.in/posts/images/upload/1784\\_1788.pdf](http://www.iamj.in/posts/images/upload/1784_1788.pdf)