

A Comprehensive Management of Stage IV Lung Cancer through Ayurveda – A Single Case Study

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ABSTRACT

Lung cancer is the leading cause of cancer-related deaths worldwide, with smoking prevalence among patients nearing 80%. It has the highest incidence and mortality rates in men and second highest in women. This case discusses a stage IV lung cancer patient who underwent radiation and chemotherapy, experiencing severe side effects. The patient was treated with *Ayurveda*, which included *Mriduvirechana* (Gentle Detoxification) using *Gandarvahastadi Erandataila*, followed by *Snehapana* (Internal Oleation) with *Mahakalyanaka Ghrita* and *Triphala Ghrita*. *Virechana* (Purgation Therapy) was performed using *Trivrit Lehya*, accompanied by *Samsarjana Krama* (Post-Purgation Diet) and *Rasayana* (Rejuvenative) therapy with *Shivagutika*. Symptoms such as dry cough, chest pain, loss of appetite, weight loss, and skin discoloration reduced by 80%, with significant improvement in the patient's quality of life (QOL). While modern medicine focuses on treating cancer, it has limited solutions for alleviating suffering in advanced stages. This underscores the importance of *Ayurveda* in improving QOL, especially in terminal stages. The *Ayurvedic* treatment approach used here *Kshayaja/Kshataja Kasa* focused on *Mridu Shodhana* (gentle detoxification) and *Brihmana* (nourishing therapy). These *Ayurveda* interventions were effective in enhancing the QOL of a stage IV cancer patient, suggesting that such palliative care approaches merit further research for their potential benefits.

Keywords: *Ayurveda, Arbuda, Shodhana, Rasayana, Quality of Life, Lung-Cancer.*

1. INTRODUCTION

Cancer is a mass of tissue formed as a result of abnormal, excessive, uncoordinated, autonomous and purposeless proliferation of cells, even after removal of growth stimulus which caused it.¹ Lung cancer is the leading cause of cancer-related deaths worldwide and the most commonly diagnosed cancer. In India, it accounts for 5.9% of all cancers and 8.1% of all cancer-related deaths.² The prevalence of smoking in patients with lung cancer is nearly 80%.³ *Ayurveda* describes that *Shareera* is composed of *Dosha*, *Dhatu* and *Mala*. In malignant conditions - *Tridosha* get out of control, lost mutual coordination and causes derangements in tissues, and further results in critical conditions. *Acharya Sushruta* defined *Arbuda* in detail as all the *lakshana*'s will mimic the symptoms explained in contemporary science.⁴ In 2022, it was the leading cause of cancer morbidity and mortality, responsible for nearly one in eight (12.4%) cancers diagnosed globally and one in five (18.7%) cancer deaths.⁵ The disease ranks first for incidence and mortality among men and second among women.⁶

2. CASE REPORT

A 30-year-old male mechanic presented with complaints of vision loss in his left eye, severe dry cough, chest and flank pain, weakness, weight loss, and loss of appetite for the past 6 months, worsened in the last 15 days. He also reported disturbed sleep and skin discoloration.

Six months ago, his vision decreased, and a mass was found on his optic nerve. He developed a dry cough, fatigue, and a weight loss of 6 kg. Diagnosed with lung cancer (Ca lungs) with metastases to the skeletal system, liver, and brain, he underwent one cycle of chemotherapy and 10 sessions of radiotherapy, but his condition worsened with side effects like hair loss, skin discoloration, and health decline. He refused further treatment and sought Ayurvedic care.

After 10 days of Ayurvedic treatment starting 21/06/2023, he reported 80% improvement in dry cough, loss of appetite, and skin discoloration. He returned on 06/09/2023 for additional treatment.

The patient had a history of pneumonia at age 12, a COVID-19 infection, and a maternal relative with ovarian cancer. His lifestyle included mixed diet, normal physical activity, passive smoking (10 years), and disturbed sleep due to stress and severe nighttime coughing.

Clinical findings

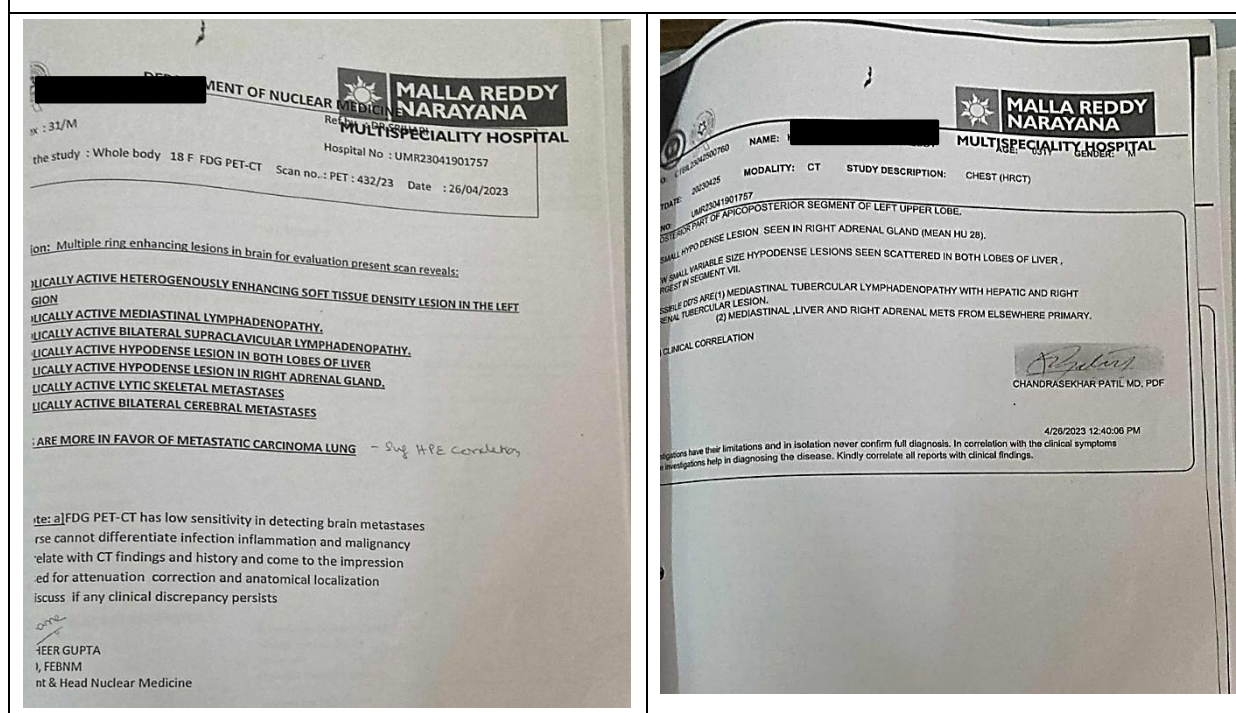
Based on the clinical presentations, examinations found B/L wheezing and ronchi was present in both lower lobes and the detailed examination is provided in Table 1.

Table 1: Systemic examination
CNS – Conscious and well oriented to time, place & person CVS – s1s2 heard, No murmurs
Respiratory system URT- NAD <u>LRT-</u> On auscultation: Vesicular breath sounds (+), B/L Wheezing and Ronchi (++) Vocal resonance – Normal vibrations Vocal frem-itus – Normal
GIT Soft & non tender
Ashtavidha pareeksha: Nadi - Vata pittaja, 80 bpm, Shabdha – Prakruta,Mala - Once in a day, Sparsha – Anushnasheeta, Mootra - 5-6 times/day, Drik: Left eye- Loss of vision, Right eye-prakruta, Jihwa- Alipta, Akrti- Madhyama

Diagnostic assessment

Based on the clinical presentations, examinations and investigations, the patient was diagnosed with lung cancer (Ca lungs), confirmed through routine investigations on (26/04/2023) such as HRCT Chest shows Mediastinal, Liver and Right adrenal metastases from elsewhere primary and FDG PET- CT scan suggests metabolically active metastases to the lungs, liver, skeleton and brain. Reports are provided in Table 2.

Table 2



Based on clinical presentations, he was diagnosed with *Kshataja/ Kshayaja kasa* in *Ayurveda*.

Therapeutic intervention

On initiation of treatment, the patient was received *Mridu Virechana* (mild purgation) for 3 days. Progressively, since the patient's *Bala* (strength) was *Pravara* (good), we planned for *Virechana* (purgation therapy) followed by *Shamanoushadhi* (internal medicines). The blackish discoloration was reduced by about 50%, appetite improved by 40% and cough reduced by grade 3 to grade 2. The patient received a total of 2 courses of treatment, each lasting 10 days in hospital followed by oral medicines for next 3 months, over a period of 5 months. The treatment schedule for the patient during the different courses is provided in Tables 3 and 5.

Table 3 - First course of treatment (21/06/23-30/06/2023)

Date	Procedure	Medicine	Duration
21/06/23-23/06/23	<i>Mrudu virechana</i>	<i>Gandharvahastadi Eranda Taila-25ml + Dashamoola Kashaya-25ml</i>	3 days
24/06/23-26/06/23	<i>Snehapana</i>	<i>Guggulutiktaka ghruta + vidaryadi ghruta</i>	3 days
27/06/23-29/06/23	<i>Sarvanga abhyanga followed by Nadi sweda</i>	<i>Nirgundi taila +Karpooradi taila</i>	3 days
30/06/23	<i>Virechana</i>	<i>Trivrut lehya</i>	1 day
21/06/23-23/06/23	<i>Ekanga Abhyanga (chest) followed by Nadi sweda</i>	<i>Karpooradi taila</i>	3 days (During evening time of initial 3days)
Shamanoushadhis / oral medicines			
	MEDICINE	DOSAGE	DURATION
21/06/23-	<i>Arbudahara Kashaya</i> (A novel preparation in our hospital advised for CA	50ml-0-50ml	Daily

29/06/23	patients)		
21/06/23-29/06/23	<i>Shivagutika</i> <i>Abhayarishta + Vasarishta</i>	1-1-1 After food	Daily
21/06/23-29/06/23		20ml-0-20ml After food with equal quantity of water	Daily
02/07/23-31/08/23	<i>Vasarishtam + Guggulutiktaka Kashaya</i>	25ml-0-25ml After food with equal quantity of water	Daily
02/07/23-31/08/23	<i>Shivagutika</i>	1-1-1 After food	Daily
02/07/23-31/08/23	<i>Tribhuvana keertirasa</i>	1-1-0 After food	Daily
02/07/23-31/08/23	<i>Guduchi churna(50gm) + Gokshura churna(50gm) + Talisadi churna(50gm) + Shataputi Abhraka Bhasma(10gm)</i>	2.5gm -0-2.5gm with honey	Daily

Table 5 - Second course of treatment (06/09/23-20/09/2023)

Date	Procedure	Medicine	Duration
06/09/23-09/09/23	<i>Snehapana (arohana matra)</i>	<i>Mahakalyanaka ghrita + Triphala ghrita</i>	4days
10/09/23-12/09/23	<i>Sarvanga abhyanga followed by Nadi sweda</i>	<i>Karpooradi taila</i>	3days
13/09/23	<i>Virechana</i>	<i>Trivrith lehya-15gm Triphala Kashaya-50ml</i>	1 day
14/09/23-20/09/23	<i>Netra Tarpana</i>	<i>Jeevantyadi ghrita</i>	7 days (During Vishrama kala)
Shamanoushadhis / oral medicines			
	MEDICINE	DOSAGE	DURATION
06/09/23-07/09/23	<i>Agnitundi vati</i>	1-1-1 Before food with water	Initial 2 days
06/09/23-09/09/23	<i>Panchakola phanta</i> (During snehapana)	30ml	once daily at 11am for 4 days
06/09/23-20/09/23	<i>Arbudahara Kashaya</i> (A novel preparation in our hospital advised for Ca patients)	50ml-0-50ml	Daily
06/09/23-20/09/23	<i>Abhayarishta + Vasarishta</i>	20ml-0-20ml After food with equal quantity of water	Daily
06/09/23-20/09/23	<i>Shivagutika</i>	1-1-1 After food	Daily
21/09/23-21/10/23	<i>Shivagutika</i>	1-1-1 After food	Daily
21/09/23-	<i>Abhayarishtam</i>	0-0-15ml After food	Daily

21/10/23			
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Timeline of the case study and their outcome

The patient received a total of 2 courses of treatment, each lasting 10 days in hospital followed by oral medicines for next 3 months, over a period of 5 months and timeline is provided in figure 1.

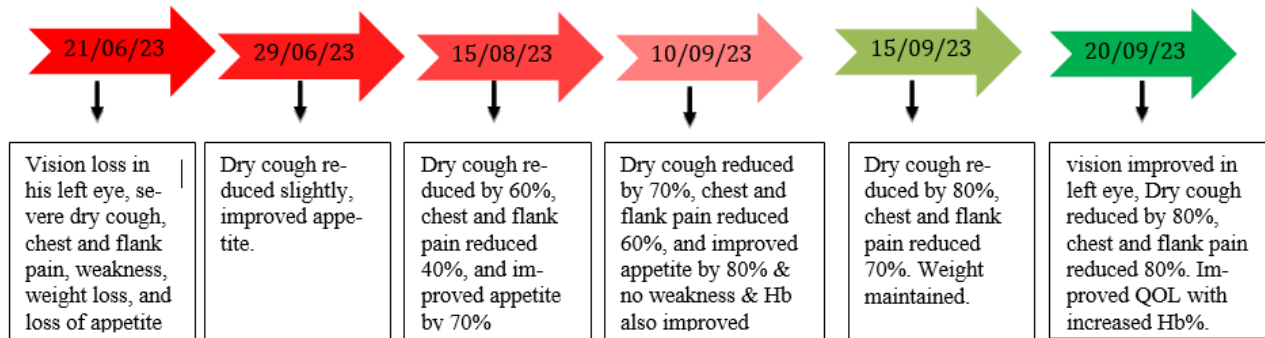


Figure 1: Impact of lung cancer and their improvement by the ayurvedic therapy

Follow up and outcomes

Patient received treatment for 10 days as in-patient and followed oral medicines for next 3 months. By the end of the treatment, the patient experienced satisfactory relief. The patient visited our hospital again after 3 months for further follow-up. At the end of the total duration of 4 months, the patient experienced significant improvements. Visual acuity in the left eye improved, and after *Tarpana*, the patient was able to see light. The blackish discoloration was reduced by about 80%. The patient's appetite improved by 60%, and quality of life (QOL), as assessed using the QOL-Performance Status Scale and Karnofsky score, improved by 70% to 90%. The *Kasa* (cough) reduced from Grade 3 (dry cough with severe pain in the chest, intolerable) to Grade 1 (dry cough without pain). *Shoola* (pain) reduced from Grade 4 (severe Vedana) to Grade 1 (mild Vedana) as assessed by the VAS scale. Additionally, there was a marked improvement in hemoglobin levels.

Table no. 4 and 6 provides the significant results were found in symptoms.

Table 4	
Before treatment (06/04/23)	After treatment (06/09/23)

Table 6 – Outcome of the case study

Observation	Before treatment	After treatment
Blackish discolouration	Present over face, hands	Reduced upto 80%
Visual acuity	6/6 (Right) & 6/5(Left)	6/6 (Right) & 6/5(Left) improved vision in left eye
Cough (<i>Kasa</i>)	Grade 3	Grade 1
<i>Shoola</i> (pain in chest & flank region)	Grade 4	Grade 1
QOL-performance status scale	Grade 2	Grade 1
Karnofsky score	70% (Caring for self, not capable of normal activity or work)	90% (Capable of normal activity, few symptoms or signs of disease)
Hb%	13.0	14.5

3. DISCUSSION

The treatment protocol was framed based on the line of treatment for *Kshayaja/Kshataja Kasa*, where the treatment principles focus on *Mrudu Shodhana*¹¹ (*snehapana* with *Mahakalyanaka*¹², *Triphala ghrita*¹³ & *Virechana* with *Trivrut lehya*¹⁴) followed by *Brihmana Chikitsa*. *Abhayarishtha*¹⁵ and *Vasarishtha*¹⁶ demonstrates various pharmacological actions like Anti-asthmatic and bronchodilator activity. *A. vasica* has demonstrated antimetastatic and antiproliferative activity, which was confirmed through a cell migration assay. mRNA expression analysis revealed the reactivation of p53 and p21 genes upon treatment with the extracts, which were found to play a potent role in the anticancer activity of ethanol extracts of *A. vasica*.¹⁷

Arbudahara Kashaya is a novel preparation containing ingredients like *Lakshmitaru* leaves and *Lakshmana phala* leaves, both known for their anti-cancerous effects. *Lakshmitaru* (*Simarouba glauca*), recognized for its strong antibacterial and anti-tumorous properties, is particularly effective in reducing tumor size and addressing secondary infections in cancer patients.

Simarouba is highly effective in treating early-stage cancers, it can also significantly enhance the quality of life in later stages.¹⁸ Quassinoids found in *Simarouba*, including aianthinone, glaucarubinone, and holacanthone, exhibit anti-leukemic properties, making them beneficial against blood cancer. Additionally, glaucarubinone has been shown to improve mitochondrial metabolism, boosting energy levels.¹⁹

*Shivagutika*²⁰ is a unique polyherbo-mineral formulation mentioned in the *Rasayana*. It has been shown that *Shilajatu* can activate murine peritoneal macrophages and stimulate splenocytes in tumor-bearing animals during both the early and later stages of tumor growth. *Shilajatu* exhibits anti-cancer effects against liver cancer, as studies show that it helps destroy cancerous cells in the liver and prevents their multiplication. Additionally, *Shilajatu* helps reduce the side effects of chemotherapy, as it contains fulvic and humic acids, which are powerful antioxidants that help scavenge free radicals.²¹

Tarpana with *Jeevanti ghrita*.²² As *Ghrta* is one among the best *Rasayana Dravya* and *Jeevanti* is considered the best *Chakshushya Dravya* and most of the contents of *Jeevanti ghrita* have *Tridosahara* properties.²³

4. CONCLUSION

Ayurveda promotes the restoration of the body's innate healing mechanisms to enhance immunity, resilience, and overall health. Integrating *Ayurveda* into current healthcare research, especially for diseases like cancer, is essential for advancing global wellness in disease prevention and management. In the present case, the classical approach of *Mrudu Shodhana*, combined with *Arbudahara Kashaya*, *Shamanoushadhis*, and *Rasayana*, significantly improved the quality of life by alleviating symptoms and increasing life expectancy, even in the advanced stages of lung carcinoma.

5. PATIENT PERSPECTIVE

After the first course of Ayurvedic treatment, all symptoms were reduced by 80%. Following the second course, the patient experienced an improvement in quality of life (QOL) with further reduction in symptoms. Previously, the patient had suffered from side effects of chemotherapy and radiation, but now he is happy with the Ayurvedic treatment.

Declaration of patient consent:

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given

his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity.

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