



Case Report

Case report of Esophagus Squamous Cell Carcinoma treated with Novel Drug Preparation Method of *Catharanthus rosea* (Periwinkle) - An Integrated Oncological approach

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Abstract

Esophageal squamous cell carcinoma (ESCC) is a high-grade malignancy often requiring aggressive multimodal therapy. While conventional chemotherapy remains a standard of care, integrating with botanical preparations may improve therapeutic outcomes and patient resilience. Further Integrated oncology aims to bridge traditional pharmacological preparations with standard care to enhance the therapeutic window and mitigate systemic exhaustion. This particular case report explores the synergistic potential of a novel Ayurvedic preparation of *Catharanthus roseus* (L) G. Don (Periwinkle) in a patient with advanced ESCC. Case presentation: A 40-year-old female presented with biopsy-confirmed mid-thoracic esophageal squamous cell carcinoma on 2nd October 2024. She exhibited persistent dysphagia, significant luminal narrowing and chemotherapy-induced alopecia. The patient initially underwent a conventional oncology protocol with 5 cycles of chemotherapy with Paclitaxel and carboplatin weekly once doses. To augment her treatment and manage systemic toxicity, integrative Ayurvedic therapy was approached. A novel drug preparation derived from *Catharanthus roseus* (L) G. Don flower *sheetha kashaya* was administered alongside clinical monitoring. *C. roseus* is known to contain potent vinca alkaloids, such as *vincristine*, *vinblastine* and *vindocin* which inhibit microtubule polymerization. The novel Ayurvedic preparation method (*seethakashaya*) aimed to optimize the bioavailability and therapeutic index of these phytoconstituents. Dietary Restrictions and Support. Refined sugar, Maida, non-vegetarian foods were excluded and regular intake of Pomegranate (*Punica granatum*) juice and Cucumber (*Cucumis sativus*) juice hematopoietic support included. Results: Sequential haematological and radiological assessment conducted over an one and half years period demonstrated consistent tumor stability. Notably, the patient reported significant improvement in general health, her weight gain from 51 to 57 kgs, functional status and tolerance to previous cytotoxic stressors, no significant adverse haematological shifts were found during.

Keywords: *Catharanthus roseus* *Seetha Kashaya*, Esophageal squamous cell carcinoma, Integrated oncology, Vinca alkaloids.

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Introduction

Esophageal squamous cell carcinoma (ESCC) remains a globally aggressive malignancy, particularly in south Asia. Standard management involving taxane-based chemotherapy often results in a cumulative toxicity profile that limits long-term maintenance. This report details a novel approach utilizing the *seethakashaya* (cold infusion) method to deliver biocompatible plant alkaloids in a maintenance setting. (1)

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A 40-year-old female was diagnosed with mid-thoracic esophagus squamous cell carcinoma on 29 August 2024. Baseline PET-CT findings revealed intensely FDG-avid circumferential soft tissue thickening with significant luminal narrowing and proximal dilation. This patient completed five cycles of chemotherapy with Paclitaxel and carboplatin weekly dose in September 2024.

On October 2, 2024, the patient initiated an integrated maintenance protocol. The primary intervention consisted of *Vinca seethakashaya*: 3 fresh flowers of *Catharanthus roseus* soaked in normal drinking water, kept overnight, in the early morning the flowers were squeezed and removed, the water is taken on an empty stomach.

Patient information

A 40-year-old female patient visited Ayurvedic hospital, Errgadda, Hyderabad on 2nd October 2024. Diagnosed with mid-thoracic

esophagus squamous cell carcinoma With difficulty in swallowing (with a food pipe in situ.) Complaining of reduced appetite, reduced weight, chemotherapy induced alopecia, constipation.

On examination

The patient was conscious, oriented, pallor, slightly emaciated, slightly swelling at Esophageal notch, no marked lymphadenopathy around neck, Abdomen was soft ,no tenderness.

No past history of thyroid, diabetes, hypertension. No family history for cancer.

Prakriti was pitta predominant vatha (body constitution). *Avara Agnibala* was noted (reduced digestive capacity).and the *shareera bala* (body strength) was (optimum)

The patient was pale, slightly emaciated. Pulse rate 97/minute, heart rate 78/minute, BP 100/70 mm Hg, SPO₂ 96%,respiratory rate 19cpm, temperature 97°F. She was diagnosed with Arbuda.she was treated accordingly as given in table 1

Table 1: Treatment plan along with dietary recommendations

Medicine	Direction	Dietary recommendations	Principle outcomes
Tablet <i>Yastimadhu</i> (Glycyrrhiza glabra)	One tablet 500mg twice daily before food with water	Daily pomegranate juice with pepper. One kheera cucumber . No sugars, maida,non veg preparations.	Reduced difficulty in swallowing slightly
<i>Catharanthus roseus</i> flowers	Kept in 20ml water overnight and given orally on empty stomach before sunrise		Appetite improved. Hair growth. Good improvement seen in 8 months. Improvement in weight from 51kg to 57kg.No evidence of second cancers/ metastatic lesions as evidenced by scan.

Table 2: Longitudinal Hematological Monitoring (2024-2025)

Date	Hb(gm/dlit)	WBC (Cells/cu.mm)	Monocytes (%)	Anthropometric and clinical status
16 sep 2024	12.2	1,75,300	15%	Post chemotherapy reaction
30 sep 2024	11.2	33,520	3%	Myelosuppressive phase
02 oct	11	1,60,601	4%	Baseline (51kg).initiated protocol
07 jan 2025	12.2	5,590	Normal	Complete normalization
06 feb 2025	11	5,603	8%	Maintenance (57kg):Hair regrowth

Catharanthus roseus (L.) G.Don, flower was the main cancer treatment given to the patient along with some adjuvants. The treatment started with 3 flowers given for 8 months regularly. The patient was trained for growing the plant at their house, and preparation of *sheetha kashaya* with flowers. The patient tolerated well with this treatment. Dietary Restrictions were strictly followed as summarized. Encouraged to take more leafy vegetables, black pepper and *Amalaki* powder . Asked to take more butter milk daily .Rewie was scheduled after 3months. The patient was advised for surgery on 24 Sep 2024,as the PET-CT scan on 29-08-2024 given the impression- Intensely FDG-avid circumferential soft tissue thickening in mid thoracic esophagus the lesion is causing significant luminal narrowing and proximal esophageal dilation-more in favor of neoplastic etiology. Then they started chemotherapy as the patient was not ready for surgery. They took appointments with vellore hospital for February 2025. In the meantime they seeked Ayurvedic intervention ,and the patient visited Ayurvedic hospital on 2nd October 2024. We started our treatment regimens.Though the scheduled visit after 3 months The patient came on 5 Nov 2024 saying some improvement was seen in whole Body Digital 18F-FDG PET- CT Scan. 18F FDG PETCTreveals mildly diffuse FDG-AVID mid-thoracic esophageal wallthickening-likely post RT-reactive uptake.Improvement seen in her weight (1kg improved). Appetite increased, overall slight general condition improved. They removed the food pipe. The next visit was scheduled after 3 months . The patient visited on 8 Jan 2025,with CECT scan chest report the impression was- Mild Irregular circumferential wall thickening in the mid thoracic oesophagus as described-known primary. Few fibrous strands in the left lung lower lobe. Compared to previous PET-CT dated 4-11-2024 findings are static. All these days she was only on Ayurvedic medicine. On 21 February patient visited Ayurvedic hospital with CT THORAX on 20 feb 2025 of Cristian medical College. Vellore.

Impressions

Compared to instapacs uploaded CT29 august 2024 and 4 november 2024 scans:

CT report 29-08-2024: Circumferential esophageal wall thickening above and below carina, indenting the left bronchus.There was loss of fat plane with aorta with angle of contact of 55degree with aorta.

CT report 4 -11- 2024: Compared to 29-08-2024 there is mild interval reduction in circumferential esophageal wall thickening approximately 7mm abutting left main bronchus maintaining fat planes with surrounding structures, which remains stable to the present scan.

On 1 February 2025 patient underwent X-RAY with Barium Swallo. Findings revealed, Mild short segment luminal narrowing with mucosal irregularity in middle 1/3rd esophagus. However free flow of contrast is seen in passing into distal esophagus and stomach. No surgery was advised and the Pateint was advised vitamin tablets for general strength once daily. And further review was scheduled after 3 months.

ON 26 may 2025, the patient visited Cristian medical College. Vellore and with the advice of the physician, under went PET-CT whole body again. It revealed: Mild interval decrease in circumferential wall thickening in the mid thoracic oesophagus as described. Few subcentimetric bilateral deep Cervical and retroperitoneal nodes and Non -obstructive left renal calculus.

GASTRO SCOPY done on 27 may 2025 showed, normal oesophageal mucosa, with no obvious ulcers or growth, Z line and GE Junction at 36 cm. Diaphragmatic pinch noted at 38cm. This showed that the gastroscopy is normal and no abnormalities detected.

The patient visited Ayurvedic hospital with 26 may 2025 CT reports on 29th may 2025. The patient weight improved from 51kg -57kg, hair regrowth seen and overall general health improvement seen. The patient was advised to continue with same treatment.

The patient visited Ayurvedic hospital again on 2nd August 2025. With general overall improvement and no adverse effects were seen in overall treatment days. Asked to continue with the same treatment.

On 08-dec-2025 patient again visited Cristian medical College. Vellore. He was advised with Computerized tomography of the thorax and it revealed that there is no oesophageal thickening or new lung lesions. This showed that the patient tolerated the Ayurvedic medicine well and also showed no relapse in the disease.

The patient advised to stop *Catharanthus roseus* seethakashaya. And continued with *Yastimadhu* 500mg tablets twice daily with water .

Timeline of the study

The patient was diagnosed with mid-thoracic esophagus squamous cell carcinoma on 28 -08-2024. Upper GI Endoscopy. -Esophageal growth.

PET-CT scan- intensely FDG-avid circumferential soft tissue thickening in mid-thoracic esophagus the lesion is causing significant luminal narrowing and proximal esophageal dilation. After diagnosis 5 cycles of chemotherapy Paclitaxel and carboplatin weekly once doses are done, when advised surgery she visited Ayurvedic hospital.

Ayurveda treatment was started on 2nd October 2024. All treatments were followed by patients as instructed and advised to visit with investigations, whole Body PET-CT scan which was negative on 8 Dec 2025. The treatment only *Yastimadhu* 500mg twice daily with water till Feb 2026, on 2nd March 2026 patient was seen as a follow-up visit, during which the patient reported no complaints.

Discussion

Ayurveda a traditional Indian Medicine treating with plant based drugs with successful outcomes and prevention of various diseases including cancer and tumors (3). The classical texts *Charaka Samhita* and *Sushruta Samhita* have described the cancer as either *Arbuda* (major neoplasm) or the *Grandhi* (minor tumors) this current case can be taken as *Arbuda* as it is having all classical symptoms showing narrowing of Esophageal lumen, involving the wall thickening, deglutation difficulty. These are benign and malignant tumors in modern science. In the present case, the esophageal squamous cell carcinoma, which comes under high grade malignancy and needs aggressive multimodal therapy was detected to the patient and received the chemo and radio therapies. Later patient visited to Ayurvedic hospital for further improvement and suppression of the relapses of the disease. Hence the present study was taken up and was advised the *Sheeta Kashaya* of one of the most commonly known anti-cancerous drug *Catharanthus rosea*. Even though the chemicals extracted from the plant are the most important anti-cancerous chemicals, they show some of the side effects and

generalised weakness. To overcome this the flowers of the same plant has been processed in to *Sheeta kashaya* as mentioned in the texts of Ayurveda and was advised to see the effect of the same. This has become a novel preparation and was also helpful in controlling the relapse in the case and also improved the overall well being of the patient.

The disease comes under the category of *Arbuda* as the signs and symptoms correlate must to them. All *Arbudas* are *tridoshaja*, involving all three major bodily functional components (vata, pitta, kapha) and its (9) etiology with vitiation of all three functional components causing tissue damage. *Catharanthus roseus* flowers are established in both ancient and modern medicine in the treatment of blood and cancers of many internal organs. In this case the same was adapted. The pharmacological rationale for using a cold infusion of 2-3 flowers of *Catharanthus roseus* (L) G. Don lies in the delivery of indole alkaloids in a biocompatible, crude form(4). Unlike isolated vincristine, this method preserved haematological integrity as evidenced by the stable WBC count of 5630 cells/cu mm(5). The comparison of WBC stability before ayurvedic intervention is also noted. This aligns with the principles of *sheetha veerya*. *Sheetha Kashaya* described in the *Sushruta Samhita* (*Sutra stana* 45:7-9) indicated for inflammatory conditions like malignant mucosal thickening (4).

The diagnosis was made with modern tests such as *PET-CT scan* and was given five cycles of chemotherapy. *The Ayurveda* treatment resulted in complete disease resolution as evidenced by PET-CT scan on 8 des 2025 along with no metastatic lesions. The same was reported for advanced high grade lymph nodes after the use of *Rasayana* of the poly herbal constitution. (5). *The administration of Yastimadhu (Glycyrrhiza glabra L.). Catharanthus roseus* flowers and dietary modifications have contributed to combat the side effects and to set equilibrium while curing the cancer.

The clinicians may consider the current drug in *Sheetha kashaya* form, dietary recommendations for esophageal squamous cell carcinomas encountered in a 40 years patient. The wide scope and success of herbal leads in cancer treatment may be understood, and can be given for patients who acted for *Ayurveda* treatment.

Limitations: As the study is a single case study, the same may be tried in large sample size for the better statistical results and conclusions. This study may be helpful to provide a lead for the further researches on the same conditions.

Conclusion

Integrated oncology successfully achieved disease stabilizing and high quality of life bypassing high risk surgery. Radiological outcomes PET-CT (May 26 2025) confirmed near resolution of regional lymphadenopathy. Barium swallow confirmed free contrast flow. Further investigation via controlled trials is warranted. One and half of treatment with no adverse effects, improving life quality may be considered for effective management and for the prevention of metastasis.

Patient consent

Written informed consent was obtained in English and local language from the patient before the commencement of treatment. Also the consent form stated that the details of the case presentation may be used for academic or research.

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