Ayurveda Intervention In Managing Invasive Ductal Carcinoma Of Breast - A Single Case Study

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ABSTRACT

Having replaced Lung Cancer as the most commonly diagnosed Cancer globally, Breast Cancer today accounts for 1 in 8 Cancer diagnosis and a total of 2.3 million new cases in both sexes combined. Invasive Ductal Breast Carcinoma is the most common type of Cancer in women and accounts for about 80% of all Breast Cancer. Significant advances in early detection and conventional treatment methods like surgery, chemotherapy, radiotherapy and targeted therapies have improved the survival outcomes. But a notable number of women exhibit reluctance towards pursing these standard medical interventions. This hesitation can stem from a variety of factors, including fear of side effects, cultural beliefs, lack of access to care or due to psychosocial and physical setbacks as well as compromised quality of life that come along with conventional treatment. Ayurveda can be considered as a complementary treatment option as it is less invasive and disruptive to physical appearance, offers potential for symptom relief, disease free survival, prevents recurrence and improves quality of life.

This article aims to report a case of 51year old post- menopausal woman, diagnosed with Invasive Ductal Carcinoma of right Breast. Patient was reluctant to opt for treatment suggested by Modern Oncologist, and so she was managed with Ayurveda medicines. There was a significant reduction in symptoms during the course of treatment. The results of the imaging and blood biochemistry showed no significant abnormalities post intervention. Mammogram of both the breasts showed no evidence of any malignancy and metastasis.

Keywords: *Ayurveda; Breast cancer; Complementary medicine; Invasive ductal carcinoma; Quality of life*

INTRODUCTION

Breast cancer (BC) is the commonest malignancy among women and the main reason for cancer related deaths in this population globally. Having replaced lung cancer as the most commonly diagnosed cancer globally, breast cancer today accounts for 1 in 8 cancer diagnosis and a total of 2.3 million new cases in both sexes combined.[6] It comprises a diverge range of diseases with different histologically defined sub-groups, clinical manifestations, therapeutic responses, and prognosis. Most of the tumours are derived from mammary ductal epithelium, mainly the ducts and are diagnosed as Invasive Ductal carcinoma (IDC) and represents 80% of Breast Cancer cases[7]. The rate of survival of BC patients has been significantly enhanced with improvements and availability of therapy. However, women with BC who have undergone chemotherapy, radiotherapy and surgery faces numerous psychosocial, physical and as well as compromised overall quality of life. Hence, few are still hesitant to opt for conventional anticancer therapies. In such cases, Ayurveda can be considered as a complementary treatment option as it is less invasive and disruptive to physical appearance, offers potential for symptom relief, disease free survival, prevent recurrence and improves quality of life. In this case study, a 51-year-old postmenopausal female patient diagnosed with IDC of the right breast declined standard treatment and was managed exclusively through Ayurvedic interventions at a specialised cancer outpatient department. The therapeutic regimen included a range of plant-based and herbo-mineral formulations such as *Sahadevi* (*Cyanthillium cinereum)*, *Nityakalyani* (*Catharanthus roseus*), *Hridayarnava Rasa*, *Rasa Sindura*,

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and *Nimbamritadi Panchatiktam Kwatham*, many of which have demonstrated anti-proliferative, immunomodulatory, anti-inflammatory, and pro-apoptotic properties in pharmacological studies.

Notably, *Catharanthus roseus* contains vinblastine and vincristine—well-known alkaloids used in chemotherapeutics—while *C. cinereum* and *Cynodon dactylon* have shown promise in preclinical models for their antioxidant and cytotoxic activity against various tumor cell lines[1,4]. Additionally, herbo-mineral preparations like *Rasa Sindura* and *Hridayarnava Rasa* have been reported to modulate immune responses and induce apoptosis in malignant cells via mitochondrial and DNA-binding pathways[2,3]. This article explores the potential of Ayurvedic medicine as a primary or adjunctive treatment in Breast Cancer, particularly for patients who are either unfit for or decline conventional therapies. The case presented highlights not only symptomatic improvement but also radiological evidence of disease regression and remission over a two-year follow-up period. Through this lens, the article aims to contribute to the growing field of integrative oncology, where traditional systems of medicine are critically evaluated for their scientific validity, safety, and therapeutic potential.

CASE PRESENTATION

Patient information

A 51year old post-menopausal female, a home-maker, divorced with one child, weight 45 kg and moderate built presented in OPD of Cancer, Charitable Hospital, Arya Vaidya Sala, on 17th November 2021 with a palpable lump on the right breast associated with white discharge from nipple, pain in chest, right shoulder and flank. She had undergone relevant investigation from Government Medical College, Theni, which confirmed Malignancy of Ductal Carcinoma of Breast and was advised for Right Modified Radical Mastectomy (MRM) but was not willing to opt for conventional anti-cancer therapies because of her perception regarding its toxicity, so came to OPD of Cancer, Charitable Hospital, Arya Vaidya Sala, Kottakkal to seek Ayurveda treatment.

Medical history

Patient had a surgical history of Appendectomy eighteen years back. There was no other history of any co-morbidities. No significant family history of any cancer or any other major illness as well.

Clinical findings

On examination a vague mass noted in upper outer quadrant of right breast

Diagnostic Assessment

In October 2021, she noted a lump in right breast with white discharge from nipple and chest pain, hence visited Government Medical College, Theni. Following investigations were performed as mentioned in table no one. Biopsy and immunohistopathology (IHC) investigation were advised but not done by the patient, hence grading and hormone receptor status was not known.

Table no 1

Date	Investigations	Findings
25th October 2021	FNAC	Dys-cohesive clusters of atypical ductal epithelial cells in haemorrhagic back- round. Revealed ductal carcinoma of breast.
30th October 2021	CT-Thorax	both lungs appear normal
13th April 2022	PET-CT	Heterogenous trace uptake in right breast, bilateral supraclavicular, mediastinal, abdominal, and pelvic lymph nodes.
18th April 2022	FNAC of right cervical and left cervical lymph node	features of reactive hyperplasia of lymph nodes.

Therapeutic interventions

After primary assessment and case-taking, patient was given oral medications in three sets.

1. First set of medicines as mentioned in table no. two and were continued for twelve months (November 2021-November 2022).
2. The second set of medicines as mentioned in table no three, for the next six months (December 2022-June 2023).
3. The third set of medicines as mentioned in table no four , (July 2023 and still ongoing).

A follow up period for every two months was maintained by the patient throughout the course of treatment.

Table no. two

Medicine	Instructions	Time
Sahadevyadi lehyam (3gm) + Rasa-sinduram capsule (2)	oral intake	after lunch and dinner
Sanjeevani tailam (10ml)	on body	external application
Nimbamritadi Panchtiktam Kwatham tab (2)	oral intake	before lunch and dinner
Nityakallyani extract (2gm)	oral intake with warm water	after lunch and dinner
Katukkapodi (3gm) + Chittamrithupodi (2gm)	mix and make paste with warm water. Apply on lump for one hour	external application

Gradually pain in chest, shoulder and flank region were reduced. Discharge from nipples was reduced but still occasionally serum like secretion was seen. The medicines were modified as mentioned in table no two.

Table no three

Medicine name	Instructions	Medication used for
Nimbamritadi Panchatiktam Kwatham Tab (2)	oral intake	before lunch and dinner
Sahadevi extract (1gm)	oral intake with warm water	after lunch and dinner
Hridayarnavarasam Gulika (1)	oral intake	after lunch and dinner
Sanjeevani Tailam (10ml)	on body	for external application
Nityakallyani extract (1gm)	with warm water	after lunch and dinner

After the intake of second set of medicines discharge from nipples completed stopped. Patient was asymptomatic and there was an overall improvement in general health conditions. The medicines were modified as shown in table no three.

Table no four :

Medicine name	Instructions	Medication used for
Nimbamritadi Panchatiktam Kwatham Tab (2)	oral intake	before lunch and dinner
Sahadevi extract (1gm)	with warm water	after lunch and dinner
Sanjeevani tailam (10ml)	on body	for external application.

At present patient is asymptomatic, continuing above medications and is maintaining regular follow-ups for every two months.

Outcome

During the course of treatment, there was a significant reduction in symptoms which were presented at the initial phase. The patient was subjectively feeling better on every follow up. The results of the imaging and blood biochemistry showed no significant abnormalities as mentioned in table no five. It is notable that both the breasts showed no evidence of any malignancy and metastasis. This clearly indicates cure of the disease. Patient is disease free for the past two years and continuing the medication and maintaining regular follow up.

Table no. five

Investigations	Date	Remark
Sono-mammogram	5/12/2022	No significant bilateral axillary lymphadenopathy. No significant abnormalities detected in both breasts.
Sono-mammogram	30/05/2023	No significant abnormality detected in both breasts.

Discussion

The prognosis of any Invasive Carcinoma is bad as compared to Carcinoma in situ (DCIS). Treatment of IDC depends on many factors, such as stage, size of tumor, spread of the Cancer cells. Cancer surgeries such as lumpectomy or mastectomy may be used to remove the tumor in early-stage IDC cases or the entire breast in late IDC cases. Radiation therapy is often used after lumpectomy to ensure all Cancer cells are destroyed and to prevent recurrence of cancer. Systemic therapy may also be used to treat IDC. Specific systemic treatments or Invasive Ductal Carcinoma include chemotherapy, hormone therapy and targeted therapy. In the present case, patient was diagnosed with IDC of right Breast. Patient was advised for Modified Radical Mastectomy but was reluctant to do and choose Ayurveda as a primary management modality. Considering patient preference, following medicines were prescribed;

Sahadevi extract (aqueous extract of *C. cinereum* (CCE) and its herbal product KGS tablet (prepared out of whole plants of *Cyanadon dactylon* and *C. cinereum. C. datylon*) are some of the important herbal medicines used for treating Cancer patients. Several classes of metabolites, such as flavonoids, polyphenols and anthocyanin identified from CCE and KGS had been reported to be responsible for numerous pharmacological properties, such as anti- inflammatory, anti-oxidant and anti-cancer activities. The glycosides of apigenin and kaempferol are reported to possess anti-cancer

activity (Imran et al. 2019, 2020). Anthocyanins like delphinidin-3-O-monoglucoside and cyanidin-3-O-monoglucoside identified in KGS has been reported to be effective against different types of cancers such as colorectal cancer, breast cancer, colon cancer and lung cancer (Vareed et al. 2006; Fraga 2009; Yan et al. 2017; Wang et al. 2018)[1].

Inflammation is often associated with development and progression of cancer. As the cells responsible for cancer associated inflammation are genetically stable and thus are not subjected to rapid emergence of drug resistance. *Nimbamritadi Panchtikam kwatham* which represents strong anti-inflammatory action targets the inflammation and serves attractive strategy both for Cancer prevention and for Cancer therapy.

Rasa sindhuram as a potent *Rasayana* drug works on body cells as well as tissues and favorably modulates the immune system so that it arrests the growth and the risk of Cancer progression is considerably reduced[2]

Hridayarnava Rasa, is a herbo-mineral combination of *Kajjali* (black sulphide of mercury- Hgs) and *Tamra Bhasma* (incinerated copper). The failure of apoptosis (natural cell death) contributes to the development of human cell malignancies. *Tamra* in *Hridayarnav rasa* acts as a DNA-binding transcription factor that regulates specific target genes to arrest the cell cycle, induce repair mechanism, and initiate apoptotic cell death[3].

Nityakalyani extract (aqueous extract of *In Cantharanthus roseus*) belonging to the genus *Vinca* and oleander it has for a very long time been an important medicinal plant of great concern. In a study on human skin cancer cell line A431, the methanol extract of the plant had a positive effect on reducing the proliferation in this category. Alkaloids such as vincristine, vindoline, vinblastin, vinflunine, and catharantin in the aerial parts are different from vincristine and vinblastine, and among them 2 combinations of plant secondary metabolism are used today as anticancer drug. The effects of this plant's alkaloids on cancer cells of breast, prostate, cervix (MCF-7, PC3-1C, HeLa) were studied, indicating that these alkaloids tubular protein links changed its structure by blocking the division of cancerous cells; these compounds with antioxidant properties will prevent cancer cells from progression[4].

Sanjeevani tailam is a medicated oil which contains anti-cancer and anti-inflammatory drug called *Euphorbia hirta* [5]. Patients experiencing cancer-related pain, swelling or discomfort, external application of this oil was given as a part of supportive care.

Local application of *Katukkapodi* (powdered form of *Teminalia chebula*) and *chittamritapodi* (powdered form of *Tinopsora cordifolia)* on the breast lump area. This formulation has being employed by the practitioners of Arya Vaidya Sala for many years. These herbs have properties that are believed to promote the reduction of inflammation and tumor size.

Medicine	**Action**
Sahadevi	Anti-tumor
Nityakalyani	Anti-proliferative
Rasa-sindhuram	Immune-modulator
Nimbamritadi Panchtiktam kashayam tab	Anti-inflammatory
Hridayaranav rasam	Induces apoptosis

Conclusion

Breast cancer is considered as a systemic disease with a high risk of metastasis and concerns about disfigurement from surgery or side effects from Chemotherapy and its complications, and impact on the quality of life. Thus, patients are hesitant to pursue Conventional treatment. Ayurveda in such cases can provide disease free survival, prevent recurrence and improves quality of life. This case of a female patient with IDC type breast cancer highlights valuable insights into potential role of Ayurveda medicine in Cancer care. A disease-free state and excellent quality of life was observed in this patient. This case underscores the importance of considering complimentary treatment options and individualizing the care to meet the unique needs and preference of each patient. Embracing integrative modalities like Ayurveda can provide valuable adjunctive support in the journey towards optimal health and well-being for individuals facing challenges of Cancer.

Declaration of patient consent

The authority certify that they have obtained all appropriate patient consent forms. In the forms, patient has given her consent for sharing her images and other clinical information to be reported in the journal. The patient understand that her names and initials will not be published and efforts will be made to conceal their identity.

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