

Arbuda in Ayurveda and A Traditional holistic approach in the Management of infiltrating ductal carcinoma of non-special type NST Grade 2 – A Case Study

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Abstract

Background

Cancer patients are generally treated with standard-of-care agents (SOC), such as chemotherapy and/or targeted therapies, which are known to reduce tumor growth but often lead to various side effects. In addition to experiencing toxic adverse events, many patients also develop resistance to the current line of therapy. In contrast, Ayurveda offers a traditional holistic framework for understanding and managing diseases like cancer. An imbalance leads to illness, including conditions such as Arbuda, which is described in Ayurveda as a malignant tumor and aligns with certain modern understandings of cancer.

Methods and Findings

In 2017, a case of infiltrating ductal carcinoma (IDC) of no special type (NST), Grade 2, of the left breast was presented at Sri Sri Ayurveda Hospital, with symptoms including fatigue, loss of appetite, and a history of non-recurrence. The patient was treated with an integrative Ayurvedic regimen comprising herbal formulations, dietary modifications, Panchakarma therapies, and mind-body practices. As a result, the tumor showed no increase in size, and the patient has remained well without difficulty for the past seven years.

Conclusion

This case highlights the potential of Ayurvedic intervention as a complementary modality in managing certain types of breast cancer, offering symptomatic relief, improved quality of life, and disease stabilization. These outcomes suggest the opportunity to enhance

clinical comfort and lifestyle restoration in cancer patients through Ayurvedic care, warranting further clinical research.

Keywords: Infiltrating Ductal Carcinoma, Ayurveda, Sudarshan Kriya Yoga (SKY).

Introduction

Breast and ovarian cancers are among the most commonly occurring cancers in women compared to cancers affecting other female reproductive organs. Though survival rate has improved dramatically in recent decades, it is comparatively lower in developing countries than developed countries [1]. Triple negative breast cancer (TNBC) is a subset of breast cancer (BrCa), with an aggressive phenotype with a lack of treatment options and biomarkers poses a major challenge. Compounds derived from medicinal plants have shown promising activity against this rare form of TNBC [2].

Arbuda is the Sanskrit word for tumor. 'Charaka' and 'Sushruta Samhitas' the Ayurvedic textbooks mentioned cancer as 'Granthi' or 'Arbuda'. The literary meaning of arbuda is a lump or mass. Ayurveda categorises cancer-like conditions are under different types of arbuda such as Vatika arbuda (Vata Dosha or air and ether element), Paitika arbuda (Pitta Dosha or fire and water element), Kaphaja arbuda (Kapha Dosha or water and earth element), Medoja arbuda (affected adipose tissue), Rakta Arbuda (blood tumor or blood impurities) and Mamsa Arbuda (muscle tumor). Diseases which can be labelled as clear malignancy are as follows: Arbuda (Neoplasia) and Asadhya Vrana (Malignant ulcer) (Belavadi, 2023). According to the description given by Sushruta (Sushruta samhita. Nidan sthana, 11/10, 11). Arbudas are gradually increasing mass of big size, globular in shape, fixed with deeper structure, usually do not suppurate, giving occasional pain and can occur in any part of the body. It can involve Mamsa and Rakta due to vitiation of tridosa [3, 4].

Etiopathogenesis of Arbuda

It is based mainly on Doshic theory i.e. Vata, Pitta and Kapha. Further by Mithya Ahara and Vihara the different humors are vitiated involving different Dhatus (Mamsa, Meda, Rakta, etc.) resulting in the prescription of Arbuda [5]. Though vitiated "Dosha" are responsible for the development of Arbuda, Sushruta has mentioned that due to excess of Kapha, Arbuda does not suppurate (Sushruta Samhita. Nidan sthana. 19/1) which is considered to be the common and important factor for any growth in the body and trauma (Sushruta Samhita Nidan sthana, 11/18) may precipitate or activate the formation of Arbuda [6].

Plant-based products have shown different levels of protection against several cancers both in vitro and in vivo (Pilmelmeijer,

2017). Certain herbal formulations have proven to have immunomodulatory effects to kill cancer cells by improving the interactions between host microbiota and immune cells [7, 8].

Patients and Methods

A 49-year-old female patient was diagnosed with post-surgical grade 2 invasive breast carcinoma. In 2015, she presented with a palpable mass in her left breast without any accompanying symptoms. By 2017, she reported the onset of localized pain in the affected breast. Histopathological evaluation of a core biopsy specimen confirmed the diagnosis of invasive carcinoma of no special type. Subsequently, the patient underwent a mastectomy and experienced post-surgical fatigue as a clinical symptom. Despite being advised to undergo chemotherapy, the patient declined both chemotherapy and radiation therapy. Instead, she elected to pursue preventive and therapeutic interventions and subsequently sought treatment at the Sri Sri Ayurveda Hospital, Bangalore, in 2017. The patient had no comorbidities, was not on any medication, and reported no family history of malignancies, including breast, ovarian, or other cancers. On physical examination, her body mass index (BMI) was 24. Inspection revealed a post-mastectomy scar on the left breast, with no palpable masses identified in either breast. Pulmonary auscultation revealed clear lung sounds, and the remainder of the systemic examination was unremarkable [9-11].

Treatment

Considering the condition, strength and tolerability of the patient, oral medications such as Panchagavya ghrita, Shakthi drops, Noni juice, Pranda Gutika and Turmeric were prescribed. Along with this Diet and Sudarshan Kriya Yoga (SKY), Sahaj Samadhi Meditation advised to do on daily basis.

The patient's clinical presentation, treatment decisions, and follow-up observations are summarized in Table 2. During her second follow-up visit to Sri Sri Ayurveda Hospital in January 2018, the patient reported no new symptoms or concerns. Notable improvements were observed, including enhanced appetite, increased tolerance and comfort with the ongoing treatment regimen, and a subjective sensation of bodily lightness, indicating a positive response to the therapeutic intervention [16-19].

Post treatment Follow-up

Additional evaluated parameters such as USG and liver function test (LFT) have been shown in Table 3. The patient in general is feeling better with respect to overall health conditions during the last visit in March 2025. No additional lesions were observed while the patient was under Ayurvedic care. Interestingly some of the lesions such as axillary lymphadenopathy and uterine fibroid have disappeared completely with the normal pattern in LFT. The patient is leading a healthy quality life without any major

Table 1: Composition of Key Medicinal Formulations.

S No	Herbal formulation	Composition	Medicinal Value	Key function
1	Panchagavya ghrita	Medicated ghee	Anticancer	Panchagavya Cow ghee: Carcinogen detoxification activities in liver and mammary tissues: Glutathione-S-transferase (GST) activity [9]. Cow milk: Vitamin D and calcium reduces the risk of epithelial disorder of breast, putative precursor of breast cancer [10] Cow urine: Antioxidant, helps the lymphocytes to survive by inhibiting their apoptosis and by repairing the damaged DNA [11] Cow dung juice: Antioxidant [12] Cow curd: Antioxidant [13]
2	Noni Juice	Polysaccharide - rich substance	Immunomodulation	Antitumor activity: C/EBP β plays a role in damnacanthol-induced NAG-1 expression [14].
3	Turmeric	Curcumin	Anticancer	Chemopreventive effect: Inhibits the growth of <i>H. pylori</i> cagA+ strains <i>in vitro</i> a carcinogen [15]
4	Shakthi drops	<i>Bacopa monnieri</i>	Anticancer	Anti-tumorigenic & antiproliferative activity: By inducing cell cycle arrest at the G2/M phase and formation of multiplied cells by signal transducer and activator of transcription-3 (STAT-3) independent but reactive oxygen species dependent mechanism [16]
		<i>Asparagus racemosus</i>	Anticancer	Anticancer activity: Shatavarin has an anticancer effect on breast cancer <i>in vitro</i> and <i>in vivo</i> [17].
		<i>Withania somnifera</i>	Anticancer	Antiproliferative activity: Withanolides in human cancer cell lines [18]
		<i>Glycyrrhiza glabra</i>	Anticancer	Glabridin and its derivatives exhibit varying degrees of estrogen receptor agonism and growth-inhibitory actions on breast cancer cells [19].
		<i>Eclipta alba</i>	Anticancer	Luteolin is mainly attributed for its anti-cancer effects and mitigates tumor induced hepato-renal toxicity [20].
		<i>Convolvulus pluricaulis</i>	Anticancer	The Lupeol molecule has anti-cancer effect which affects the CCRF-CEM cells (leukemic cell lines) [21].
		<i>Phyllanthus emblica</i>	Anticancer	PEEP (Polyphenol extract of <i>Phyllanthus emblica</i>) is effective in inhibiting HeLa cell (cervical cancer cells) proliferation by inducing cell cycle arrest at G2/M phase and inducing apoptosis [22].
		<i>Tinospora cordifolia</i>	Anticancer	Dihydrotestosterone (DHT) in <i>Tinospora cordifolia</i> has been reported to stimulate the growth and proliferation of Human LNCaP cells (which are androgen-sensitive human prostate adenocarcinoma cells) [23].
5	Pranda Gutika	<i>Quassia excelsa</i>	Anticancer	High phenolic content (250-400 $\mu\text{g}/\text{mg}$) in <i>Quassia excelsa</i> inhibits lipid peroxidation and oxidative damage by scavenging reactive oxygen species. Tannins in <i>Quassia excelsa</i> reduce oxidative stress by binding iron and preventing Fenton reaction-mediated ROS generation and protects cellular components [24].

Table 2: Summary of Clinical Signs, Treatment Options And Follow-Up Evaluation Provided to The Patient.

Date of visit	Complaint	Treatments given	Post treatment observation
02/06/2018	Cough, radiating pain from hip joint to right leg.	Oral medicines 1. Panchagavya ghrita 2. Shakthi drops 3. Noni juice 4. Turmeric 5. Pranda Gutika	Pain is reduced. Cessation of cough
11/01/2019	Follow up	1. Panchagavya ghrita 2. Shakthi drops 3. Noni juice 4. Turmeric 5. Pranda Gutika	Pain in left arm has been reduced
05/10/2019	Follow up	1. Panchagavya ghrita 2. Shakthi drops 3. Noni juice 4. Turmeric 5. Pranda Gutika	Routine examination done
21/02/2020	Follow up USG both breasts- No evident solid cystic lesions in right breasts. No suspicious axillary lymph nodes.	1. Panchagavya ghrita 2. Shakthi drops 3. Noni juice 4. Turmeric 5. Pranda Gutika	Routine examination done. No fresh complaints.
21/02/2021	Follow up	1. Panchagavya ghrita 2. Shakthi drops 3. Noni juice 4. Turmeric 5. Pranda Gutika	Due to COVID-19 online consultation done. No fresh complaints.
06/09/2022	Follow up	1. Panchagavya ghrita 2. Shakthi drops 3. Noni juice 4. Turmeric 5. Pranda Gutika	Due to COVID-19 online consultation done. No fresh complaints.
11/02/2023	Follow up	1. Panchagavya ghrita 2. Shakthi drops 3. Noni juice 4. Turmeric 5. Pranda Gutika	Routine examination done. No fresh complaints
02/03/2024	Follow up	1. Panchagavya ghrita 2. Shakthi drops 3. Noni juice 4. Turmeric 5. Pranda Gutika	Routine examination done. No fresh complaints
15/03/2025	Follow up	1. Panchagavya ghrita 2. Shakthi drops 3. Noni juice 4. Turmeric 5. Pranda Gutika	Routine examination done. No fresh complaints

Table 3: Post Treatment Follow-Up Details of The Patient.

S No	Report name	Date	Report impression
1.	Ultrasound both breast	28/04/2015	Mixed fatty & fibroglandular breasts with fibroadenoma's as described and 11 o' clock simple cyst also in the left breast.
2.	Histopathology Report of Breast	27/11/2017	Left modified radical mastectomy (post lumpectomy) No residual neoplasm Three out of three lymph nodes show reactive change only
3.	ER/PR Paraffin Block	11/03/2018	ER Staining ER Percentage – 25% (Moderate) PR Staining PR Percentage – 70%(Strong) Estrogen Receptor-Positive Progesterone Receptor-Positive
4.	HER2/NEU Immunohistochemistry	16/03/2018	HER 2 Overexpression –Negative (score -2)
5.	IHC-Ki67 with interpretation	20/03/2018	Ki67-5-8% A Large nuclear protein preferentially expressed during all active phases of the cell cycle but absent in resting phase Allows direct monitoring of growth fraction of normal and neoplastic cells ,correlates with tumour grades and is also used in differential diagnosis of tumors like Burkitt's Lymphoma /MALT Lymphoma,Diffuse Large Cell Lymphoma,. Cellular Localization -Nuclear
2.	Ultrasound both breast	28/06/2018	Status post total mastectomy with axillary clearance left side Normal study of left breast –BIRADS 1 No evident axillary lymphadenopathy
3.	Ultrasound both breast	09/01/2019	Left post mastectomy status No focal solid/cystic lesion in right breast-birads 1 No suspicious axillary lymph node
4.	Ultrasound both breast	06/2/2020	No evident focal solid/cystic lesion in the right breast. No significant axillary lymphadenopathy
5. .	Liver function test	06/02/2020	Bilirubin total -0.40 Bilirubin direct -0.13 AST/SGOT -18 ALT/SGPT -14 Alkaline phosphatase -57 Total Protein -7.52 Albumin – 4.42 Globulin-3.10
5.	Ultrasound both breast	17/02/2021	No Sonological evident focal lesions in right Breast
6.	Ultrasound Abdomen and Pelvis	17/02/2021	Fatty Liver Grade 1 Uterine Fibroid
7.	Ultrasound both breast	04/09/2022	No evident Focal solid /cystic lesion in right breast sonologically No significantly Axillary Lymphadenopathy
8.	Mammography Right Breast	11/02/2023	No Focal Lesion –BIRADS 1
9.	Ultrasound Abdomen Pelvis	11/02/2023	Grade 1 Fatty Liver –No Focal Lesion
10.	Ultrasound Abdomen Pelvis	02/03/2024	Grade 1 Fatty Liver No Focal Lesion Left renal microlith - Small uterine fibroid
11.	Mammography Right Breast	02/03/2024	No Focal Lesion –BIRADS 1 Screening of Left Chest shows no lesion
12.	Mammography Right Breast	15/03/2025	No Focal Lesions or microcalcification in the breast parenchyma BIRADS 1
13.	Ultrasound Abdomen Pelvis	15/03/2025	Grade 1 Fatty Liver Retroverted uterus showing small old fibroid

complaints which also have been ascertained in the follow-up ultrasound examination. The Ayurvedic treatment is also found to be absolutely safe to the patient without any newly added adverse signs [20, 21].

Discussion

Oral contraceptive pills, hormonal therapy after menopause and timing of pregnancy are some of the risk factors associated with breast cancer. By avoiding risk factors, early detection, and proper management cancer can be prevented. Lumpectomy (removal of the tumor and a small, cancer-free margin of healthy tissue around the tumor) and mastectomy are two surgical procedures commonly followed in breast cancer as per ASCO guidelines. Though approaches targeting hormonal receptors or aromatase inhibitors yielded significant improvement in the survival of patients having disease with ER+/PR+ disease relapse and adverse events seem to be a major concern. Due to lack of diagnostic and treatment facilities, patients visit the hospital at the later stage of cancer making treatment challenging [22].

Panchagavya is traditionally used to boost immunity. Its formulation as a Ghrita, also known as Panchagavya Ghrita leverages the bioactive lipophilic compounds in cow ghee contributing to the improved outcomes in patients with advanced cancer particularly by modulating the host immune responses and reducing oxidative stress [23].

Noni Juice, extracted from the fruit of *Morinda citrifolia*, has gained attention for its pharmacological properties which includes antibacterial, anti-inflammatory and anti-cancer effects. It has been observed in preclinical studies that Noni juice helps in preventing and mitigating breast cancer development. Damnacanthol, an anthraquinone present in Noni extract has notable cytostatic and pro-apoptotic effects. It is reported to induce cell cycle arrest at G1 checkpoint and trigger apoptosis by activating p21 and caspase-7 molecules. Additionally, the polysaccharide-rich fractions have also demonstrated antitumor activity [24].

The anticancer potential of turmeric comes from a polyphenolic compound curcumin, which has diverse pharmacological activities. Curcumin targets many signalling pathways responsible for breast cancer development and progression such as NF- κ B Pathway Inhibition, Estrogen Receptor Pathway Disruption, Inhibition of HER2 Tyrosine Kinase, Anti-Angiogenic and Anti-Metastatic Effects and Modulation of Multidrug Resistance [25].

Shakthi Drops has strong free radical scavenging activity, reduction of oxidative stress which has been demonstrated in dose dependant antioxidant assays including DPPH and reducing power assays in breast cancer cell lines. The Shakti drop formulation has been shown to induce apoptosis in breast cancer cells observed in confocal microscopy studies documenting mitochondrial membrane integrity disruption and enhanced reactive oxygen species (ROS) generation in treated cells. In in vitro assays, such as MTT, it is shown that Shakti drops significantly inhibit the proliferation of breast cancer cells suggesting interference with crucial cell signaling pathways essential for cancer cell survival. The polysaccharide fraction from *Tinospora cordifolia* was said to be very effective in dropping the metastatic potential of B16-F10 melanoma cells [26] [27].

Pranda Gutika is another traditional Ayurvedic formulation reputed for its therapeutic potential in various malignancies. The main constituent, *Quassia excelsa* is known to have quassinoids. Quassinoids such as Glaucarubinone are reported to have activity against solid and multiresilient mammary tumors [28].

The current case study demonstrates that Ayurveda as a therapeutic approach improves quality and span of life. Ayurvedic treatment manages symptoms better by improving mental health and controlling side effects. According to WHO 'Relief from physical, psychosocial, and spiritual problems can be achieved in over 90% of advanced cancer patients through palliative care. Rationale for choosing herbal formulations and combinations in this study is based on their rejuvenating, anticancer and immunomodulatory properties of key ingredients. Further research is suggested in Ayurveda treatment improves not only the health of patients, quality of life and effectiveness of other therapies as well.

Conclusion

As breast cancer remains a significant global health concern, conventional treatments like surgery, chemotherapy and targeted therapy have significantly improved prognosis, but are greatly associated with adverse effects and disease relapse. The Ayurveda system provides an alternative therapeutic strategy without causing adverse effects on overall health and lifestyle as shown in the current case study. along with the practice of Sudarshan Kriya Yoga (SKY) and Sahaj Samadhi Meditation. The prescribed ayurvedic formulations have shown promising anticancer activity. Ayurvedic perspectives on complex diseases like cancer establish understanding on its development, treatment and supportive care along with modern systems that provide valuable insights.

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