

Role of Shamana Chikitsa in Arbuda with Special Reference to Cancer

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Abstract

Cancer has attracted an attention of physicians and surgeons of the world. It is a challenge to the medical profession as it is not easy to cure by several methods of treatment being followed by different system of medicine. As it stands today, one of the most dread full diseases of the 20th century and further spreading continuously with increasing incidence in 21st century and there is no permanent remedy for cancer of long standing duration. And it accounts for 25% of all the deaths in humans presently.

Validations of anti-cancerous property of various medicinal plants have been screened worldwide. The new findings about anti-cancerous drugs of plant origin which is not mentioned in ancient literatures add up to Ayurvedic science that has been developed through ages. The researchers conducted on medicinal plants of Ayurvedic preparations for their anticancer efficacy strongly emphasize Ayurvedic therapy as a scientifically motivated one. Such integrated approach is necessary to manage cancer using the growing body of knowledge gained through scientific developments. Hence, an attempt is made in this review to discuss about anticancer drugs of plant origin as well as the Ayurvedic line of managements like shamana, shodhana, rasayana etc. strategies for various cancers.

Keywords: Arbuda; Cancer; Ayurveda; Rasayana.

Introduction

The word Arbuda means an abnormal glandular growth within or of any bodily tissue or organ. This word describes cells believed to have no natural function in the body. The words Granthi, Arbuda, Gulma, and Ashtila etc. are the words chosen for different abnormal growths.[1] Ayurveda points out that the tissues of the inner layer of the dermis, or the same kind of tissues lining any part of the body, are regarded as the original birth place of Granthi or Arbuda. According to Ayurveda the tissue of the inner 6th layer of the skin is called "Rohini means tissue which

has the nature of growth. It seems clear that the word rohini is a synonym for the word epithelium, the group of cells found lining the skin, and surface layers of the mucous membranes. Pathogenic injuries to muscular tissues and blood can be caused physical trauma, or imbalances of Vata, Pitta and Kapha. This result in injury to the rohini tissue, and the formation of abnormal branches of blood vessels. In this stage, early Granthis or Arbudas can develop, in the form of bubble shaped glandular growths.[1]

Several studies have been conducted on herbs to evaluate its anti-cancerous properties. The survey study on 3000 plants by Hartwell conveys the knowledge of potent anticancer drugs.² Ayurveda emphasizes prevention or suppression of various tumors by various lines of treatment by using these natural drugs. There are many case reports of cancer patients, were treated with only Ayurvedic principles. This creates a confidence not only in patients but also in physicians.

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Arbuda/Cancer

A tumor or neoplasm is a growth of new cells, which proliferate without relation to the needs of the body.[3] Vataja/Pittaja/Kaphaja and dwandwaja (By combination of two) signify a benign neoplasm. One or two of the three bodily systems are out of control and is not too harmful because the body is still trying to coordinate among these systems. Tridosaja, abnormal growth - indicate the malignant stage of the neoplasm; Are very harmful because all the three major bodily systems lose mutual coordination and thus cannot prevent tissue damage, resulting in a deadly morbid condition. Some cancers grow quickly while others can take years to become dangerous to the patient.[1]

Cancer is a process of uncontrolled multiplication of body cells. Cell losses control on its natural degeneration (death) and regeneration (rejuvenation). Without its natural degeneration (death), no cell can be regenerated (rejuvenated).[4]

Materials and Methods

Ayurvedic concepts of treatment

A patient's natural resistance is one the essential factor that should be preserved for the arrest of the progress of the disease.[3] In Ayurveda Bala (immunity) is classified into Sahaja (Natural), Kalaja (Periodical) and Yuktikruta (Acquired). Ayurvedic concept of vyadhikshamatva or immunity/Resistance power involves both Vyadhi utpada prathibandhakatva i.e., the capability to prevent the onset of a diseases and Vyadhi bala virodhitva which fight against developing diseases. Even the Ojas (Essence of body) which imparts strength to various tissues in the body to resist diseases. Pratyanka bala (Induced immunity) is responsible for increasing immunity of the host to prevent diseases before its onset; every person has some Sahaja bala or natural immunity too. One could enhance this capacity or Pratyanka bala and Ojas by taking appropriate Rasayana herbs which help in building optimum quality

tissues which fight diseases. Because, According to Ayurveda un-equilibrium within the body and mind as diseases. Therefore always the aim of Ayurveda to bring back altered equilibrium within the body and mind to harmony with nature.[5]

Ayurvedic treatment

- *Shodhana Chikitsa* (strong purifying modalities), which eliminates vitiated doshas, has been primarily used for medical management of cancer. Both internal and external purifications are given by five techniques known collectively as Panchakarma Chikitsa
- *Shamana Chikitsa* (palliative treatment) pacifies doshas and gradually relieves the disease. However, this treatment is prescribed only to weaker patients, for whom shodhana chikitsa is contraindicated. Because it is important to maintain the strength of the patient during the treatment.

Shamana Chikitsa

Shaman therapy involves Rasayana (Rejuvenative therapies), Poly herbal formulations, *Herbo-mineral/ herbo-metallic therapeutics*, diet etc.

Rasayana means the way for attaining excellent rasa and other dhatus i.e. one attains longevity, memory, intelligence, freedom from disorder, that are strengthening or restorative in nature are used to balance and remove any debility in the patient caused by the purification or cleansing.[6]

With the introduction of rasa shastra (the science of Mineral/Metal processing [bhasmas]) many cancers were considered curable, especially if they were treated in the early stages.[7] Rasoushadhis [Herbo-metallic/herbo-mineral preparations] is one of the most promising area of treating Cancer and occupied superior status among the Ayurvedic Chikitsa due to their high therapeutic potency in eliminating dreadful diseases and also for rejuvenation purposes.

They are popular because of their faster relief, lesser and agreeable dose, tastelessness, quick action and mysterious efficacy in dreadful diseases without producing any discomfort to patients and long shelf life. Hence rasoushadhis considered more effective medicines for Cancer, such as prophylactic, palliative, curative and supportive.[8]

Poly herbal formulations showed remarkable improvement in quality of life of various Cancer patients who were receiving chemotherapy, radiation and to overcome the side effects of chemotherapy and radiation such as hair loss, weight loss, stomatitis and zerostomia.[9,10]

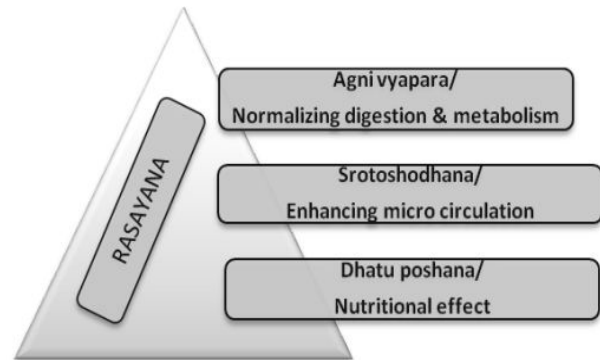
Pathya (Diet) is the one which is wholesome or conducive to health, means which supports a medicine in bringing back the homeostasis of vitiated doshas during disease condition.[11] And it is prescribed according to age, body constitution, season, and environment, as well as the socioeconomic status of the patient. Emotional support and psychotherapy are provided with yoga, meditation, prayers, and chanting, along with individualized nutrition plans and dietary interventions are believed to benefit them in mind and body with the least physical stress also plays major role in treatment of cancer.[12]

Rasayana

Rasayana drugs aims at keeping the enzymes in the tissue cells in their normal functioning condition and keeps the individual free from disease even at an advanced age. It has multi-faceted actions in human physiology. Its scope expands from suggesting proper nutrition to a healthy individual to treatment, management of chronic illness to bestow the follower with quality of life. An incredible statement by Susruta says, Rasayana being capable of pacifying all afflictions.[13]

Ayurveda says the root cause of all metabolic diseases is due to improper agni (Digestive fire). In digestive process the quality and quantity of ahara rasa generated and circulated to internal organs determines the

Ayurveda explain the mode of action of Rasayana at 3 different levels.[14]



efficacy of rasayana and also does the dhatu paka [Tissue metabolism].

The possible mechanism of modern aspects with action of Rasayana can be interpreted as - Anti-oxidant action, Immunomodulatory action, Hemopiotic effect, Adaptogenic action, Antiageing action, Anabolic action, Nutritive action and Neuroprotective action.[15]

Rasayana/Anti-oxidants[16-17]

Anti-oxidants are the substances that reduce oxidative damage such as that caused by free radicals. Researches show that, it possibly reduces the risk of cancer. Vitamins - E, C, Certain enzymes like Superoxide dismutase (SOD), Catalase, Glutathione peroxidase, Phytochemicals are considered as antioxidants. Phytochemicals are biologically active naturally occurring chemical compounds in plant product present in - Fruit, Vegetables, Legumes, Whole grain Nuts, Herbs, Spices etc.

Antioxidant therapy also acts in three ways[16]

1. By inhibiting the generation of reactive oxygen species. This can be achieved by removing causative factors i.e., *langhana karma*.
2. By increasing action of antioxidant enzymes, like SOD or catalase. This is done by the use of certain drugs which enhance the action of these enzymes i.e., *dipana karma*.

3. The use of certain substances, which help in neutralizing free radicals by either donating or accepting electrons from free radicals. Vitamin C and vitamin E i.e. by *Pachana*.

Rasayana drugs like amalaki and ashwagandha act as antioxidants. Main constituents in amalaki such as riboflavin, vitamin C, carotene which have a role in cellular oxidation reduction in collagen fibrin synthesis and absorption of iron. The natural antioxidants like super oxide- dismutase, catalase and glutathione peroxidase increases by withanolide in Aswagandha.[15]

Immunomodulatory and adaptogenic activity

Rasayana drugs also act as immunomodulators by promoting bodily defense mechanisms such as increasing the WBC count, improving immune function by increasing number of T & B cells to fight against infections. Rasayana, much emphasizes about administration of the right kind of the diet to the diseased and healthy individual as well as a medicine i.e., it need not be only herbal formulation, may be a dietary regimen or special health promoting behavior also.[17]

Withania somnifera and *Tinospora cordifolia* are also proven to be powerful immunostimulants, which could increase body resistance power during cancer-associated immunosuppression.[18] *Asparagus racemosus*, *Ocimum sanctum*, *Picrorhiza kurroa*, *Emblica officinalis*, *Piper longum*, and *Terminalia chebula* are other herbs frequently used either singly or in combination. Research works shows that reduced side effect of chemotherapy and radiotherapy by Ashwagandha (*Withania somnifera*) and Haritaki (*Terminalia chebula*), and prevention of reoccurrence by Guduchi,[9] and Radioprotection and Chemoprotection action by administration of brahmarasayana, Besides bael, turmeric, ginger, triphala, and *Podophyllum hexandra*[19] the other immunomodulating herbs also show these properties.[20] Other herbs, such as Neem,

Amalaki, *Plumbago rosea*, and curcumin, and *semecarpus lehyam*[21] have been shown radio- and chemosensitizing properties.[22]

Habitual intake of *Basella rubra* or application of alkali preparation of *Musa paradisiacal*, Conch shell ash, *Elaeocarpus tuberculatus*, Sulphur, Potassium carbonate, *Embelia ribes* and ginger were used to cure Arbuda traditionally.[23]

Anti-cancer herbs commonly used in Ayurvedic treatment[10]

The mixture of Haritaki (*Terminalia chebula*), grape juice and *sugar cane juice* has been used. Resveratrol, a natural product derivative from grape juice has been proved to possess cancer chemopreventive activity. Tulsi (*Oxoxylum indicum*) the drug *Oxoxylum indicum* prescribed in treatment of *Granthi*.

Local application: The paste comprising of *Baliospermum montanum*, *Plumbago zeylanica*, *Euphorbia neriifolia*, *Calotropis procera*, jaggery, *Semecarpus anacardium* applied over the tumours. The barks of *Madhuca indica*, *Syzygium cumini*, *arjuna Terminalia arjuna* and *Salix caprea* are prescribed. A paste of *Pandanus odoratissimum* or *Pterospermum acerifolium* flowers with sugar was applied locally. *Raphanus sativus* powder paste with the radish ash was considered effective against *kaphaja Arbuda*. *Barleria prionitis* oil prepared with whole plant is indicated for external application during acute stages of cyst in blood vessels. *Prosopis cineraria* seeds, *Raphanus sativa*, *Moringa oleifera*, barley and mustard with sour buttermilk was applied locally for disintegrating cysts. *Amorphopallus campanulatus*. The mature tuber is first burnt and then mixed with butter and jaggery and applied for tumour destruction. *Flacourtia romantchi*, *Cassia fistula*, *Capparis sepiaria*, is recommended for *kaphaja* tumours. *Moringa oleifera* seeds, *Solanum xanthocarpum*, *Sinapis dichotoma*, *Holarrhena antidysenterica* and *Nerium odorum* roots prepared with buttermilk is used for *arbuda* tumours. *Ficus bengalensis* and *Saussurea lappa* pacify tumour growth on bone. *Curcuma domestica* powder in

combination with *Symplocos racemosa*, *Soymida febrifuga*, is mixed with honey is used. Poultice prepared of *Basella rubra*, the plant and leaves are ground with sour buttermilk with salt indicated for *arbuda*.

Therapeutic enhancement potential of ayurvedic herbs on cancer chemotherapy/radiation[24]

Allium sativum: S-allylmercaptocysteine (SAMC) (Water-soluble derivative of garlic) inhibited proliferation and cell cycle progression in two human colon cancer cell lines, Suggest usefulness alone or in combination with other chemo preventive agents.

Aloe vera: The protective effect of adding aloe to the soap regimen increases during long time radiation exposure. Patients with advanced solid tumours, Aloe vera extracts produced therapeutic benefits in terms of stabilization of disease and survival rate.

Alstonia scholaris: The *Alstonia scholaris* extract increased the effect of radiation as by enhancement of cell killing in HeLa and KB cells. In in vivo studies, mice with Ehrlich ascites carcinoma extract caused increased life span of animals. The combination treatment of *Alstonia scholaris* extract was also found to be most effective against Ehrlich ascites carcinoma as it caused the highest tumor regression and enhanced the survival time.

Curcuma longa: When radiation and curcuma were applied together, curcuma showed a radiation sensitising effect. Curcumin (active constituent of *Curcuma longa*) also enhances the anticancer potential of Cisplatin and reduces its nephrotoxicity in fibrosarcoma.

Heliotropium indicum: Patient of solid tumour who have undergone prior chemotherapy/radiation therapy, Indicine N-oxide (alkaloid from *Heliotropium indicum*) have shown improvement against skin melanoma and ovarian carcinoma.

Moringa oleifera: The leaf extract of *M. oleifera* exhibits significant radiation protection to the bone marrow chromosomes in mice and are useful to overcome side effects of radiation

therapy.

Nigella sativa: In Ehrlich ascites carcinoma, thymoquinone (TQ), (the constituent of the *Nigella sativa* oil) significantly enhanced the therapeutic efficacy, less body weight loss by improving its antitumour effect and reducing its nephrotoxicity.

Ocimum sanctum: Orientin and Vicenin (water-soluble flavonoids of leaves of *Ocimum sanctum*) have shown significant protection to the human lymphocytes against the clastogenic effect of radiation, radiation lethality and chromosomal aberrations there by radioprotection associated with their antioxidant activity.

Taxus buccata: Taxol (active constituent of *Taxus buccata*), ifosfamide, and carboplatin has proved active, safe, and easy to deliver in patients with advanced stage lung cancer. Taxol significantly improves the overall response rate, increases the time to progression and the overall survival in breast cancer patients. Taxol also exerts a weak radiosensitising effect on breast and cervical carcinoma cells.

Withania somnifera: *Ashwagandha* has shown significant reversal of neutropenia of paclitaxel in mice. It can be used as an adjuvant during cancer chemotherapy for the prevention of bone marrow depression associated with anticancer drugs. Withaferine (active component) showed significant antitumor and radiosensitising effects, without any noticeable systemic toxicity. In Ehrlich ascites carcinoma, the extract showed dose dependent inhibition on tumor growth and increased the survival rate. It also reduces cyclophosphamide induced myelo suppression and leucopenia, can be useful in combination with chemotherapy.

Importance of Rasaushadhi

Being a preventive medicine, Ayurveda has protective influence over the killing disease. It improves the immune system of the body against the disease due to its immunomodulatory activity. Prevents the multiplication of the cells by lekhan karma

(scraping action)E.g.: Vajra Bhasm, Abhrak Bhasma, Swarna bhasma, Rajata bhasma, Naag bhasma, Tamra Bhasma[24], Rasasindoor Hiraka bhasma,[25] Raudra bhasma,[26] Somanatha rasa,[27] Arbudahara rasa[28] Gandhadi lepa,[29] Ramabana rasa, Suvarnavangeshwara rasa, Suvarnamalini vasantha rasa, Nityananda rasa[30] etc.

There are many Rasaushadhis used in the management of Arbuda in early stage of disease and are helpful in the prevention of spreading of disease in further stages. As Rasa preparations can be administered even in incurable diseases, Preparation of Rasoshadhis are essential for treatment of ailing humanity, provided these are produced without compromising the fundamentals of the Ayurvedic pharmaceutical operations (like shodhana, marana, etc).

Pathya

Time tested life science emphasizes the importance of the right kind of food for the formation and sustain of body. Body is the product of food and that humans attain pleasure and sorrow [health & diseases] because of wholesomeness and unwholesomeness of the diet. Exercise and diet are important adjuncts to the primary treatment. Without wholesome diet medicines are of no use and with proper diet medicines are not required.[31] Use of herbs every day in the diet (e.g., ginger, turmeric, garlic, pepper, cloves, tulsi, and saffron) and taking seasonal detoxifiers and antioxidants such as triphala, neem, amalaki, piperine from black pepper, has been shown to be a bio enhancing principle.[32]

Avoiding a non-vegetarian diet has been shown to be preventive for tumorigenesis.[33] Cancers is most prevalent in the Western World and in India comparatively it's very low. For example, the incidence of prostate cancer is 50-fold less in India compared with the United States. The cause of the lower incidence, mortality, and morbidity could be lifestyle and diet related; the question of whether it is due to Ayurvedic principles

leading to a better diet and lifestyle is difficult to pinpoint. The 70% of the Indian population is vegetarian, and this may also contribute to the lower incidence of cancer.[34]

The concept of Aarjasrika rasayana [general rejuvenation] deals with pathya for improving quality of life by offering protection from external and internal stressors.

Discussion and Conclusion

Mamshajanam tu samshuddhi: shastra kshara agni karma cha | |

Surgical management in Ayurveda includes fomentation by means of external application, cleansing by internal medication, opening the tumour surgically for evacuation of its contents, cauterisation to avoid recurrence and post-operative care for healing the wound .Arbuda is excised completely from its deep root seat by cauterisation to destroy any of the remaining cell particles by using herbal and mineral medicines. Even agni karma, kshara sutra and jalukacharana have a great role in managing a disease like cancer. In the unripe stage of granthi, a treatment recommends as same as that of shophya. Different kinds of sweda (fomentation), upanaha (poultice), and lepa (pastes) were recommended. Once the granthi got ripens it should be cut open and drained of pus and the ulcer washed with the herbal decoctions and purified, followed by kshara agni karma by heat or alkalis and medicated oil application.[35]

Ayurvedic concepts of chemotherapy

Chemotherapeutic drugs can be considered as visha dravya (toxins) as they are cytotoxic and produce symptoms same as Garavisha. They are Ushna in virya , Tikshana, Laghu, Ruksha, Vishad, Vyavayi, Vikashi guna.[36] Most of the properties are opposite to Rasa, Rakta, Shukra dhatu, Ojus and Prakrit Kapha. Ayurveda is exploring the treatment of malignancies by clinical evidence through various research works. Management of complication of chemotherapy can be well

managed by the principles & line of treatment mentioned in Ayurveda. In Ayurveda these set of medicines (chemotherapeutic Drugs) can be understood as Tikhsna Aushadhas and their properties are almost similar to properties of visha (poison). The drug which cures the disease and at the same time will not produce any other disease or discomfort is uthamabheshaja (best medicine). So this review illustrates the same concepts.

Though from the lateral half of management of cancer, one should escalate our self to the former half of the management of cancer. Modern medicine also uses cytotoxic, chemotherapy, radiotherapy, and surgical removal of tumors, which are mainly shodhana (Purificatory) measures and mainly kapha reducing.

Ayurvedic treatment of cancer is a holistic approach and is currently preferred. The new wave of "system biology" and "genome revolution" is expected to provide a holistic approach to the treatment of cancer. In spite of it, this approach tends to ignore the relationship between mind, body, and spirit. It is our hope that Ayurveda can help fill this gap.

Overall, it provides a glimpse of the Ayurvedic approach to cancer and treatment. This review also an attempt to reveal, how these approaches can be applied in today's world. The current treatment tends to be focused at the molecular level and symptomatic relief; it is highly unfocused at the whole organism level. This way of approach diminishes the side effects noted with modern treatments that substantially impact the quality of life of cancer patients. These shamanaushadhis have been shown to improve appetite, food intake, malnutrition, fatigue, and sensation of well-being, which could elicits body-weight gain. Thus it rejuvenates the body tissues, tones up the body systems, and acts as a tonic to the body against cancer cachexia. Attention should be given not only to the evaluation of safety and examination of effectiveness in treatment strategy, but also to the consideration of community practice settings, patient

expectations, compliance and cost effectiveness. Because of this holistic approach towards total healing and health promotion, Ayurvedic treatment has a great deal of promise in cancer therapy.

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