

## Arbud-Tumor-Cancer- a concise integrative review

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### Abstract

The Cancerous diseases will cause 10 million deaths in 2020 and may increase in coming years (1). Since ancient times Cancer-Arbud has been considered a mega disease and critical for treatment. A review is presenting the conception, description and treatment modalities as described in ayurveda, a short review is presented in this article.

**Keywords:** Arbud, Cancer, Proliferation, Metastasis, Agnikarma, Radiation, DNA, Radiotherapy, Chemotherapy, Herbs, Anticancer, Samhita.

### Introduction

The Chancer is now considered a life style related disease and day by day the prevalence is increasing due to faulty life styles, all types of pollutions etc. Now Cancer stands as a challenge before medical sciences. This is not a new disease; it is described in Veda and Ayurveda the most ancient sciences. The Cancer research is one of the fields where maximum research is going on in all aspects but the treatment modalities are not satisfactory, safe, and economical despite newer and newer drugs and methods which are emerging. Alternative or traditional therapies are also in validation for safe and effective treatment.

### Methods

There are many ancient classical books, almost in all major books the Cancer is described, the more precise description is observed in the main surgical ancient book "Sushrut Samhita", was written by the famous physician and surgeon Susruta in the 6th century BCE who taught at Benares-Varanasi.

Sushruta (c. 600 BCE) is considered as the "founding father of surgery". His period is usually placed between the period of 1200 BC - 600 BC. One of the earliest known mentions of the name is from the Bower Manuscript where Sushruta is listed as one of the ten sages residing in the Himalayas.

The review is based on ancient conception,

etiopathogenesis, sign, symptoms, and treatment of "Arbud" which is called cancer in present terms. Here the herbal drug and diet aspects are reviewed in some details.

Arbud is described as a Mahagad = Mega disease, at present time the prevalence of cancerous diseases is very high and alarming. In general, Arbud is equated with cancerous diseases and it is worthy in view of the concept of cancer.

The characteristic feature of Arbud is growth, the meaning of Arbud is a mountain and the meaning of Arab is also a high numerical figure; we may take this in the sense of a mass with innumerable number of Peshis = Cells. In one sentence the definition of cancer is "Unwanted uncontrolled growth". In Traditional Chinese Medicine the cancer is denoted by a Mountain along with a patient on one side, this indicates the important feature of cancer as Growth. The same concept is observed in Chinese Medicine (2).

ग्रंथीसद्रशयोसु. नि., उत्सेदप्रधानः च.सू.,  
अर्बुदोऽयं ग्रथितो महान भवति । अ.सं.

Almost in all classical texts the Arbud is featured as a disease with mass or swelling.

Cancer is neither contagious or hereditary disease; it is caused due to genetic disorder which is the nuclear factor. It is suggested that every living organism has

some inactive cancer-causing genes called proto-oncogenes. Several physical, chemical, or biological agents are known to mutate and activate these proto-oncogenes into active and cancer-causing oncogenes. Due to altered gene activity, normal control mechanisms are lost and the abnormal cell growth and cell division take place.

यस्य यस्य अवयवस्य बीजे बीज भागः उपतप्तो भवती, तस्य तस्य अवयवस्य विक्रतीर्जायते नोपजायते च अनुतापात् ।

The physical and chemical agents, which induce cancer growth, are called carcinogens. The Sushrut Samhita commentator Acharya Dalhan narrates that the human Beej consists of many beejas of many organs or traits. The Gene is the basic physical unit of heredity. In the human body there are about 2500 genes which control many traits, organs, and organ parts specific characters.

The above genetic prime factor may be correlated with the description as narrated in Charak Samhita Sharira Sutra 3/17 it is mentioned that, any organ's Beej – Gene or its part if exists defective then that defect may have appeared in that organ (3).

In causation of Arbuda along with Mithyaahar and Vihar = non-Beneficial food and activities, two significant causes are described by Acharya Sushruta are as,

मुष्टीप्रहारदि Constant trauma / irritation and (4) मांसपरायन सु. नि. ३ / १८ – (5,6) Regular intake of non-vegetarian food; both these provocative factors are proved for causation of cancer.

Recently a link between excessive meat eating and cancer has been explained by Dr. Williard J. Visek, a research scientist at Cornell University. The problem, according to Dr. Visek, is ammonia, the carcinogenic by-product of meat digestion.

### Other causes

High blood pressure linked to brain tumor risk

### 21 December 2011 WCRF

People with high blood pressure may be at increased risk of developing brain tumors, a new study has suggested.

The study, by researchers from Austria, Norway, and Sweden who were funded by World Cancer Research Fund (WCRF), suggests people with high blood pressure are more likely to be diagnosed with brain tumors and that for some types the risk may be double.

The results suggested the 20 percent of participants with the highest blood pressure readings were twice as likely to later be diagnosed with meningioma or

malignant glioma (7).

### Sign and symptoms of Arbud

गात्रप्रदेशे क्वचिद्येव -The Arbud may appear in any part or organ of the body (8)

दोषः सम्मूर्च्छितः the functional tissues in the Arbud exists in precipitated form means there is no differentiation of cells is observed (9).

मांसमभिप्रदुश्या Mainly the Mansa = Muscular tissues are vitiated; here we should assume the meaning of Mansa considering its core meaning including its sub tissue skin (10).

वृत्तम Circular, this feature indicates the that it may spread in any direction (11).

स्थिरम Fixed, it is anchored in surrounding tissues

मंदरूजम Mild pain, it is due to compactness of tissues (12).

महन्तम- Deeply rooted in the tissues

अनल्प मूलम- Invasion of many tissues or organs (13).

चिरवृद्धयपाकम Very delayed pus formation (infection) सु.नि. ११/१३-१४,

नपाकमायन्तिकफाधिकत्वात्मेदोबहुत्वाच्चविशेषतस्तु।दोषस्थिरत्वात्ग्रंथीनाच्चतेषांसर्वार्बुदान्येवनिर्गतस्तुसु.नि. ११/२१

Delayed inflammatory changes in later stages of cancer are due to solidified impact mass which is due to predominance of Kapha and Meda occurring almost in all Arbudas is the nature of disease.

अनौकदेशेश्वसनिलादिभिः स्यात्स्वरूपधारीस्फुरणसिराभिः । च.चि. १२ / ८१-(14)

दोषः प्रदुष्टोरुधिरं सिरास्तुसंपिड्य....सु. नि. ११ / १७

In genesis of Arbud Angiogenesis is very much important in the initial phase the vessels are dilated forming a network enhancing rapid multiplication of abnormal cancerous cells. This phenomenon is described in Charak and Sushrut Samhita in detail denoting the word "Sfuran Sirabhi" =Dilatation of blood vessels.

### Classification of Arbuda

Arbuda is classified into two types as its Doshik = bodily humors predominance and curability:

Curable: Vataj, Pittaj, Kaphaj and Sharkararbud; these may be considered as Benign tumors.

Incurable: Raktaj=Blood born, Mansaj= Sarcoma and Medoj= Fatty tissues born; these may be considered as Malignant tumors.

Further in another way Arbuds are classified -



concise research study of some anticancer plants is narrated.

### ***Emblica officinalis***

The antioxidant activity of *E. officinalis* was attributed to the high content of ascorbic acid but it was discovered that such effects may be due to the tannins, Emblicanin A and Emblicanin B.

Another study found that an aqueous extract of *E. officinalis* decreased tumor volume through inhibiting the cell cycle regulating enzyme CDC25.

Progallin extracted from *E. officinalis* leaves also caused cell cycle arrest in the G1/M and G2/M phase, inhibited proliferation, and induce apoptosis in human hepatocellular carcinoma cells (BEL-7404) – (18).

*E. officinalis* extract confers hepatoprotection by reducing lipid peroxides in serum and liver, alkaline phosphatase, and glutamate-pyruvate transaminase.

The *E. officinalis* berry extract is effective in triple breast cancer (19).

### **Cinnamon**

Cinnamon is beneficial in cancer by delaying the process of development at the stages from initiation to metastasis (20).

Cinnamon extract is very much effective in tumor cell proliferation and death of cancer cells through inhibition of NFκB and AP1. This action of Cinnamon is considered a potent anticancer herbal drug in different types of cancer (21).

### **Curcumin**

The curcumin an Indian spice is a potential herbal drug and proved in clinical trials conducted in many research institutes and established to be a third-generation chemo preventive agent.

Curcumin possesses strong anti-inflammatory action and a potent inhibitor of reactive oxygen-generating enzymes.

Apart from this the Curcumin is also a potent inhibitor of protein kinase C, EGF-receptor tyrosine kinase and I Kappa kinase. (22, 23, 24).

### **Flaxseed**

The both types of Flaxseeds like brown and gold are the richest source of mammalian lignan precursors, and proved the reduction in the growth of tumors in rats. Based on this laboratory study a randomized double-blind placebo-controlled clinical trial was conducted and observed the positive effects in breast cancer patients (25).

### ***Withania somnifera***

The *Withania somnifera* leaves extract is rich in many

active chemical components found effective in Growth inhibition of human tumor cell lines (26).

### ***Triphala***

The Triphala extract has a novel dual activity to induce cytotoxicity in tumor cells but without any harm to normal cells. This feature of Triphala has widened its uses in different types of cancers and in protective action during chemo radio therapies (27,28).

### **Pomegranate**

Pomegranate fruit extract (PFE) is rich in many bioactive chemicals having anti-cancer activity in Skin, Breast, Lung, Colon, and Prostate cancers (29).

### ***Moringa oleifera* Lam**

The *Moringa Oleifera* is a potent anticancer herb, in all parts of the plant possesses bioactive chemicals beneficial in varied types of cancers like Hepatic, Breast, Leukemia, and apart from this it has radio-protective actions also (30).

### ***Commiphora Mukul***

The guggulsterone- the bio-active chemical induced cell death in human prostate cancer cells, and enhances the activity of chemotherapeutic drugs (31).

*Centella asiatica* Linn the *Centella asiatica* is rich in Asiatic acid a bio-active chemical effective in many cancers in Nasopharyngeal cancer (32).

In another study it is observed that, *C. asiatica* extract is associated with modification of cell proliferation and induction of apoptosis in colonic crypts and that the extract has a chemo preventive effect on colon tumorigenesis (33).

### ***Spices for Prevention and Treatment of Cancers***

Several spices are potential sources for prevention and treatment of cancers, such as *Curcuma longa* (turmeric), *Nigella sativa* (black cumin), *Zingiber officinale* (ginger), *Allium sativum* (garlic), *Crocus sativus* (saffron), *Piper nigrum* (black pepper) and *Capsicum annum* (chili pepper), which contained several important bioactive compounds, such as

curcumin, thymoquinone, piperine and capsaicin. The main mechanisms of action include inducing apoptosis, inhibiting proliferation, migration and invasion of tumors, and sensitizing tumors to radiotherapy and chemotherapy. This review summarized recent studies on some spices for prevention and treatment of cancers (34).

Some Single and Compound Poly herbal / metallic formulations

- Guduchi satva, Ashvagandharishta, Kumariasava, Rohitakarishtha, Chitrakadi vati, Apamarg kshara, Shilajatu, Bhallatakasava, Pippalyasava
- Tamra bhasma, Suvarna bhasma, Rajat bhasma, Hirak bhasma, Mauktik bhasma, Manikyā bhasma, Aditya rasa, Navjivan rasa, \* Harital bhasma, Kanchanar guggulu, Narsimha rasayan, Arogya Vardhan, Praval bhasma CCRAS and ACTREC-TATA Joint research project for screening anticancer activities of herbs described in Ayurveda. The anticancer activity of fifteen herbal extracts was conducted against fourteen different cancer cell lines. Among these nine plants extract has shown anticancer activity against eight different cell lines.

### Result

This short review explains the Cancer description in ancient Indian health care science Ayurveda. The most of the features and treatment modalities are in principally like today's prevalent treatment of Cancer.

### Conclusion

There are many treatment modalities for cancer, the CAM is not explored in depth, particularly anticancer herbs, dietary advices, Panchakarma= Bio-Cleansing therapy, Yoga, and Spiritual practices hence more efforts are required (35, 36, 37, 38).

### Conflict of interest

The author declares no conflict of interest.

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