

## AN INTEGRATED APPROACH TO CANCER MANAGEMENT

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### ABSTRACT

Once Cancer was not even among the *AshtaMahaGadas*, now, from irrelevance it has risen to be one of the most dreadful diseases today. *Dinacharya*, *Ritucharya* and *Sadvritta* though generalized, are simple and effective tools of Ayurveda. Surgery, Chemotherapy & Radiotherapy are the options in Oncology, where adverse effects include an agony far more severe than actual disease. Chemotherapy causes collateral damage, severe weakness, cachexia, GI disturbances, fever, hair fall, etc, suppresses bone marrow and lowers hematological counts. Deteriorating general condition of the patient may make them less punctual to undergo Chemotherapy cycles too.

It is observed that adverse effects of Chemotherapy are remarkably reduced when on Ayurvedic management. Ayurvedic care effectively counters the negatives without altering the basic purpose of the Chemotherapy or radiotherapy modality, thus resulting in a synergy. Digestible and energizing *Pathya* consisting of *mudga*, *ghrita*, *madhu*, *navanita* etc enhances nutrition and calorie supply. Insomnia due to stress & physiological disturbances is obvious, observing *āchāra rasāyana* helps in coping up with such conditions and consequences. Counseling patients & relatives is a *Sattvāvajaya Chikitsa* and is of utmost importance in management of Cancer and its allied adversities. Cancer patients are definitely benefited with this type of integrated approach in treatment.

**Keywords:** *Sattvāvajaya*, *āchāra rasāyana*, *nitya sēvaniya pathyāhāra*, post-chemotherapy cancer care.

### INTRODUCTION

Cancer is one of the most dreaded diseases of the 21st century. India is likely to have over 17.3 lakh new cases of cancer and over 8.8 lakh deaths due to the disease by 2020<sup>(1)</sup>. It is considered as an adversary of modernization and advanced pattern of socio-cultural life dominated by Western medicine. Multidisciplinary scientific investigations are making best efforts to combat this disease, but the sure-shot, perfect cure is yet to be come. Ayurveda, a traditional medicine has been successful from very ear-

ly times in using natural drugs along with diet and life style management in preventing or suppressing various tumors.

Only 5–10% of all cancer cases can be attributed to genetic defects, whereas the remaining 90–95% are due to the environment and lifestyle<sup>(2)</sup>.

The lifestyle factors include cigarette smoking, diet (fried foods, red meat), alcohol, sun exposure, environmental pollutants, infections, stress, obesity, physical inactivity etc.

The evidence indicates that of all cancer-related deaths, almost 25–30% are due to tobacco, 30–35% linked to diet, 15–20% due to infections, and the remaining percentage are due to other factors like radiation, stress, physical activity, environmental pollutants etc<sup>(2)</sup>.

### Ayurvedic concept of cancer

Ayurvedic classics describe cancer as inflammatory or non-inflammatory swelling and mention them as either *Granthi* or *Arbuda*. In benign neoplasm (*Vataja*, *Pittaja* or *Kaphaja*) 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. Malignant tumours (*Tridoshaja*) are very harmful because all the three major bodily systems lose mutual coordination leading to tissue damage, resulting in a deadly morbid condition<sup>[3,4]</sup>.

### Types:

*Vataja*, *Pittaja*, *Kaphaja*, *Raktaja*, *Mamsaja* & *Medaja*

### Etiology:

According to Sushruta, the fundamental cause of major neoplasm is the pathogens that affect all parts of the body. He called the sixth layer of the skin as '*Rohini*,' (epithelium) and pathogenic injuries to this layer in muscular tissues and blood vessels caused by lifestyle errors, unhealthy foods, poor hygiene and bad habits results in the derangement of *doshas*, which leads to the manifestation of tumours<sup>[4]</sup>.

In modern era, importance of dietary habits and environmental factors are given as main etiological factors for precipitation of cancer.

### Pathogenesis in Ayurveda<sup>[5]</sup>

According to Ayurvedic principles, the disease cannot be named on its own because it differs between persons in terms of illness, clinical presentation and also the treatment required<sup>[6]</sup>. Thus, pathogenesis in Ayurveda is explained on the basis of *Tridoshas*.

*Agni* and *Pitta*, which is present in each and every cell, is responsible for digestion and metabolism in human body. The decrease in *agni* is inversely proportional to the related tissue and therefore in *arbuda*, the decreased state of *dhatwagni* will result in excessive tissue growth. *Vata* can be correlated with the anabolic phase of growth whereas *kapha* to the catabolic phase. Cancer originates due to a metabolic crisis, i.e. aggravation of *vata* forces and suppression of *kapha* forces, both interacting with one another resulting in proliferation. However, the abnormal cancerous growth at a specific organ (*Ekadesavridhi*) is managed by compensation from other parts of the body (*Anyasthaniyakshaya*), e.g. body weight loss (cachexia)<sup>[7]</sup>

### Cancer therapy—a practical dilemma:

Any practical solution in combating this dreadful disease is of paramount importance. An alternative solution to western medicine is the use of medicinal plant preparations to check the nature of the disease. Many herbs have been evaluated in clinical studies and are currently being investigated phytochemically to understand their tumouricidal actions against various cancers. Ayurvedic therapy was found to be able to cure these chronic diseases better, which were previously not amenable to treatment by western medical practices.

### Allopathic Treatments

Surgery, Radiation Therapy, Chemotherapy, Immunotherapy, Targeted Therapy, Hormone Therapy, Stem Cell Transplant, Precision Medicine.

### Side Effects

Different drugs cause different side effects. Certain types of chemotherapy have common side effects. But each person's experience is different.

Fatigue, headaches, muscle pain, stomach ache, pain from nerve damage, peripheral neuropathy, mouth ulcers, sore throat, diarrhea, nausea, vomiting, constipation, anemia, dizziness, shortness of breath, leukopenia, stiff neck, sexual and reproductive is-

sues, appetite loss, weight loss, malnutrition, hair loss, radiation recall etc.

People who have had chemotherapy may develop side effects months or years after treatment. These are called late side effects. Cancer survivors also have a higher risk of second cancers later in life.

### Treatment base in Ayurveda

*Daivavyapashraya, Yuktivyapashraya, Satwawajaya*

### Therapeutic approach of Ayurveda<sup>[5]</sup>

*Sodhana chikitsa, Shamana chikitsa, Rasayana prayoga, Vyadhipratyanika chikitsa, Lakshanika chikitsa, Hita ahara-vihara, Satwawajaya, Daivavyapashraya, Yoga & Pranayama*

### Few anti cancerous drugs

The key role of herbal medicine in cancer treatment is their immuno modulatory effect and chemoprevention. Apoptosis induction is one of the main applications of chemo preventive plants. *Picrorhiza kurroa, Cedrus deodara, Piper longum, Vitex negundo, Berberies Aristata, Aloe vera, Catharanthus roseus, Syzygium aromaticum, Aegle marmelos, Allium cepa, Allium sativum, Azadiracta indica, Bauhinia variegata, Curcuma longa, Glycyrrhiza glabra, Ocimum sanctum, Rubia cordifolia, Saussurea lappa, Solanum nigrum, Tinospora cordifolia, Vitex rotundus, Zingiber officianale* etc are few common ones used.

### Dinacharya

*Dinacharya* starts with waking up at *brahmi muhurta*- during this time, *shuddha vayu, jala, bhumi, prakasha* and *akasha* is present. Morden science accepts that the exposure to early morning sun rays reduces Vit D deficiency. *Mukha daurgandhya, vibandha, ajeerna, aalasya* etc can be reduced by waking up early.

**Danta dhawana:** With twigs of *vata, asana, arka, khadira, karanja, arimeda, apamarga, arjuna* etc which has *kashaya, tikta, katu rasa* have *krimighna, jantughna, vranaropana* properties.

Catechin present in *khadira* has anti oxidant properties and reduces risk of cancer. The alkaline and volatile oils of these drugs help in strengthening the gums and teeth. Margosin of neem and karanjin of *karanja* possess germicidal properties. Massaging the gums with *triphala, trikatu, trijataka* and *madhu* helps in reducing gingivitis and loose teeth.

**Kavala and Gandusha:** Strengthens the mandible, improves voice quality, nourishes the face, enhances taste-perception, tooth-decay, strengthens teeth & gums, reduces hypersensitivity of teeth. Oil pulling is practiced today & advised by all most all dentists for maintaining proper oral hygiene.

**Vyayama:** Improves immune system, improves metabolism resulting in decreasing GI disturbances, improves strength and flexibility, reduce inflammation etc,. . Exercise has a number of biological effects on the body, some of which have been proposed to explain associations with specific cancers, including: Lowering the levels of hormones, and of certain growth factors that have been associated with cancer development and progression (lowers blood estrogen – thus lowering the risk of breast cancer); Helping to prevent obesity and decreasing the harmful effects of obesity, particularly by the development of insulin resistance. Exercise increases production and release of serotonin.

### Abhyanga:

Helps in combating with insomnia, different types of pain, fatigue, tiredness, wrinkles, numbness and stiffness of the feet, cracked feet etc Several studies have shown that there is increase in serotonin release with abhyanga. Research carried out by the Touch Research Institute at the University Of Miami School Of Medicine reports that there is increase in dopamine with massage. Dopamine is known to help control nausea and vomiting.

**Nityopayogi Ahara:**

*Shashtika shali, mudga, saindhava, amalaki, yava, antareksha jala, ksheera, sarpi, jangala mamsa, madhu* are to be included in daily diet.

*Shashtika shali* has very low glycemic index compared to normal rice, *shashtika* is higher in Protein content by 16.5%, Thiamin by 27-32% Riboflavin by 4-25%, Niacin by 2-36%. Contains the Bowman Brik trypsin inhibitor protein, which is known for its anti-carcinogenic effect.

Ghee has MCTs have been found to be easier on digestion and easily broken down and absorbed; more readily available in the liver and transformed into energy; stimulating for the body's metabolism and thus supporting weight loss. Ghee has Omega3 fatty acids also which is an anti oxidant.

Honey has apoptotic activity, antiproliferative activity, anti-inflammatory, immunomodulatory, anti-oxidant, antimutagenic and estrogen modulatory activity.

**Ritucharya:**

By regulating the *ahara vihara* according to seasons, the possibility of *doshavaishmya* is minimized, increases immunity, reduces GI disturbances and promotes well being.

**Achara rasayana:**

By observing truthfulness, refraining from anger-alcohol- violence- exertion, remaining peaceful, soft spoken, *samaswapna jaagarana, nitya ksheera gruta abhyasa*, regime according to *kaala* and *desa*, etc helps in maintaining comfortable psychological and physical activity, which leads to hormone balance, restoration of anabolic activity, leading to *ojovridhhi* and in turn enhances immunity.

In 1991, a study was carried out & the participant's blood showed significant reduction in the levels of serotonin after 45 minutes of consuming alcohol. Serotonin is the most essential mood relating hormone. High levels of serotonin are associated with sleep, appetite, happiness, contentment etc. Low levels cause anxiety, agitation, and depression.

Melatonin is pumped out from brain during sleep, which is an anti oxidant, capable of preventing damage to DNA. Leading scientist Prof David Spiegel from Stanford University says that he has found evidence that sleep can help cancer recovery. In his studies, the night shift working women – had less melatonin – and thus an increase in estrogen – causing more possibility of breast and ovarian cancer.

**Yoga & Pranayama in cancer:**

Practice of *pranayama* like *Kapalabhati, Bhastrika* and *Anulom vilom pranayama* daily for 30 minutes is reported to help in issues related with cancer. *Pranayama* regenerates dead cells, is excellent in enhancing immune system, releases stress depression and hypertension, improves blood circulation, strengthens the mind, body, soul and improves positive thinking.

**CONCLUSION**

With global warming and variation in seasons, observing *Ritucharya* in the present scenario is a query. *Ritucharya* is based on *Dosha* and *Panchamahabhuta* theory. Since *Ritus* do not follow uniformity, level of *Dosha* and *Pancha mahabhuta* should be analyzed accordingly, to decide the regimen. These principles surely demand a closer observation for clarity.

Following *dinacharya, ritu charya* and *achara rasayana* will help not only to prevent cancer, but also to revert the complications during the therapies. *Nityopayogi ahara* and proper *vihara* helps in maintaining the equilibrium of *doshas* and in turn both physical and psychological well being.

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