



CONCEPT OF CANCER IN MODERN AYURVEDA

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ABSTRACT

Cancer originates due to metabolic changes. Vata Dosha is responsible for cell division. Aggravation of Vata Dosha and suppression of Kapha Dosha or both the Doshas interacting with one another may result in proliferation with one another may result in proliferation of cells. The knowledge and management of the disease, cancer was not unknown to the ancient surgeons of India. However the Ekadeshavridhi (Growth of specific part) is a part of abnormal cell division resulting in Benign or Malignant tumours. Theoretical based mechanisms and action of Ayurvedic therapy is supposed to treat and prevent these entities well fully by which patient's quality of life improves. In this 21st century the world is running behind alternative medicines like Ayurveda to minimize the side effects due to chemotherapy and prolong their lifespan. The Ayurvedic science is believed to add a step on to the curative aspects of cancer and lead to healthy cells in addition to controlling /killing the cancer cells. Hence, attempt is made in this review to discuss about the pathology and principle of therapeutic management of various cancers described in Ayurveda.

KEYWORDS: Arbuda; Cancer; Ayurvedic principle; Tumours; Granthi.

INTRODUCTION

The word cancer is derived from the Greek meaning 'crab' which was used in medical sciences for long time as mere technical term 'CANKER' applied to eroding ulcers. Such swelling or lumps have been categorized under the heading of "ARBUDA". The world is facing 2nd cause of death by survival of Cancer. In this 21st century the world is running behind alternative medicines like Ayurveda to minimize the side effects due to chemotherapy & prolong their lifespan.

Arbuda is a more dangerous type of growth that can hurt or kill the individual & that which can grow in size by multiples of hundreds & crores. Arbuda (cancer or tumour) group of diseases are well matched with various types of cancer or cancer related symptoms. The treating cancer has more challengeable to medical scientists due to known adverse effects with three principal modes of treatment viz. surgery, chemotherapy & radiotherapy because each of these has its own limitation.

The Ayurvedic literature describes how this therapy aims to restore a balance of Dosha (Humours), Dhatu (bodily tissues) & Naishtika chikitsa (spirit for good health) along with the main treatment gives complete wellness of humanity in such life hold disease⁽¹³⁾.

Ayurveda offers treatment with many single & poly

herbal or herbo-mineral preparations which promote immunity and manage cancer and its related symptoms. By adjuvant with established treatment, Ayurveda provide better quality cancerous growth at a specific organ (Ekadeshavridhi) is managed by compensation from other parts of the body (Anyasthaniyakshya) eg. Body weight loss (cachexia).

CONCEPT OF CANCER (ARBUDA) -

The classics clearly describes about both Granthi (tumour) and Arbuda (cancer). The classification of neoplasm depends on various lakshanas in relation to tridoshas (Vata, Pitta, Kapha) in Ayurveda. The condition that can be named as malignant treatment of cancer.

When the treatment does not show any good prognosis, then surgical management is followed in Ayurveda which include the principles of fomentation by means of external application, opening the tumour surgically for evacuation of its contents, cauterization to avoid recurrence and post-operative care for healing the wound cauterization with Ksharas (alkalis) and mineral medicines. Arbuda (cancerous tumour) is excised completely from its deep root and cauterization is done to destroy any of the remnants of carcinoma.

ETIOPATHOGENESIS OF CANCER-

It is based mainly on Dosis theory i.e. Vata, Pitta and

kapha. Further by Mithya Ahara and Vihara the different humours are vitiated involving different Dhatus (Mamsa, Meda, Rakta etc. resulting in the prescription of Arbuda. Agni which present in each and every cell, is responsible for digestion and metabolism in human body. The decrease in Agni is the responsible for production of Ama (Autotoxins) which leads to impairment of body channels (Srotamsi). Thus inverse proportional of the related tissue form which leads to manifestation of Arbuda. Therefore in Arbuda, the decreased state of Dhatwagni (deranged metabolism) will result in excessive tissue growth. 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). Sushruta has proposed six stages in the Shatkriyakala⁽³⁾(pathogenesis of all diseases) but this concept suits more to the pathology of the tumour than pathogenesis itself.

- 1) Sanchaya (stage of Aggravation)- Early stages of localised neoplastic changes.
- 2) Prakopa (stage of Accumulation) – Transformation of primary growths into metastatic tumours.
- 3) Prasara (stage of overflow) – metastasis
- 4) Sthana-samsraya (stage of Relocation) – Complete metastasis and secondary growth.
- 5) Vyakti (stage of build-up in a new location) – clinical signs and symptoms are expressed.
- 6) Bheda (stage of manifestation) – The stage where differentiation of growth occurs on the basis of histopathology.

TYPES OF ARBUDA ACCORDING TO PROGNOSIS

Arbudas described in Ayurvedic text books, they can be placed under 2 categories:- 1. Sadhya Asadhya (malignant). Arbuda is a protruding disorder. It can remain confined to any particular tissues or organ. Sushruta agrees with Charaka that Arbuda and Granthi have very little difference. Arbuda or cancer are 6 types which are being given here under- i) Vataja ii) Pittaja iii) Kaphaja iv) Raktaja – Pitta predominance v) Mamsaja – Vata predominance. vi) Medoja.

BASIC CLASSIFICATION OF CANCER AND RELATED

SYMPTOMS - 1) Group – I – Diseases that can be named as clear malignancy, which includes Arbuda and Granthi eg.- Mamsarbuda (melanoma) and Raktarbuda (leukemia) etc. 2) Group – II – Diseases that can be considered as cancer, such as incurable ulcers with eg. Tridosha Gulmas (Abdominal tumours like carcinomas of the stomach) 3) Group – III – Diseases with the possibility of malignancy eg. Visarp (erysipelas) and Nadi Vrana (sinusitis).

*STAGES OF CANCER ON MODERN- There are 2

main types of staging systems for cancer. These are the TNM systems.

T→ Size of the cancer & how far it has spread into nearby tissue –it can be 1, 2, 3 or 4, with 1 being small and 4 large.

N→ Whether the cancer has spread to the lymph nodes.

M→ Whether the cancer has spread to another part of the body it can either be 0 or 1.

*Following stages on cancer.

STAGE -0 – Carcinoma in situ – Early form.

STAGE 1- Localized, the cancer cells look very similar to normal cells and are growing slowly.

STAGE- 2 – Early locally advanced, the cells don't look like normal cells and are growing more quickly than normal.

STAGE -3- Late locally advanced, the cancer cells look very abnormal and are growing quickly.

STAGE 4- Metastasized. Means the cancer has spread from where it started to another body organ. This is also called secondary or metastatic cancer.

THE STAGES IN THE DEVELOPMENT OF ARBUDA AND ITS CORRELATION WITH CANCER.

- 1) Arbuda is a localized growth in any part of the body - Gatrapradeshik Kvachidevadosha.
- 2) Initially it grows slowly and silently- Ciravridhi, Apaka.
- 3) Local spreading of the growth and rooting – Analpamulam.
- 4) Fixation – Krtamulatvam, Achalam.
- 5) Spreading – Mahavastuparigraha.
- 6) Ulcerating – Samprastrutam.
- 7) Recurrence – Adhyarbuda.
- 8) Metastasis – Dvirarbuda.

OTHER DISEASES SIMILAR TO CANCER DESCRIBED IN THE AYURVEDIC TEXTS –

It is not very clear whether the ancient Ayurvedic physicians were aware of the nontumour forming cancers. For the matter, it seems that Ayurveda did not group all cancers under a single heading for instance, certain stages of diseases like Gulma, Pandu and Vidradhi seem to resemble cancer. There is a disease known as Valmika described in the later texts of Ayurveda that seems to match the description of cancer.

PRINCIPLES OF AYURVEDIC HEALING^[6]

The causative factors which upset the balancing of Dosha and Dhatu of human system and leads to disease like cancer. It classifies disease development into 6 stages that include aggravation. The Ayurvedic system of medicine was founded on the basic principles of nature and its elements after a careful and through study of human physiology (Lok-Purusha Samatavada). The treatment is aimed to establish the normal conditions (Prakriti Sthapan) in doing so 2 major processes are involved as described below – Sampraptivighatan: Breaking down the morbid condition of Doshas and

Dushyas. Ii) Kshinanamvridhi : Reversal of morbid process Vridhaman Kramasah by Shodhna and Shamana.

THEORETICAL BASED ACTION OF AYURVEDIC THERAPY FORCANCER^[7]

The therapeutic approach of Ayurveda has been divided into 4 categories.

- i) Prakritisthapani chikitsa (Health maintenance).
- ii) Rognashani chikitsa (Disease care).
- iii) Rasayan chikitsa (Restoration of normal function)
- iv) Naishtiki chikitsa (Spiritual approach)

Surgery is considered only for advanced cases. Finding the cause of illness is the basic goal of Ayurvedic therapy through Yuktivyapashraya chikitsa (skillful treatment by physician) and in cancer.

- Nidan Parivarjana (Maintain life style)
 - Pathya- Apathya (controlled diet regimen)
 - Yuktivyapashraya Chikitsa (skillful treatment)
- 1-Shodhana Chikitsa 1)Doshapratyanika chikitsa (Balancing Tumours) (purification process)
 - 2) Vyadhipratyanika chikitsa (anti-cancerous effect) 2-Shaman Chikitsa(subsided treatment)
- Rasayana Prayoga (Immunotherapy) – Adjuvant therapy
- i) Dhatwagni Chikitsa (correction of metabolic defects)
 - ii) Dhatupushti Chikitsa (tissue nourishment)
- Lakshanika chikitsa (symptomatic treatment)
 - Upadrava Chikitsa (Management of complications)
 - Shalya karma (surgery)
 - Agnikarma (cauterization)
 - Naishtika Chikitsa (spiritual approach)

APPLICATION OF MODERN RESEARCH ON AYURVEDA IN CANCER.

1) Modern research is being conducted to explore the anti-cancer effects of herbs and formulations described in classical texts. It is of paramount of to a solution for combating this dreadful disease ⁽¹⁰⁾. The generation of aldehydes during chemotherapy could be reduced by the use of antioxidants from herbals used in Ayurvedic system of medicine. Therefore many researches are conducted at phyto-chemical levels, pharmacological levels and clinically on herbs to study the anti- cancerous effect and to develop the Immune system in the cancer patients.

- 1) Sadabahar (Catharanthus roseus) – Vincalengkoblastine and Leuroscristine used in treatment for breast cancer.
- 2) Ardrak (zingiber officinale) – Constituents present in ginger and other zingiberaceous plants have potent antioxidant and anti-inflammatory activities and some of them exhibit cancer preventive activity in carcinogenesis.
- 3) Ashwagandha (withania somnifera) – Apoptotic activity of methanol extract of Ashwagandha (MEAG) and treatment of human head and neck squamous cell carcinoma (HNSCC)
- 4) Kumari (Aloe vera) – The protective effect of adding aloe to the soap regimen increases during long

time radiation exposure.

- 5) Tulasi (Ocimum sanctum) – Anti-proliferative and anti-apoptotic effect of ethanolic and methanolic extracts and treated of tumour suppressor gene anti-migratory effectson cancer cells
- 6) Bhallatak (semicarpus anacardium) – chloroform extract of the whole nut gives symptomatic relief in human cancer of the oesophagus and in myeloid leukemia. Marking nut contains k-40 chemotherapeutic value in cancer.
- 7) Shigru (Moringa oleifera) – m.oleifera exhibits significant radiation protection to the bone marrow chromosomes.
- 8) Rasona (Allium sativum) – Effects sulindac sulphide (ss), a well - known colon cancer chemo-preventive agent.
- 9) Manjishta (Rubia cordifolia) – mild neoplastic activity and its often used as a part of uterine and ovarian cancer formulas.
- 10) Haridra (Curcuma longa) – when radiation and curcuma were applied together as synergical therapy, Curcuma showed a radiation sensitizing effect in HeLa.
- 11) Guduchi (Tinospora cordifolia) –Methanolic extract showed significant anticancer against MDA-MB-23) human breast cancer line.
- 12) Saptaparna (Alstonia scholaris) – Treatment of alstonia scholaris extract found to be most effective against Ehrlich ascites carcinoma.
- 13) Shatavari (Asparagus racemosus) & 14) Bacopa monnieri) – Found to possess anticarcinogenic activity. An alcoholic extract of both herbs has been shown to be effective in reducing epidermal carcinoma of the nasopharynx.

- Vyadhipratyanika Chikitsa – (anti- cancerous activity)

The technique applied to treat the disease and protect the progress of disease is known as Yuktivyapashraya chikitsa .In which skill based treatment approach is adopted by a physician to manage the disease condition. Shodhana Chikitsa, which eliminates vitiated Doshas, have been primarily used for medical management of cancer .When both internal and external medications were given then it is called as Panchakarma Chikitsa. Detoxification on cancer patients showed the increased haemoglobin levels and normalized liver functions .It was found helpful in minimizing the adverse effects of chemotherapeutic agents. The other type of curative therapy is called Shaman Chikitsa. Shamana chikitsa is based on the properties of drugs which having taste like Tikta, Kashaya act as Dhatu vridhdhikar and Raktaprasadak and Lekhna action simultaneously. Some medicinal plants protect the body from cancer by enhancing detoxification functions of the body.

- Rasayana therapy in cancer – Tissue familiar Rasayana drug may protect the tissues involving in progression in pathology of disease .It may protect disease to spread .Thehealth related quality of life is a multidimensional construct that includes the subjective appraisal of the patients physical, mental

and social well-being.

- Concept of Dhatupushti (protect the strength of patient at cellular level) – Acharya Sushruta has been quoted that factor that should be preserved for the arrest of the progress of the disease.
 - Upadrava Chikitsa and Adjuvant therapy in cancer – Adjunct treatment with Ayurvedic Herbo-mineral drugs Maatikyukta- Kamdudha and metallic drugs. Swarnabhasmadi yoga appear to have a significant effect on reducing the toxic side effects of chemotherapy drugs in cancer patients.
 - Shalya Chikitsa and Agnikarma in cancer – Surgical cancer management in Ayurveda include the principles of fomentation by means of external application cleansing by internal medication, treatment to liquefy the contents of the swelling opening the tumour surgically for evacuation of its contents, cauterisation to avoid recurrence and post-operative care for healing the wound. Naishtika Chikitsa in cancer (spiritual approach)- The anxiety and stress leads to turn to increase of pain, some sorts of breathing techniques, chanting of mantras, pronouncing of Omkara as a form of Naishtika chikitsa.
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CONCLUSION

In Ayurveda, cancer and its related symptoms may be classified on the basis of Dosha, Dhatu and tumour site and prognosis types. Treatment modalities may be adopted accordingly. Various intervention studies have proved the Ayurvedic herbs enhance the quality of life during cancer chemotherapy / radiation. Ayurvedic literature reveals that the clinical features of tumour forming cancers were well understood in the very early stages of the evolutionary history of Ayurveda. Systematic and rigorous research is needed to pinpoint the specific benefits that Ayurveda can offer in the management of cancer.

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