

CANCER IN AURVEDA - AN APPROACH IN ETIOPATHOGENESISKalpana B Kachare¹, A C Kar²¹PhD. Scholar, Vikriti Vigyan Department, Faculty of Ayurveda, IMS, BHU, Varanasi, Uttar Pradesh, India²Professor, Vikriti Vigyan Dept., Faculty Of Ayurveda, IMS, BHU, Varanasi, Uttar Pradesh, India**ABSTRACT**

The Cancer is such a disease, which is very complicated in nature with complexity at every level at anatomy, physiology, biochemistry, molecular biology and gene expression. So treating such disease is a big challenge. Numerous techniques are employed to combat these diseases, including surgery, radiotherapy, chemotherapy, interferon therapy, hormone therapy and blood transfusion. But the remedies that are currently in use are either only for reducing the immediate complications associated with these diseases or for slowing down the proliferation of the diseases. Thus the mortality and morbidity rates are more in cancer person. *Ayurveda* which is not only a system of medicine but a way of life, advocating prevention of disease as its primary aim and following holistic approach in dealing with different diseases. As per the sequence of pathogenesis of disease given by *Madhavkara*, *Nidan* is the first step and foremost step of the manifestation of disease and it gives the particular knowledge about the pathogenesis of disease. *Ayurveda* is supposed to add a step on to the curative aspects of cancers that have resemblance with clinical entities of *arbuda* and *granthi* mentioned in *Sushruta samhita*.

Key words: Cancer, Ayurveda , Etiopathogenesis, Nidan.

INTRODUCTION**AYURVEDIC CONCEPT OF CANCER**

Ayurveda is a Science of life. We know that Cancer is one of the most dreaded disease of 20th century and spreading further with continuance and increasing incidence in 21st century. Classical *Ayurvedic* texts have several references to cancer. Some terms used to describe the condition are general while others are much more specific. According to *Ayurveda*, there are various disease entities which resemble new growths. They are described under the headings of *Shotha*, *Dushtavrana*, *Gulma*, *Kshudraroga*. But for purpose of the malignant nature of the disease, the description of

Granthi and *Arbuda* come nearest to cancer than any other disease.

According to *Ayurveda*, cancer results from lifestyle errors such as unhealthy foods, poor hygiene, or poor behavior, or from physical trauma, all leading to imbalances of *Vata*, *Pitta*, and *Kapha*, resulting in injury to the inner layer of the dermis (*Rohini*, the sixth layer of the skin) and the formation of abnormal branches of blood vessels. In this stage, early *Granthi* or *Arbuda* can develop in the form of bubble-shaped glandular growths. *Granthi* has been described as a round, hard, and bulging swelling, produced owing to the aggravation of *Vata* and

Kapha vitiating the muscle, blood, and fatty tissues. *Arbuda* has been described as a round, large, muscular, immovable, deeply rooted, slowly growing swelling produced owing to the aggravation of *Doshas* vitiating the muscle, blood, and fatty tissues. Both types of swelling can be inflammatory or non-inflammatory, based on the *Doshas* involved. *Tridoshaja* tumors are usually malignant because all of the three major body humors lose mutual coordination resulting in a morbid condition various signs and symptoms arising owing to the progression of cancer have been described in detail for example, anemia, cachexia and loss of appetite.

Cancer has been understood to exist for thousands of years. While cancer may be more prevalent today because people live to a greater age than in the past, Cancer has always occurred. Healers since the beginning of time have tried to understand the condition and manage those who have been suffering. The following terminology describes the most basic concepts

SIGN AND SYMPTOMS OF ARBUDA :

Vrittam, *Sthiram*, *Mandrujam*, *Mahantama*, *Unalpa-moolam*, *Chiravruddhi*, *Apakam* these are the symptoms which is mentioned by *Sushruta*. In the modern era also these symptoms we are getting in the case of benign and malignant stage of carcinoma.

Symptoms of benign tumor grow slowly don't invade and metastasize. These are the well differentiated. *Vrittam* (round), *Sthiram* (immoveble) , *Manda ruja* (slightly painful), *Mahant*(big size), *Unalpa-moolam* (deep seated), *Chirvruddhi* (slowly increasing) and *Apakam*(non-supurating) are the classical symptoms of benign growth. Benign tumor have minimal tendency to invade

surrounding tissues. It is almost like well differentiated from the surrounding tissues. *Sushruta* have mentioned *Adhyarbuda*, *Dwiararbuda* , this type of *Arbudas* can be correlated with malignant stage of cancer or metastasis of cancer. Malignant cancer has rapid growth it have the property to invade surrounding tissues and capacity of rapid metastasis.

SAMPRAPTI AND CAUSES OF ARBUDA (ETIOLOGY)

Etiopathogenesis of *Arbuda* is based on *Doshic* theory. Human body is made up of *Tridosha* (*Vata*, *Pitta*, *Kapha*). It is believed that equilibrium of *Vata*, *Pitta* and *Kapha* ensure good health. If any of the factors of *Tridosha* gets vitiated due to the changed dietary habit and life style, body becomes diseased. Though vitiated "*Doshas*" are responsible for the development of *Arbuda* almost all *Ayurvedic* texts have given maximum importance to *Kapha*. *Sushruta* has mentioned that due to excess of *Kapha*, *Arbuda* does not suppurate, which is considered to be the common and important factor for any growth in the body. Thus, it seems justified to postulate that excess of vitiated *Kapha* in the body might be responsible for the precipitation of cancer.

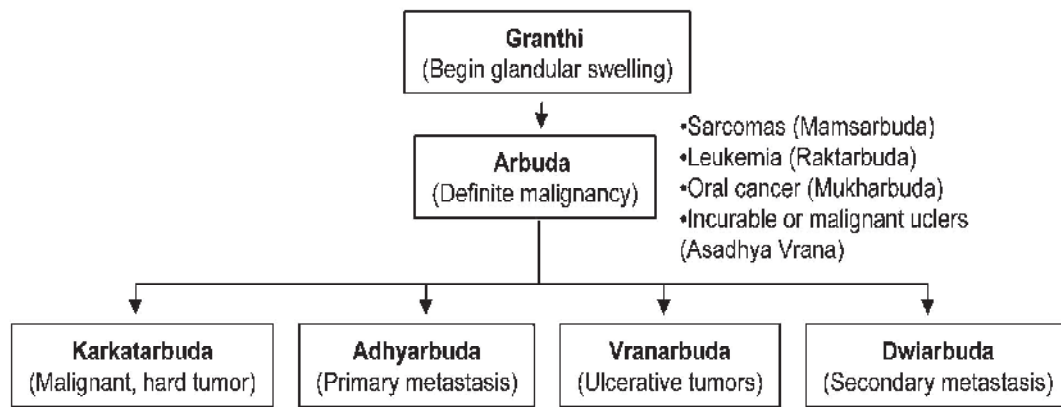
Irritation and trauma may precipitate or activate the formation of *Arbuda*. Where for the enlargement of external genitalia local application of certain irritable medicines have been advised. More often improper use or misuse of those drugs i.e. *Linga Vridhikara Yoga* has led to the development of *Mamsarbuda*. According to *Sushruta* trauma is also considered to be another causative factor for the development of *Mamsarbuda*, whereas *Vagbhata* has described that whenever there is excessive formation of *Mamsa Dhatu* it may lead to various pathological

conditions, such as *Galaganda*, *Gandamala*, *Arbuda*, *Granthi* and *Adhimamsa*. It indicates that *Mithya Ahara* and *Mithya Vihara* probably changes local or systematic biochemical factors including the hemodynamic leading to the origin of *Arbuda*.

Excessive use of meat is considered to precipitate the formation of tumor described in *Sushruta Samhita*. *Mushti Praharā* (trauma) is another important factor for development of *Mamsaarbuda* (*Sushruta and Vagbhata*) emphasizes that factor re-

sponsible for excessive formation of muscle and soft tissue (*Mamsa Dhatu*) may lead to the development of tumors and other pathological conditions. The genetic cause for the manifestation of cancer is also well documented in *Ayurveda*. Unwholesome diet (*Mithya Ahara*) and unwholesome regimen (*Mithya Vihara*) are main reasons behind the rise in incidence of cancer.

Fig. No. 1 : Development and progression of cancer through different stages



Types of *Arbuda* according to *Dosha*

1. *Vataja Arbuda*
2. *Pittaja Arbuda*
3. *Kaphaja Arbuda*
4. *Tridoshaja Arbuda*

This indicates that probably there are four main *Doshas* or humors playing an important role after vitiation or derangement which may be low or high in comparison to other humors to precipitate the malignant growth in the body. Extreme diversion of *Doshas* may lead to fatality. Such variations in different types of *Arbuda* can be diagnosed or labeled as *Vataja*, *Pittaja*, and *Kaphaja* based on their symptomatology. Those *Arbudas* having mixed symptoms of all the three humors can be labeled as *Tridosaja*. However to establish or label the particular types or *Doshaja Arbuda* require de-

tailed fundamental advancement in the field of *Ayurveda*.

Types of *Arbuda* according to *Dhatu* (tissue or cells)

This indicates that ancient Indian clinicians were aware of the involvement of different tissue either primarily as local factor or generally by derangement of *Doshic* factors. According to *Sushruta's* description in *Nidana Sthana*, *Dhatu*s are involved in *Arbuda* i.e. three types of *Dhatu*s.

1. *Raktaja Arbuda* –Pitta predominance
2. *Mamsaja Arbuda*- *Vatika* predominance, sarcoma is considered as *Mamsaja Arbuda*.
3. *Medoja Arbuda* (Fatty tissue)

However, a vivid description is also available where *Asthi* (Bone) has also been involved to give rise to swelling like *Arbuda* described as '*Adhyasthi*' but not as *Asthyarbuda*. Further *Asthi-kshaya* if localized to some particular portion resembling pathological fracture or osteoclastic destructive change in the bone may also be included in *Asthyarbuda*.

Types of *Arbuda* according to sites:

According to *Sushruta*, *Arbuda* can occur at any site or tissue of the body and probably no site is exempted which cannot give rise to *Arbuda*. This include eye, ear, nose, buccal cavity separately such as *Vartma-Arbuda* (eye lid), *Karnarbuda* (ear), *Nasarbuda* (Nose), *Taluarbuda* (Palate), *Ostharbuda* (Lip), *Galarbuda* (Throat), *Mukharbuda* (Buccal mucosa) and *Sirarbuda* (Tumors of head or brain).

Apart from the above mentioned site, genital organ has also been included under the nomenclature of "*Shuka Dosh*". This includes two types of *Arbuda* i.e. *Mamsarbuda* and *Shonitarbuda*, which is precipitated due to misuse of various types of '*Linga Vriddhikara Yoga*'.

Types of *Arbuda* according to prognosis:

Based on the prognosis of the different types of *Arbud*as described in *Ayurvedic* text books, they can be placed under two categories:

1. *Sadhya*

2. *Asadhya*

Most of the *Arbud*as including *Mamsarbuda*, *Raktarbuda* and *Tridoshaja arbuda* of any site occurring in ear, nose, throat etc. are considered as *Asadhya* (incurable). However some of the *Arbud*as are also described as *Sadhya*, which are most probably cyst benign tumours or chronic inflammatory swelling.

Recurrence and metastasis:

At an interval or period of time, *Sadhya Arbuda* may develop into *Asadhya* i.e. from one stage to the other or *Asadhya Arbuda* may give rise to its spread to another place which may be called as metastatic stage. Such pathogenesis of malignancy has been described in *Ayurvedic* text books as "*Adhyarbuda*" or '*Dwirarbuda*'. This most probably suggests the recurrence and metastasis of tumours to distal places. When *Arbuda* is appearing at pre-existing site or nearby primary growth it is called as *Adhyarbuda* (recurrence) whereas when a couple of similar types of growth occurring at different places, following one after another it is called "*Dwirarbuda*" i.e. metastasis.

***Asadhya Vrana* (malignant ulcers)**

Asadhya Vrana may be due to a number of causes and malignancy cannot be ruled out as one of them. Almost all clinical presentation of different *Asadhya Vrana* described by *Sushruta* can be considered under malignant ulcers. According to *Sushruta* these ulcers are chronic in nature and depicts with raised or rolled edges, multiple firm fleshy masses similar to cauliflower type with various types of discharges. Sometimes these ulcers also present some general symptomatology i.e. painful respiration, anorexia, chronic cough, cachexia etc. suggesting the stage or spread of cancer to other places.

Diseases which may be considered as Malignancy

This includes particularly those diseases which are labeled as *Asadhya* along with certain manifestations similar to malignancy. Those are *Mamsaja Ostha*, *Alasa*, *Mamsa Kacchapa*, *Galaudha*, *Asadhya Galaganda*, *Tridosaja Gulma*, *Asadhya Vrana*, *Lingarsa* etc.

Mamsaja Ostha: This is an incurable disease of lips which becomes heavy, thick protruding fleshy mass and developing ulcers occasionally. Such lesions of the lips can be considered as exophytic lesion (Acerman's Cancer).

Alasa: Due to vitiation of *Rakta* and *Kapha*, there is a deep seated swelling under the surface of the tongue. It increases gradually in size, with fishy odour discharge and destroys the surroundings structures. Such types of disease resembles Adenocystic and Mucoid epidermoid tumours of salivary glands.

Mamsa Kacchapa: Due to vitiation of *Kapha*, a big swelling develops on the palate

which is painful, increases gradually in size and is incurable. This resembles a tumour of hard palate.

Galaudha : Similar to other diseases, this disease develops also due to vitiation of *Rakta* and *Kapha*. In this disease, an extensive swelling occurs in the throat obstructing both the passages of oesophagus and trachea with the result that patient develops difficulty in swallowing and also in respiration which becomes fatal to the patient. A malignant growth at oropharynx may give all these symptomatic features

Benign tumors

Table No. 1 : Symptoms of a benign tumor

BENIGN TUMOR	SYMPTOMS	CAUSE
Vata Granthi	Variable, pricking and cutting pain, large, black, round, non-fixed, its size may fluctuate, hard, bulging and if pricked, exudes a clear, thin fluid.	Aggravated <i>Vata</i> , due to dry or stale foods, stress, insomnia, fatigue etc.
Pitta Granthi	Burning sensations, red or yellow in colour, suppurates quickly and exudes a warm blood when pricked.	Aggravated <i>Pitta</i> , due to restlessness, spicy food, overcontrolling, aggressive behaviour etc.
Kapha Granthi	Painless, large, hard tumor, pale colour, the area around is cold and itches. Suppurates slowly and if pricked, exudes thick, white, cloudy pus.	Aggravated <i>Kapha</i> caused by too much fatty foods, fast foods, lack of movement, lethargy.
Rakta Granthi (Blood)	Loss of tactile sensations. Symptoms similar to <i>Pitta Granthi</i> .	Aggravated <i>Vata</i> , <i>Pitta</i> and <i>Kapha</i> circulate through the bloodstream, with <i>Pitta Dosha</i> as The main cause for the disturbance.
Mamsa Granthi (Muscle tissue)	Large, oily, hard tumor tends to be very vascular. They ulcerate and bleed easily and often become malignant. Symptoms are similar to imbalance of the <i>Kapha Do-</i>	Excessive consumption of wrong kinds of meat.

	<i>sha.</i>	
<i>Meda Granthi</i> (Fatty tissue)	Soft, fatty tumor, but movable. Symptoms similar to imbalanced <i>Kapha Dosha</i> , usually grow in proportion to body growth. If pricked, exudes a coppery, white or black fatty fluid.	Intake of too much fat, where upon <i>Vata</i> transport it to the muscle tissue or skin.
<i>Asthi Granthi</i> (Bone tissue)	Tumor growth outside of the normal area of the bone.	Fractures or injuries to the bone, that accumulate <i>Vata</i> .
<i>Sira Granthi</i> (Channels)	Vascular tumors, painless and do not pulsate. Contracting, dehydrating, deformation.	Overexertion, severely accumulated <i>Vata</i> weakens the blood consistency, which enters the channels of the body.

Benign tumors, when detected in an early state, are curable because the drying, compressing and contracting qualities of *Vata* have closed the blood vessels. This has made it impossible for the tumor to root deeply in the tissues and growth and nourishment are highly limited. However when these tumors are in the blood-stream, they are much more serious and harder to cure. Important features for a successful chance of recovery are pain and mobility of the tumor. Whenever a tumor is completely attached and has started to grow, it is hard to treat.

Malignant tumors

Raktarbuda occurs when aggravated *Doshas* hamper blood vessels in their functioning, impeding the blood circulation as well. This leads to disturbances in the blood, comparable to the accumulation of toxins (*Ama*) in the blood. These toxins (e.g. carcinogens) can be the cause of a tumor. When tumors develop in the blood vessels, their spreading through the blood- and lymphatic system will soon become a reality. This large spreading of tumors will make recovery extremely difficult. Symptoms of blood tumor little fluid or pus accumulation (inflammatory signs) around the tumor grows quickly, covered with small metastases and

secretion of disturbed (vitiating) blood. This form is very difficult to cure. *Mamsarbuda* occurs when muscles get disrupted from fighting for instance. When from the punching, the muscles show a swelling which is stony hard, painless, glossy, and immobile without inflammatory signs, of same colour as the surrounding then this is the tumor. These are more common in non-vegetarians. *Mamsarbuda* is extremely difficult to cure for the same reasons as *Raktarbuda*.

Adhyarbuda: Development of another tumor over the first tumor or when a tumor arises on a pre existing site or near a primary tumor.

Dwirarbuda: When two tumors arise at the same time those tumors that cause large secretion of fluid in the surrounding tissue, are located in vital locations or channels (lymphatic system and blood vessel system) or attached to the surrounding tissue are highly difficult to cure.

The Development of Malignant Tumors

When a benign tumor suddenly starts to grow excessively and roots deeply into the tissue, with symptoms compatible with increased *Kapha Dosha* and fatty tissue, a malignant tumor is occurring. Malignant tumors do not suppurate and also do not ex-

ude fluid, blood or pus anymore. They are no longer removed by the body, grow quickly and cover a large area. They are caused by three vitiated *Doshas* and always affect muscle tissue, adipose tissue and blood. For more information see the detailed descriptions in the *Sushruta Samhita*. The four previously described benign tumors (*Granthi*) have now developed into a malignant tumor (*Arbuda*). Curable are those *Granthi* that occur in the blood vessels, are painful and mobile. However, *Granthi* that is painless, large, immobile and situated in the vital parts of the body are exceedingly difficult to cure.

CONCLUSION

The identification and description of malignant diseases (Tumour) are available in the ancient literature. Classical *Ayurvedic* texts have several references to cancer. *Arbuda* is the most specific term for malignant cancer and *Dwirarbuda* indicates the metastasis or spread of cancer from one part to other part of the body. As far as *Samprapti* of tumour formation is concerned, it seems to be of *Vata-Kapha* origin. *Vata* is responsible for faulty division of cells and *Kapha* for their uncontrolled growth. Benign tumours are generally predominant of *Kapha*. But in malignancies, *Pitta* is also vitiated and the condition becomes *Sannipatika* in nature.

In *Granthi*, *Kapha* plays the predominant role as it enters the affected *Dhatus*. The most common *Dhatus* affected are *Medas*, *Mamsa* and *Rakta*. The result is slow growing cancer of benign in nature. *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*.

Etiopathogenesis of *Arbuda* is based on *Doshic* theory. Though vitiated "*Doshas*" are responsible for the development of *Arbuda*, almost all *Ayurvedic* texts have given maximum importance to *Kapha*. *Sushruta* has mentioned that due to excess of *Kapha*, *Arbuda* does not suppurate which is considered to be the common and important factor for any growth in the body. Thus, it seems justified to postulate that excess of vitiated *Kapha* in the body might be responsible for the precipitation of cancer. *Dhatus* involved in *Arbuda* are *Rakta*, *Mamsa* and *Meda* having *Pitta*, *Vata* and *Kapha* predominance respectively. The description of "*Adhyarbuda*" or '*Dwirarbuda*' suggests the recurrence and metastasis of tumours to distal places. Cancer is an abnormal excessive, uncoordinated, autonomous and purposeless proliferation of cells in any tissue or organ of the body.

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