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VIEW

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ABSTRACT

Arbuda is one of the most serious and potentially challenging, life-threatening diseases of the present era, occurring due to metabolic as well as catabolic crises in the body. Cancer is the result of the vitiation of tridosha, dhatu, agni, and mala. Abnormal cell division is due to aggravated vata dosha. Pitta dosha is responsible for all the enzymatic activity and hormonal dysfunction, kapha dosha gives definite shape to the tumor. The treatment of cancer has increased in complexity. To limit the extent of surgery, the patient receives adjuvant chemotherapy or radiation therapy, which increases the length and the toxicities of treatment. 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. Hence it is very important to adopt Ayurvedic therapy as a co-therapy along with chemo or radiation therapy and so in the present article, a complete review of various information regarding arbuda is brought under a single roof so as to help future researchers to use the incorporated details about arbuda (cancer).

Keywords: cancer, arbuda, chemotherapy, radiotherapy.

INTRODUCTION

Cancer is the deadliest disease of the 20th century and spreading further with the continuance and increasing incidence in the 21st century¹. Cancer is second only to coronary artery disease as being the most common cause of death all over the world. The disease Arbuda was mentioned during the Vedic period. In Atharvaveda, a reference to Arbuda and its management is mentioned. Acharya Charaka, Sushruta, Vagbhata have clearly mentioned Hetu, Lakshana, and Anekviddha Upkrama of Arbuda. According to Ayurveda, there are various disease entities that 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 the cancer than any other disease. The derivation of the word arbuda generally means the disease which spreads very abruptly. Acharya Sushurta² has described Arbuda as "The Doshas having vitiated in any part of the body and afflicting the Mamsa, and produce a swelling, which is circular, fixed, slightly painful, big in size, broad-based, slowly growing and does not suppurate." Which are clear signs and symptoms of cancer. Acharya Charaka³ has described Arbuda as a complication of Vata-Rakta. Acharya Madhava while describing Arbuda opines that the vitiated Dosha afflicts the Mamsa and Rakta both to produce swelling. The disease begins in the form of Shotha (swelling) and with the span of time gets converted to Arbuda.

NIDANAS OF ARBUDA- Cancer originates from lifestyle errors such as unhealthy foods, poor hygiene, or poor behaviour, or physical trauma, all leading to imbalances of Vata, Pitta, and Kapha. Mamsavaha Strotodushti janya nidanas like Abhishyadi Bhojya (deliquescent), Sthula Bhojya (gross), Guru Bhojya (diet heavy to digest), bhuktam cha swapatam diwa (Sleep immediately after lunch) can be taken as samanya nidanas of arbuda. Broadly we can classify the nidanas into Vatakara nidanas like - Mutations (90-95%), excessive mental stress, strain, freezer items, soft drinks, cigarette smoking, shoka, bhaya, raga, sheeta ruksha ahara, viruddha ahara, etc. Pittakara nidanas like-- excessive intake of amla, lavan, katu ahara, food containing lead, MSG, fried and spicy foods, krodha, more caffeinated drinks, UV irradiation, Mobile phone radiation, physical agents like asbestos, Cobalt, etc, Hormones like oestrogen, progesterone, etc. kaphakara nidanas like Virus (HPV, HIV, EPSTEIN BARR Viruses, Kaposi's sarcoma, herpes virus, Hepatitis A and C, parasites), Obesity, diabetic patients. All available evidence in the modern literature indicates that malignant transformation of cells (carcinogenesis) may result from a complex interaction of factors like genetic predisposition, chemical, and physical carcinogens, viruses, radiation, immunodepleting, rapid tissue proliferation, hormone changes, diet, emotion, etc. cancer is the end product of multistep processes. Also, there are multiple theories about the etiology of cancer. Those working in genetics are convinced that genetic mutations are the primary factors in cancer etiology, whereas virologists are convinced that viruses are the real etiologic agent, and those genetic changes occur only after the viral invasion.

SAMPRAPTI OF ARBUDA- Acharya sushruta⁴, Vagbhata, Madhava, Bhavprakash, Yogratnakara, all acharyas have mentioned very similar samanya samprapti. when aggravated doshas vitiate muscle and thus produce round, firm, large, deep-rooted, slowly developing non-suppurating and swollen fleshy mass, and this is known as Arbuda All the abovementioned nidanas result in vitiation of tridosha, jataragni, dhatwagni resulting in injury to the inner layer of the dermis (Rohit- sixth layer of the skin) and the formation of abnormal branches of blood vessels. In sanchaya avastha, the catabolic crisis between vata and kapha takes place. Genes are made up of vata. so here the catabolic crisis between vata and kapha can lead to genetic mutations. Vata further causes the promotion of oncogenes and inhibition of tumor suppressor genes. So basically, in sanchaya avastha, due to vibhuvata vitiation, the other doshas, dhatus, and agni gets vitiated causing a favorable environment for genetic mutation. Sanchaya may also represent the level of oxidative stress, which damages the cell structure and its functions leading to somatic mutations and neoplastic transformation of the cells. As the sloka quotes" kopastu unmarga gamita⁵" can be studied with cancer pathophysiology in prakopa avastha. After the sanchaya avastha, if the patient is exposed to carcinogens, further mutation takes place in the same area and also other secondary areas. Leading to further stronger DNA mutation, genomic

amplification, transcription in the prakopa stage. In the prasara avastha, VIBHU VATA takes the neoplastic cells to the different parts of the body through blood, lymphatic, transcoelomic, etc routes and gets lodged into the place where there is khavaigunyat and grows at that particular site and called by the name of the primary site. The union of Vitiated Doshas/ Dushyas at a particular site is called Sthanasamsraya. vata takes the cells to the different parts of the body to the place where there is khavaigunyata and causes the primary as well as secondary cancer eg- The primary lungs cancer which is vata kapha sthana gets metastasis into the brain (pranavata sthana), bone (ashraya for vata). Vyakti is the stage where cancer manifests itself completely. The symptoms that appear at the vyakta stage are used by medical professionals to examine and diagnose cancer, which helps in developing a treatment plan. It helps to plan the chemotherapeutic regimen required on the basis of stage of genetc mutation, site, symptoms. In Bheda avastha, the cancer is usually seen with its oncological emergencies like neutropenic sepsis, tumor lysis

syndrome, quada equina syndrome, etc leading to decreased survival rate.

PURVAROOPA: Symptoms that manifest themselves before the appearance of the disease are known as premonitory symptoms. None of the acharyas describe premonitory symptoms of the disease Arbuda. Some types of cancer have no symptoms until very late in the course of the disease

ROOPA- Vrittam, Sthiram, Mandrujam, Mahantama, Unalpa-moolam, Chiravruddhi, Apakam are the symptoms mentioned by Sushruta⁶. In the modern era also these symptoms we are getting in the case of the benign and malignant stage of carcinoma are C -Change in bowel or bladder habits., A - A sore or an ulcer that does not heal, U - Unusual bleeding or discharge through mouth, nose, ears, anus, or genitalia.

T - Thickening, lump, or tumor mass in any part of the body especially superficial of skin, mouth, breast, or elsewhere, I - Ingestion or difficulty in swallowing or painful/burning swallowing, O - Obvious change in a wart or mole, N - Nagging cough or hoarseness of voice⁷.

Table 01: Showing Laxanas of types of Arbuda

Туре	Laxanas	Aggravating Factors
Vata Granthi/Arbuda	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 Vata, due to dry or stale foods, stress, insomnia, fatigue, etc.
Pitta Granthi/Arbuda	Burning sensations, red or yellow in colour, suppurates quickly and exude warm blood when pricked	Aggravated Pitta, due to restlessness, spicy food, overcontrolling, aggressive behaviour, etc.
Kaphaja gran- thi/Arbuda	Painless, large, hard tumor, pale colour, the area around is cold and itches. Suppurates slowly and if pricked, exudes thick, white, cloudy pus.	Aggravated Kapha is caused by too many fatty foods, fast foods, lack of movement, lethargy.
Rakta Granthi (Blood)/Arbuda	Loss of tactile sensations. Symptoms are similar to Pitta Granthi.	Aggravated Vata, Pitta, and Kapha circu- late through the bloodstream, with Pitta Dosha being the main cause of the dis- turbance
Mamsa Granthi (Mus- cle tissue)/Arbuda	The large, oily, hard tumor tends to be very vascular. They ulcerate and bleed easily and often become malignant. Symp- toms are similar to an imbalance of the Kapha Do	Excessive consumption of wrong kinds of meat.
Meda Granthi (Fatty tissue)/Arbuda	Soft, fatty tumor, but movable. Symptoms similar to imbal- anced Kapha Dosha, usually grow in proportion to body growth. If pricked, exudes a coppery, white, or black fatty fluid.	Intake of too much fat, where upon Vata transport it to the muscle tissue or skin
Asthi Granthi (Bone tissue)/Arbuda	Tumor growth outside of the normal area of the bone	Fractures or injuries to the bone, which accumulate Vata.
Sira Granthi (Chan- nels)/Arbuda	Vascular tumors are painless and do not pulsate. Contracting, dehydrating, deformation.	Overexertion, severely accumulated Vata weakens the blood consistency, which enters the channels of the body

SANKHYA SAMPRAPTI OF ARBUDA- According to Dosha 1. Vataja Arbuda 2. Pittaja Arbuda 3. Kaphaja Arbuda 4. Tridoshaja Arbuda. 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 a local factor or generally by derangement of Doshic factors. According to Sushruta's description in Nidana Sthana, Dhatus are involved in Arbuda i.e., three types of Dhatus. 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'.

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 includes the 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).

Types of Arbuda according to prognosis- Based on the prognosis of the different types of Arbudas described in Ayurvedic textbooks, they can be placed under two categories: 1. Sadhya 2. Asadhya Most of the Arbudas including Mamsarbuda, Raktarbuda, and Tridoshaja arbuda of any site occurring in the ear, nose, throat, etc. are considered Asadhya (incurable). However, some of the Arbudas are also described as Sadhya, which are most probably cyst benign tumours or chronic inflammatory swelling.

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

A. Mamsaja Ostha: This is an incurable disease of lips that become heavy, thick protruding fleshy

mass and develops ulcers occasionally. Such lesions of the lips can be considered exophytic lesions (Acerman's Cancer).

- B. 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 the disease resemble 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 the hard palate.
- C. Galaudha: Simillar to other diseases, this disease develops also due to the vitiation of Rakta and Kapha. In this disease, an extensive swelling occurs in the throat obstructing both the passages of the oesophagus and trachea with the result is that patient develops difficulty in swallowing and also in respiration which becomes fatal to the patient. A malignant growth at the oropharynx may give all these symptomaticfeatures

DIAGNOSIS OF CANCER - A thorough medical history and complete physical examination should precede sophisticated diagnostic procedures. The tests that are useful in the early detection and staging of cancer include –X-rays, CT scans, MRIs, positron emission tomography, isotope scan, special laboratory tests, and biopsy, etc.

UPADRAVA- Sushruta mentioned pandu as Upadrava for Raktarbuda due to Raktasrava. Adhyarbuda and Dwirarbuda also can be taken under Upadrava. This can be correlated to the secondaries. A secondary may develop at any site of the body after the primary has been caused.

METASTASIS⁸ - Metastatic tumor can send cells into other tissues in the body, which may be distant from the original tumor. The original tumor is called the "primary tumor." Its cells, which travel through the body, can begin the formation of new tumors in other organs. These new tumors are referred to as "secondary tumors." The cancerous cells with the help of vata travel through the blood (circulatory system) or lymphatic system to form secondary tumors. The lymphatic system is a series of small vessels that collect waste from cells, carrying it into larger vessels, and finally into lymph nodes. Lymph fluid eventually drains into the bloodstream. Cancer is named after the part of the body where it originated. When cancer spreads, it keeps this same name. For example, if kidney cancer spreads to the lungs, it is still kidney cancer, not lung cancer. (Lung cancer would be an example of a secondary tumor.) Staging is the process of determining whether cancer has spread and, if so, how far. There is more than one system used for staging cancer, and the definition of each stage will depend on the type of cancer. Cancer is not just one disease but rather a group of diseases, all of which cause cells in the body to change and grow out of control. Cancers are classified either according to the kind of tissue from which they originate or according to the location in the body where they first developed. In addition, some cancers are of mixed types. Usually, cancer gets diagnosed at the later stages when it has undergone multiple METASTA-SIS. This means that the cancer cells can travel far from the original tumor site and form a new tumor when they settle and grow in a different part of the body which can be studied with detailed shad KRIYA kala.

SADHYASADHYATA⁹- Sadhya Arbudas are Vataja Arbuda (chikitsa sadhya), Pittaja Arbuda, Kaphaja Arbuda, Medoja Arbuda, Asadhya Arbuda are Raktaja Arbuda and Mamsaja Arbuda.

CHIKTSA¹⁰- Lakshana, Samprapti of Arbuda, and Granthi are similar; hence, the treatment prescribed for Granthi should be followed here. As Arbuda is included among the vitiation of Mamsa and Medas, hence treatment is prescribed for diseases due to vitiation of Mamsa (Shodhana, Shastra, Anushatra procedures) and for the disease of Medas (Medohara/Atisthoulyahara) should also be used. The treatment of Arbuda should be avarnagna, Amapachana, dhatuposhana, Vyadhibalavirodhirasayana, arbudagna, panduhara. To date, three major conventional therapies for cancer surgery, radiation therapy, and chemotherapy – are employed independently or in combination but all are immunosuppressive to some extent. The above therapies can be categorized under two headings

- 1) Local Treatment Surgery, Radiation
- 2) Systemic Treatment
- a) Chemotherapy Administration of antimalignant drugs
- b) Hormonal- Giving or withdrawing hormones.
- c) Immunotherapy- Very rarely used.

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 pradhana tridosha in origin. Vata is responsible for the faulty division of cells and Kapha for their uncontrolled growth cell support. Benign tumours are generally predominant in Kapha. But in malignancies, Pitta is also vitiated, and the condition becomes Sannipatika in nature. The most common Dhatus affected are Medas. Mamsa and Rakta. The result is a slowgrowing 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 the 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 vitiated Kapha in the body might be responsible for the precipitation of cancer. Dhatus involved in Arbuda is Rakta, Mamsa, and Meda having Vata, pitta, and Kapha predominance respectively. The description of "Adhyarbuda" or 'Dwirarbuda' suggests the recurrence and metastasis of tumours to distal places.

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