CANCER IN AURVEDA - AN APPROACH IN ETIOPATHOGENESIS

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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, Dushhtavrana, 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 (immovable), Manda ruja (slightly painful), Mahani (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, Dwirarbuda, this type of Arbus 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 enurse good health. If any of the factors of Tridoshaja 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 Vaghbhatta 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 bio chemical 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 Praharra (trauma) is another important factor for development of Mamsaarbuda (Sushruta and Vagbhatta) emphasizes that factor responsible 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**

<table>
<thead>
<tr>
<th>Types of Arbuda according to Dosha</th>
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<tbody>
<tr>
<td>1. Vataja Arbuda</td>
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<tr>
<td>2. Pitta Arbuda</td>
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<tr>
<td>3. Kapha Arbuda</td>
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<tr>
<td>4. Tridosha Arbuda</td>
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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, Pitta, and Kapapha based on their symptomatology. Those Arbudas having mixed symptoms of all the three humors can be labeled as Tridosha. However to establish or label the particular types or Doshaja Arbuda require detailed 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, 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’ 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 Dosha”. 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 Arbudas described in Ayurvedic text books, they can be placed under two categories:

1. **Sadhya**
2. **Asadhya**

Most of the Arbudas including Mamserbuda, Raktarbuda and Tridoshaja arbuda of any site occurring in ear, nose, throat etc. are considered as Asadhya (incurable). However some of the Arbudas 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 Osthā:** 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

<table>
<thead>
<tr>
<th>BENIGN TUMOR</th>
<th>SYMPTOMS</th>
<th>CAUSE</th>
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<tbody>
<tr>
<td><strong>Vata Granthi</strong></td>
<td>Variable, pricking and cutting pain, large, black, round, non-fixed, its size may fluctuate, hard, bulging and if pricked, exudes a clear, thin fluid.</td>
<td>Aggravated Vata, due to dry or stale foods, stress, insomnia, fatigue etc.</td>
</tr>
<tr>
<td><strong>Pitta Granthi</strong></td>
<td>Burning sensations, red or yellow in colour, suppurates quickly and exudes a warm blood when pricked.</td>
<td>Aggravated Pitta, due to restlessness, spicy food, over-controlling, aggressive behaviour etc.</td>
</tr>
<tr>
<td><strong>Kapha Granthi</strong></td>
<td>Painless, large, hard tumor, pale colour, the area around is cold and itches. Suppurates slowly and if pricked, exudes thick, white, cloudy pus.</td>
<td>Aggravated Kapha caused by too much fatty foods, fast foods, lack of movement, lethargy.</td>
</tr>
<tr>
<td><strong>Rakta Granthi</strong></td>
<td>Loss of tactile sensations. Symptoms similar to Pitta Granthi.</td>
<td>Aggravated Vata, Pitta and Kapha circulate through the bloodstream, with Pitta Dosha as The main cause for the disturbance.</td>
</tr>
<tr>
<td><strong>Mamsa Granthi</strong></td>
<td>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 Kapha Do-</td>
<td>Excessive consumption of wrong kinds of meat.</td>
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</table>
**Meda Granthi** *(Fatty tissue)*  
- Soft, fatty tumor, but movable. Symptoms similar to imbalanced *Kapha Dosha*, usually grow in proportion to body growth. If pricked, exudes a coppery, white or black fatty fluid.  
- Intake of too much fat, whereupon *Vata* transport it to the muscle tissue or skin.

**Asthi Granthi** *(Bone tissue)*  
- Tumor growth outside of the normal area of the bone.  
- Fractures or injuries to the bone, that accumulate *Vata*.

**Sira Granthi** *(Channels)*  
- Vascular tumors, painless and do not pulsate.  
- Contracting, dehydrating, deformation.  
- Overexertion, severely accumulated *Vata* 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 (vitiated) blood. This form is very difficult to cure. *Mamsarbudha* 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. *Mamsarbudha* 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 (Granthis) have now developed into a malignant tumor (Arbuda). Curable are those Granthis that occur in the blood vessels, are painful and mobile. However, Granthis 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 Granthis, Kapha plays the predominant role as it enters the affected Dhatu. The most common Dhatu 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 “Adhyanarbuda” 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.

REFERENCES


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