



CRITICAL ANALYSIS OF HEPATIC CANCER IN AYURVEDA WSR TO YAKRITODARA & YAKRIT GULMA

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ABSTRACT:

Cancer is one of the major causes of death across the globe accounting for nearly 10 million deaths in 2020. Every 6th death in the world is due to the cancer. According to the International Agency for Research on Cancer (ARC), by 2040, the global burden of Cancer is expected to grow by 27.5 million new cases.^[1] As per national Cancer Registration data (Ministry of Health & Family Welfare, GOI), in India there were 63,797 deaths in 2020 due to cancer and projected deaths by 2022 are 66,879.^[2] And it is going to increase further due to faulty dietary and lifestyle practices. Liver cancer is the 7th most commonly occurring cancer and is the second most common cause of cancer mortality. Highest incidence is found in Asia and Africa. Therefore, it is necessary to look for every possible solution including the ancient medical sciences such as in Ayurveda. Ayurveda is an ancient Indian medical science. There are references to various malignancies in Ayurveda. The tumor is referred as 'Arbuda' or 'Gulma' in Ayurveda. All the characteristics of tumors are very well mentioned in Ayurveda. Ayurvedic acharyas while suggesting the operation for these tumors, said that these tumors should be excised completely along with surrounding healthy tissue otherwise it recurs soon indicating the malignant nature of the tumors. Most of the tumors are mentioned as incurable again indicating its malignant nature. In Ayurveda, tumor is classified based on doshas and structural appearance. Among the treatment modality for Cancer, apart from medicine and surgery, cauterization and application of Alkali is also suggested in Ayurveda to avoid the recurrence. The liver cancer is mentioned under headings like 'Yakrit Gulma' and 'Yakrut Udara'. Viral liver cirrhosis is the main cause of liver cancer apart from fatty infiltration, obesity, diabetes and alcoholism. It is observed and concluded that Cancers are very well documented in Ayurveda and the Ayurvedic treatment suggested for treating the tumors need to be reexplored.

KEYWORDS – *Arbuda, Gulma, Tumor, Cancer*

INTRODUCTION

Cancer is one of the major causes of death across the globe accounting for nearly 10 million deaths in 2020. According to GLOBACON database nearly 45% of new cases are diagnosed in Asia, 26% in Europe, 15% in North America and 6% in Africa. The commonest cancers are breast, Lung, colorectal and prostate cancer. In 2020, 905700 people were diagnosed with liver cancer globally and 830200 died out of that. Liver cancer is among top three causes of death due to cancer in 46 countries. The deaths due to new cases of liver cancer may rise by >55% by 2040.^[3] Ayurveda is an ancient Indian medical science. There are references to various malignancies in Ayurveda. In the context of global burden of Cancer, it becomes essential to explore the concept of cancer in ancient Indian medical science. The tumor is referred as 'Arbuda' or 'Gulma' in Ayurveda. All the characteristics of tumor are very well mentioned in Ayurveda. Ayurvedic acharyas while suggesting the operation for these tumors, said that these tumors should be excised completely along with surrounding healthy tissue otherwise it recures soon indicating the malignant nature of the tumor. Most of the tumors are mentioned as incurable again indicating its malignant nature. In Ayurveda, tumor is classified on the basis of

doshas and structural appearance. There are references to Liver tumor in the form of *Yakrit Gulma* or *Yakritodara*. It may be included under *Mansarbuda* on the basis of involvement of *mansa dhatu*. Among the treatment modality for Cancer, apart from medicine and surgery, cauterization and application of Alkali is also suggested in Ayurveda to avoid the recurrence. In the present study, the ayurvedic literature about cancer and liver cancer will be studied critically to come to logical conclusions.

MATERIAL & METHOD

Literary descriptive method of research is adopted in the present study. Critical study of Ayurvedic literature is done to come to logical conclusions.

REVIEW OF LITERATURE

Tumour is a mass of tissue formed as a result of abnormal, excessive and inappropriate, uncontrolled growth of the cells which continues indefinitely. There are 2 types of tumors.

A] Benign tumour – It remain localized forming a single mass which is often symptomless and can be excised completely.

B] Malignant tumour – It is also called as cancer. It invades the surrounding tissues and spread through lymphatics and blood to other parts of the body where it give rises to secondaries (metastasis).

Characteristics of Tumor As Per Ayurveda ^[4]

- Circular,
- Fixed,
- Mild aching,
- Broad based,
- Slowly growing,
- Non suppurating big muscular growth

Types of Tumor As Per Ayurveda ^[5]

As per Ayurvedic oncologists (*Arbudgya*), tumors could be classified into following types

On The basis of Doshas Involved :

1. *Vataj Arbuda*
2. *Pittaj Arbuda*
3. *Kaphaj Arbuda*

On The basis of Dhatus Involved :

4. *Raktaj Arbuda*
5. *Mansaj Arbuda*
6. *Medoj Arbuda*

On The basis of Tumor Characteristics^[6]

1. *Adhi-Arbuda* – The tumor erupting over the tumor is called as *Adhi-arbuda*.
2. *Dwi-Arbuda* – The tumor occurring in pair or after one another are called as *Dwi-arbuda*.

Definition of *Gulma* (Tumor) As Per Ayurveda

As its root is deep seated and not visible like the tuber (*kanda*) and as it is rigidly entangled in itself (*sanhat*) like tendril (*gulma*) and have broad base, it is called as '*Gulma*'. ^[7]

The intermixing and consolidation of various tissues in the body is called as '*Gulma*'. ^[8]

This definition of '*Gulma*' given by acharya Bhela, indicates towards the development of benign or malignant growth in the body.

Clinical Features of *Gulma* ^[9]

1. Anorexia/loss of taste
2. Abdominal distension
3. Abdominal gurgling
4. Difficulty in passage of urine & stool
5. Non passage of flatus
6. Eructations

Specific F/o *Kaphaj Gulma* ^{[10] [11]}

1. As if covered with wet cloth
2. Fever with shivering
3. Looseness in body
4. Nausea
5. Cough
6. Loss of taste
7. Heaviness
8. Feeling cold
9. Fixed root lump
10. Enlarged lump
11. Hard lump
12. Heavy lump

F/O *Sannipataj Gulma* ^{[12] [13]}

1. Severe pain
2. Associated with burning
3. **Stony hard**
4. **Elevated**
5. Rapidly suppurating
6. **Very fatal**
7. Leads to **fear and depression**

8. Leads to **loss of appetite**

9. Leads to **loss of physical strength**

10. **Incurable**

Yakrit Gulma ^[14] ^[15]

The *Gulma* in chest region is called as '*Yakrit Gulma*'. The *Yakrit Gulma* grows due to *Vata*, suppurates due to *Pitta* and solidifies due to *Kapha*.

Features of Yakrit Gulma are :

1. Cachexia
2. Vomiting
3. Fatigue
4. Eructations
5. Nausea
6. Dyspnoea
7. Syncope
8. Heart burn
9. Thirst
10. Fainting
11. Burning in throat
12. Headache
13. Chest pain
14. Rhinorrhoea
15. Bitter spitting
16. Pricking pain in chest
17. Heaviness in Chest
18. Gurgling in abdomen

Metastasis of Yakrit Gulma ^[16]

1. Yellowish Sputum
2. **Putrid Smell**
3. **Frequent Hemoptysis**

4. Bloody diarrhea

5. Fatigue

6. **Cachexia**

7. **F/o Urahakshata**

On noticing these features, one should infer that Yakrit gulma had invaded the chest

No doubt these are features of liver malignancy which is metastases in lungs.

Incurable F/O Yakrit Gulma ^[17]

1. Breathlessness
2. Thirst (water depletion)
3. Vomiting
4. Confusion
5. Swelling on hands feet
6. Anorexia
7. Diarrhoea

These are classically seen in malignancy.

Breathlessness indicates thoracic invasion.

Clinical Features of Yakritodara ^[18]

01. Weakness
02. Anorexia
03. Indigestion
04. obstructed urine and stool
05. Giddiness
06. Thirst
07. Body ache
08. Vomiting
09. Fainting
10. Looseness in body
11. Cough
12. Dyspnoea

13. Mild fever
14. Abdominal distension
15. Loss of appetite
16. Emaciation
17. Loss of taste
18. Pain in joints of fingers
19. Pain in abdomen
20. Appearance of venous network on abdomen
21. **Severe pallor**
22. **Knobby irregular hepatomegaly**

OBSERVATION

Sr	F/O Yakrit Gulma	F/O Yakritodara
1	Heaviness in Chest	stony hard, knobby, irregular hepatomegaly
2	Anorexia	Anorexia
3	Cachexia	Cachexia
4	Dyspnoea	Anemia
5	pain in chest	mild fever
6	Frequent Hemoptysis	Ascites
7	Putrid Smell	caput mediosae
8	Bloody diarrhea	Coagulopathy

DISCUSSION

Acharya Sushruta described oral malignancies in *Nidansthana*. Apart from oral malignancies, acharya Sushruta had also mentioned the nasal, aural and head malignancies. All the oral

malignancies are said to be incurable by the Ayurvedic acharyas. In the book, Vaidyaka Sarvasva, there is reference to 'Yakrit Gulma' which appears to be hepatocellular carcinoma. Acharya Charaka, instead of *Yakrit Gulma*, described *Yakritodara* which also appears to be the hepatocellular carcinoma. **As per acharya Charaka, *Yakritodara* may result from the debilitating diseases (*Vyadhi KarshnaiHI*) or due to congestion in the liver (*Rasadibhyo Vivrudhham*) [19]. Whereas in *Yakrit Gulma*, hepatomegaly occurs due to Vata, necrosis due to Pitta and solidification occurs due to Kapha[20].** Pulmonary features in *Yakrit Gulma* (HCC) indicates its thoracic invasion. Although *Gulma* refers to the tumor, features of *Kaphaj Gulma* are suggestive of malignancy. Whereas features of *Sannipataj Gulma* indicates the incurable stage of malignancy. *Yakrit Gulma* may also go through the *Vatik*, *Paittik*, *Kaphaj*, and *Sannipataj* stages of malignant transformation. The *Mansarbuda* described by acharya Sushruta appears to be rhabdo-myosarcoma but as the *mans dhatu* is involved in liver cancer, hence it can be treated as *Mansarbuda*. The features of *Yakritodara* are more specific to hepatocellular carcinoma. In *Yakritodara*, hepatomegaly is stony hard (*ashthila vat katin*) and knobby, irregular (*Kachhaprishtha vat*) with cachexia, anorexia and

difficulty in respiration which indicates Hepatocellular carcinoma. *Jalodara* (ascites) is due to the portal hypertension.

Strotobhya Shonit struti indicates the coagulopathy which is observed in chronic liver diseases.

Pandu (anemia) is due to blood loss and due to chronic affection of liver. Anorexia and mild fever are constitutional features. *Harit Raji Yuktam Udaram* is the caput medusae formed due to portal hypertension.

CONCLUSIONS

1. Cancers are very well described in Ayurvedic literature
2. Hepatic malignancy was found in ancient time also.
3. *Sannipataj Gulma* represents the incurable stage of malignancy.
4. *Yakrit Gulma* and *Yakritodara* represent the hepatic malignancy.
5. Pulmonary features in *Yakrit Gulma* (HCC) indicates its thoracic invasion.

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