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ROLE OF RAUDRA RASA IN MANAGEMENT OF HEAD AND NECK CANCER.

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ABSTRACT

One of the former systems of medicine, Ayurveda due to its holistic approach to life is momentous in audiences worldwide. Ayurveda is said to be the science of life that aims not only at eradicating diseases but also at increasing body hostility, ultimately aiming to improve the quality of life. The techniques that are used in Rasashastra like Sodhana, Marana, Bhavana acclimatize the toxicity into effective formulae known as Herbo-Mineral Formulation of Rasaushadhi. **Background:** Rasa chikitsa is a crucial branch of ayurvedic medicine that consists mainly of minerals, metals and poisonous drugs processed with highly specialized pharmaceutical techniques. Rasaushadies are very potent Rasayana in addition to highly specialized pharmaceutical scenarios. A herbo-mineral formulation that has been inferred to treat Arbuda(Sanskrit term for cancer) is **Raudra Rasa** (Bhaishaiya Ratnavali: 44/59-60) **(1)**. According to Acharya Susrutha, the aggravation of tridosha, especially Vata and Kapha dosha can implicate the tissues and result in the array of a malignant tumour i.e. "Arbuda" **2**. In Rasa granthas and other Vedic literature, Raudra rasa is used as an anticancer drug that was widely used those days in Brhatrayi **3** and Laghutrayi **4**. Hence a need has been raised to pinpoint the activity of such drugs by clinical evaluations. Based on these facts, it was elected to select Raudra Rasa which only throws light on the state of its efficacy clinically. **Aim :** It is needless to say that cancer is a hazardous disease to mankind and it has become a necessity of the day to re-evaluate the Ayurvedic claims against Cancer and to re-examine them, as present modern science wants and to give an opinion on the justification of Ayurvedic claims. This is the evaluatory intention of this research.

KEYWORDS: Raudra rasa; Arbuda; Mercury; Ayurveda; Rasayana

INTRODUCTION :

Ayurveda is the science that imparts all the knowledge of life and defines health & factors for its maintenance & promotion. It defines man as a combination of the Pancha mahabhutas & Atma. The Pancha mahabhutas are present in the body in the form of Doshas, Dhatus & Malas comprising various organs & organ systems. All these together make up the physical & material aspects of man. The period during which all these aspects exist & function together is called Ayus (life). But any imbalance in this harmony even by slight changes, in any one of these aspects, makes for roga.

Many chronic diseases like cancer can easily come to stay with us & be our despised guests. Cancer was mentioned in ancient Ayurvedic literature by the name of Arbuda. Arbuda is one of the surgical diseases & was explained in detail by Aacharya Susruta **5**. Aacharya Charaka mentioned Arbuda under the heading of Sopha, Aacharya Vagabhatta said in his word that any mass bigger than the granthi is called Arbuda.

Cancer now has become one of the pressing health problems, both in seasoned countries and expanding countries. Recent statistics estimate that in India with a total population of around 100 crores, that is one billion people, cancer will strike about 7 lakhs, new patients, every year. Approximately 3 out of every 10 persons living today have or will acquire cancer. This is a huge commitment for the health care & research workers, deeming the disabling nature of the disease & the expensive nature of modern treatments.

The inspection of neoplastic ailments is Oncology. Neoplasm is reserved for the formation of benign & more particularly to malignant tumors or cancer. The tumor is a clinical term implying a swelling or lump but

many lumps & tissues of the body are fabricated by the laws of growth.

In the genesis of Cancer, major two factors are considered. Primarily, an isolated exemption against cancer. This can also be termed as host factor, constitution, genetic disposition etc. The genetic swaps induce activation of proto-oncogenes & inactivation of tumor suppressor gene. This is of vital significance.

Another factor is exposure to the external environment. This is the shallow factor which includes anything to which our bodies & minds are exposed for interaction, smoking, polluted air, food & water, chemicals, microbes, unhealthy & improper lifestyle, chronic injuries etc. are few among the major long list.

AIMS AND OBJECTS:

In Rasa granthas & other granthas Raudra Rasa **6** have been used as Anti cancerous & wide use of this drug in cancer on those days. Hence a need has been raised to pinpoint the activity of such drugs by clinical evaluations. On the basis of these facts it was decided to select Raudra Rasa which only throws much light on the state of its efficacy clinically.

MATERIALS AND METHODS

In this part a detail study was carried out from Ayurvedic & modern point of view. A detail review of the selected drug i.e Raudra Rasa **8**. Following are the main contents of Raudra Rasa **7**.

MERCURY

Mercury (Hg). Atomic number 80 also called quicksilver is a heavy, silvery-white metal that is liquid at room temperature, below its melting point mercury is a white solid & above its boiling point a colorless vapor. The mercury which is deep blue inside and is as bright as the midday sun outside is considered recommendable. (RASA MANJARI). Whereas smoky, yellowish and multicoloured mercury must not be used in the preparation of

medicines. Shad rasa, Guru- Snigdha-Sara gun, Ushna virya, Madhura vipaka and Yogavahi prabhava with karma being the removal of imbalances in tridosha are the pharmacological properties of Mercury.

Rasayana, Anulomaka, Drsti Bala prasad, Dirgha ayushakara, Kusthahara, Mrtyo nasak, Sarva guna Janak, Sotha Hara, Sarva roga hara, Yoga vahi are the therapeutic values of mercury. Also, it acts as an Alternative, antiparasitic, antiseptic, anti-syphilitic, cholagogue, disinfectant, diuretic, hemostatic, purgative, stimulant, skin preparations & preservatives.

SULPHUR

Sulfur "S" is a non-metallic element & is the second element of group VI below oxygen & above selenium in massive elemental form sulfur is often referred to as brimstone.

According to Rasa Ratna Samucchaya, the following are the types of Sulphur

- Sukhacancunibham (Red):Dhatuwardhan,
- Sukha picchanibham (Pita): Rasa Rasyanarth,
- Khatika(Sweta): Lepararth,
- Amla sara gandhaka(For internal use)
- Pinda gandhaka(For external use)

The sulphur, which is yellowish, like Snigdha, hard mass crystal-shaped is to be considered commendable (Grahya Gandhaka).

Kashaya- Katu-Madhura rasa, Snigdha-Tikshna-Usna-Katina guna, Katu-Madhura vipaka, Usna virya, Kushtaghna prabhava, Kapha Vata Hara karma are the pharmacological properties.

The sulphur acts as Agnidipaka, Amanasaka, Dadrunasaka, Drastibalaprada, Jvaradi rogahara, Pandughna, Kruminasaka, Ksayahara, Kusthaghna, Malasodhaka, Mrtyuhara, Pachana, Pittajanaka, Pliha rogahara, Rasayan, Saraka, Sarva vyadhihara, Virya vardhaka, Vrusya, Visahara, Visarpaghna, Yogavahi Laxative, Mild purgatives, Antipyretics, Antibiotic, Parasiticide, Anti-arthritis are the therapeutic values of sulphur.

BHAVANA DRUGS

These are the drugs that are used in the preparation of Raudra Rasa :

- Punarnava(Madhura-Tikta-Kashaya Rasa, Laghu-Ruksha gun, Usna virya, Madhura vipaka)
- Meghnada(Katu-Tikta rasa)
- Pippali(Katu/Madhura rasa, Laghu-Snigdha guna, Anushna-Sita virya, Madhura vipaka)
- Nagvalli (Katu-Tikta rasa, Katu-Tikta gun, Usna virya, Katu vipaka)
- Gomutra(Katu-Tikta-Kashaya rasa, Laghu-Tikshna guna, Usna virya, Katu vipaka)

Clinical Material:

Patients attending the IPD/OPD of IPGT&R, Hospital Jamnagar & of cancer Institute Rajkot were selected

Criteria For Selection of Patients.

The patients who were suffering from "ARBUDA" biopsy proved were selected for the present study,

Plan of Study:

It divided into two parts:

Proforma:

A special research proforma was prepared to study the patient as well as the disease

Investigation:

Routine Investigation: For the purpose of assessing the overall condition of the patient routine investigation of Blood, Urine, Stool & Biochemical investigation whenever necessary.

Special Investigation: Radiology, Biopsy etc.

Method Of Drug Administration

The selected 36 patients were divided in 2 Arms:

Group A: Only fresh cases who have not taken any other medicines previously.

No. of patients : 18

Group B: Patients who have already undergone in known modern therapy like Chemotherapy, Radiotherapy & surgery.

No. of patients: 18

DRUG SCHEDULE :

NAME : Raudra Rasa

FORM : Bhasma

DOSE : 125 Mg. Twice a day in capsule form.

ANUPAN : Honey.

DURATION : 3Months

MANAGEMENT :

According to Ayurveda, diet plays an important role in the formation of disease & it is already described as per modern science so; every patients were advised to leave such diet & consume that kind of diet in a proper manner which will reestablish the balance of the Dosh.

Patients attending the IPD/OPD IPGTER Hospital Jamnagar & of cancer Institute Rajkot were selected

Follow Up..

Patients were followed for 6 months after the completion of the study

Criteria Of Assessment

Subjective:

Signs & Symptoms were graded & then Assessed according to Ayurveda & modern point of view. Assessment on the basis of investigation i.e. before & after treatment.

Objective

Criteria Of Assessment of Therapy:

The obtained result was analyzed in the phases as

- 1) Complete relief 100% reduction in the swelling & Subsidence present complains
- 2) Marked Improvement: 50-75% relief in
- 3) Improvement
- 4) Unchanged of the signs & symptoms of the present complains 25-50% relief in the signs & symptoms of the present complains : No positive difference in the signs & symptoms present before and after the treatment.

To understand the depth and to categories the patients and their treatment methodology, Grading was done on certain criteria that included grading of :

- Lumps from T0(no swelling) to T4(invasion of tumors in adjacent structures).

- Lymph Node from N0(no regional presence) to N3(Metastasis>6cm)
- Hoarseness of voice from 0(Absent) to 4(unable to speak)
- Dysphagia from 0(Absent) to 4(total dysphagia)
- The roughness of tongue from 0(Absent) to 3(Complete roughness)
- Trismus from 0(Absent) to 3(mouth can open up to 1cm)
- Bodyweight from 0(Absent) to 3(30% or >30% loss of weight)
- Nausea and Vomiting, Hemoptysis and Constipation from 0(Absent) to 3(Daily)
- Rest of the symptoms like cough, pain, loss of appetite from 0(Absent) to 3(severe)

DISCUSSION

Raudra rasa is a novel herbs-mineral Ayurvedic preparation found to treat Arbuda, that is told under Arbudaadhikara.

It is prepared by sequentially giving Bhavana of specific herbs using Laghu Puta.

Arbuda is a versatile term. In this perspective, it represents swelling, tumour, a long round mass, lump of flesh with a rough surface, frequent bloodletting etc. The terminology Arbuda is synonymous which may also be explained as a reflection of uncontrolled multiplication of cells. According to Acharya Susruta, the aggravated dishes cause a situation of mamsa, producing muscular swelling anywhere in the body which is round, static with mild pain, big size, broad base, growing slowly and not ripening. This is known as Arbuda.

Following are the Classical References found about Raudra Rasa :

- Bhaishajya Ratnavali (44/59-60) Pg.583
- Rasaratna Samucchaya (1-2) Pg.576
- Rasendra Chintamani (1-2) Pg. 342

The outshot from the lately availed contemporary treatments like Radiotherapy, Chemotherapy and Surgery is varied and needs to be improved. Only about 1/3 cancer

patients respond well to such treatments. Another 1/3 show only partial remission for a few months before cancer recurs again.

CONCLUSION:

Ø Statistical analysis of group A showed that drug was highly significant at the level of $P < 0.001$ in the symptoms like body ache, cachexia, cough, constipation, debility, loss of appetite, loss of Wt., itching & pain as a subjective response.

Ø Whereas in objective response in-group A: stable disease was found in 50 % of the patients.

Ø Statistical analysis of group A showed that drug was highly significant at the level of $P < 0.001$ in the symptoms like body ache, cachexia, cough, headache, loss of appetite, loss of Wt., debility, itching & pain as a subjective response.

Ø Whereas in objective response in-group B: stable disease was found in 33.33 % of the patients.

Ø 40-50 % of the patients were completely (100%) relieved from the symptoms like bodyache, cachexia, cough, constipation, debility, fever, headache, loss of appt & loss of Wt. In group A.

Ø 25-50 % of the patients were completely (100%) relieved from the symptoms like bodyache, cachexia, cough, constipation, fever, headache, itching, loss of appt. & loss of Wt. In group B.

Ø Total 41.66 % of the patients had Stable disease as an effect of therapy while unchanged in 58.33 % of the patients.

Despite painful efforts to find a cure for cancer, many streams achieved no success in the last 97 years. The cancer cure rate is still what it was at the turn of the century, 16 %. What is normally quoted as a cure is a survival time with improvement in quality of life measurement upto 5 years after the first diagnosis. This time naturally increases with early diagnosis due to mass screening & better imaging systems as well as increased awareness in the population about the symptoms of the disease.

This Ayurvedic Rasa therapy **9** has improved local control in some clinical situations & its most profound impact has definitely been on improving the quality of life of cancer patients. It is hoped that a better understanding of the clinical use of anti-neoplastic drug i.e. Raudra Rasa will provide a sound scientific basis for the improved care of patients with cancer.

The science of life is Ayurveda. The practice of Ayurveda in India is a decade old talk. Due to unsatisfactory & toxic results of modern medical treatment of cancer in late stages, more & more cancer patients all over the world are turning to alternative medical systems. The proportion of patients using alternative medicine is as follows: Germany (65%), Australia (59%), Switzerland (52%), France (52%), Mexico (50%), and the USA (51%), all these figures show that the currently available modern methods are not the complete answer to cancer.

In the improvising era of cancer treatment, assorted new baits derived from raw products have been asserted to be of extreme interest. The process of anti-cancer agents involves substantial time, effort & resources.

For such achievement, no magic can help but it is possible to do so by research work which requires keen observation, justified logic & deduction, great efforts & plenty of patience.

However a sufficiently good number of recipes as a solution for disease cancer has been traced in Ayurvedic classics, under the name of Arbuda & many research work has been carried out on various drugs, but very little work has been tried on mineral products i.e. Raudra Rasa which is a classically known recipe described in Bhaishajya Ratnavali & other Ayurvedic texts as anti-cancerous.

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