



ROLE OF AYURVEDA IN THE MANAGEMENT OF ADVERSE EFFECTS OF CHEMO-RADIOTHERAPY IN A BRAIN CANCER PATIENT - A CASE STUDY.

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ABSTRACT

Cancer is a major illness and a leading cause of death worldwide, causing suffering of large population and global economic loss worldwide.^[1] Cancer is primarily a disease of older age; finding less toxic therapies is a major priority. Current cancer therapies are less effective and exhibit toxicities which are intolerable in most of the cases. In cancer there is no perfect treatment available to kill the abnormal growth of the cells. Chemo-radiotherapy is usually done to kill these cells but these therapies having lots of side effects like nausea, vomiting, diarrhea, sleep disturbance, anaemia, alopecia, hepatotoxicity etc. which have a devastating effect on quality of life. *Ayurveda* describes cancer as inflammatory or non-inflammatory swelling and mentioned them as either *Granthi* or *Arbuda*. This manuscript should help clinicians and people suffering from cancer to combat serious chemo-radiotherapy related side effects through simple but effective *Ayurveda* remedies. *Ayurvedic* anti cancer medicines can be used as adjuncts to improve the quality of life.

KEY WORDS: Cancer, adverse effects of chemo-radiotherapy, role of *Ayurveda*, A case study.

INTRODUCTION

Cancer also known as malignant tumour or malignant neoplasm is a group of diseases involving abnormal cell growth with the potential to invade or spread to other parts of the body. In other words, cancer is a hyper proliferative disorder that involves transformation, dysregulation of apoptosis proliferation, invasion, angiogenesis and metastasis. General treatments for cancer are surgery, Chemotherapy, Radiotherapy.

Chemotherapy: Chemotherapy is the use of anti-cancer drugs to treat the cancer. It can stop the growth of a tumour and kill cancer cells that have spread to other parts of the body, may also reduces the risk of recurrent, may shrink the size of a tumour to reduce cancer related symptoms. It may be given after surgery or before surgery. A few anti-cancer drugs are taken by mouth or injected into a vein. Some chemotherapeutic drugs that are used together are: Cyclophosphamide, doxorubicin, 5-fluorouracil, Methotrexate, Paclitaxel etc.

Radiotherapy: is a cancer treatment that uses high doses of radiation to kill cancer cells and stop them from spreading, to reduce symptoms. Radiation therapy can be external beam (when a machine outside the body aims radiation at cancer cells) or internal beam (when

radioactive source is put closer to tumour) mostly external beam is used.

Toxicity of chemo-radiotherapy: Chemotherapeutic drugs and radiations target all rapidly dividing cells and there affect not only tumour cells but also other cells in the body which are undergoing rapid cell division like skin and skin's appendages hair and nails, gastrointestinal cells, including sperm and ova, oral and vaginal mucosa. So in this way, chemotherapy not only kills abnormally growing cells but also normal rapidly growing cells, therefore produces side effects.

Common side effects of chemo-radio therapy are

1. Haematological toxicity – bone marrow suppression resulting in neutropenia, anaemia and thrombocytopenia leading to increased risk of infections and bleeding.
2. Gastrointestinal side effects—nausea, vomiting, anorexia and taste changes, oral mucositis, diarrhea, constipation.
3. Dermatological toxicity- can be local and systemic. Local- phlebitis, urticaria, pain, erythema, veindiscolouration & tissue necrosis. System- alopecia, dermatitis, nails changes,

hyperpigmentation, urticaria, photosensitivity reactions.

4. Gonadal dysfunction – In men reduction in sperm counts. In women, destruction of oocytes leading to ovarian failure and premature menopause.
5. Nervous system changes- tingling, burning, weakness or numbness in hands or feet, weakness, tired or achy muscles, shaking or trembling, hearing loss, stomach pain such as constipation or heartburn, fatigue, confusion and memory problem, depression, dizziness.^[2]

PRESENTATION OF CASE

A 70 yrs female patient came to our SJGAMC KC OPD on 18/6/17 with Reg. no.1006 as a diagnosed case of Brain tumor without other relevant family or personal risk factors for Neoplastic disease who had suffered from severe headache and nausea since February 2017, when she presented to her doctor, due to exacerbation of those symptoms. No abnormalities on physical and neurological examination were detected at that time. On April 30th of 2017, the CT scan of her brain was

remarkable for the following findings: “An lesion of approximately 3cmx 3cm in size, located in the brain right temporal lobe, with nonhomogenic, post- contrast signal amplification. A large edema surrounding the lesion. A compression of the occipital corner of the right lateral ventricle. A slight enlargement of the supratentorial ventricular system, shifting to the left.” On May 21st of 2017, the patient underwent surgical therapy including right temporal craniotomy, with total resection of the tumour. After surgery, the patient was referred to the institute of radiation oncology in Kerala for post operative radiotherapy, they advice 20 sittings of radio therapy, she took 10 sittings of radiotherapy mean while she come across so many complications like fatigue, confusion and memory problem, depression, tingling, weakness or numbness in hands or feet, generalized weakness, tired or achy muscles, she cannot able to walk, alopecia also present. To get rid of these side effects she approaches our hospital on June 18th 2017. Histopathological exam reveal that, the large areas of thrombotic necrosis, most probably caused by a large tumor.

MATERIALS AND METHODS

We advised her to continue radiotherapy long with these ayurvedic medication.

S.NO	MEDICATION	DOSE
1.	<i>Brihathvath chintamani Ras</i> ^[3]	1 tab, early morning on empty stomach with garlic
2.	<i>Amritha Ballataka Rasayana</i> ^[4,5]	5 gms Bid B.f with milk
3.	<i>Varunadhi quadha</i> ^[6] (<i>Brihat</i>)	15 ml Bid A.F with 15 ml of water
4.	<i>Cytocruel (Ayurkalpa pharma)</i> <i>Ingredients;</i> <i>Serveswar parpati</i> =14.4mg <i>Swarna Bhasma</i> =3.6 mg <i>Raskarpoor</i> =14.4mg <i>Swet marich</i> =42mg <i>Abraka Basma</i> =1.2mg <i>Punarnava ext.</i> =25mg <i>Yastimadhu basma</i> =25mg <i>Vasaka ext</i> =25mg <i>Hiraka basma</i> =0.3mg <i>Ras sindoor</i> =14.4mg <i>Tamra basma</i> =27.6mg <i>Lavang</i> =21.6mg <i>Panna basma</i> =0.5mg <i>Saragava ext</i> =25mg <i>Rohithaka chhal ext</i> =25mg <i>Guduchi ext</i> =25mg <i>Excipients</i> =Q.S	1 tab Bid with water A.F
5.	<i>Aswagandha churna</i> ^[7]	5 Bid with milk A.F

RESULTS

So far as adverse effects are concerned, the patient started feeling better from the very beginning (i.e. 20 days after the introduction of medicines). After 4 months of therapy she get rid of fatigue, indigestion, constipation, confusion and memory problem, depression, tingling, weakness or numbness in hands or feet, generalized weakness, tired or achy muscles, she cannot able to walk, alopecia. Now she able to walk with help of walker.

DISCUSSION

All the drugs in this combination are anti-cancer & chemo- radio protective activity, anti-oxidant, immunomodulatory activity, anti emetic activity, Tissue & Radio protective, Neuroprotective activity, and Hepatoprotective activity. Cytocruel capsule is the excellent combination of anti neoplastic, tissue promoting and anti inflammatory precious herbo minerals. Cytocruel capsule is very useful in detect in

earlier in primary stage it's curable in some type of cancer.

REFERENCES

1. Yadav B, Bajaj A, Saxena M, Saxena AK. In Vitro Anticancer Activity of the Root, Stem and Leaves of *Withania Somnifera* against Various Human Cancer Cell Lines. *Indian J Pharm Sci* 2010; 72(5): 659–663.
2. Susan G.Komen for cure(home page on internet). New York: American Cancer Society online resource: cited 2009/October available from www.komen.org.
3. Govind Das, Bhaisajya Ratnavali, Vidyotini Hindi commentary by Ambikadatta Sastri edited by Rajeswaradatta Sastri, 2001, Caukhambha Sanskrit Bhavan, Varanasi, Uttar Pradesh. *Vatavyadhi chikitsa* page: 267.
4. Agnivesa; Caraka Samhita; redacted by Caraka and Drdhabala with Ayurveda Dipika commentary by Cakrapanidatta; edited by Vaidya Yadavji Trikamji Acarya, 6th edition, 2008; Published by Caukhambha Surabharati Prakasana, Varanasi, Uttar Pradesh. *Chikitsa stana* 1 st chapter ,2nd pada.
5. Govind Das, Bhaisajya Ratnavali, Vidyotini Hindi commentary by Ambikadatta Sastri edited by Rajeswaradatta Sastri, 2001, Caukhambha Sanskrit Bhavan, Varanasi, Uttar Pradesh. *Arshas chikitsa prakaramna* page 603 vol 2.
6. Govind Das, Bhaisajya Ratnavali, Vidyotini Hindi commentary by Ambikadatta Sastri edited by Rajeswaradatta Sastri, 2001, Caukhambha Sanskrit Bhavan, Varanasi, Uttar Pradesh. *Asmari chikitsa prakaramna* page 484 vol 2
7. Anonymous; Yogaratnakara, with Vidyotini Hindi Commentary by Vaidya Laksmipati Sastri, 7th edition, 1999, Caukhambha Sanskrit Sansthan, Varanasi, Uttar Pradesh, *Rajayakshma chikitsa*, page 317.