RASAYU Cancer Clinic
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Newsletter

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Successful application of Rasayana Therapy in Chemo Resistant Cancer: A new hope in Non-Hodgkin's Lymphoma Cancer

Mrs. K.P a 72-year old diabetic female patient and after tonsillectomy was presented with swelling over left tonsil and chronic intermittent fever. She was diagnosed with Diffuse large B-cell lymphoma (DLBCL), an extra nodal High grade Non-Hodgkin's Lymphoma (NHL) on the basis of histopathology report. She was treated with six cycles of chemotherapy comprising of cyclophosphamide, vincristine and prednisolone (CVP regimen). She did not receive rituximab-chemo drug since it was unaffordable for her. Post treatment PET scan for response evaluation showed extensive metabolically active neck and mediastinal lymph nodes suggesting persistent disease. Unfortunately the patient had chemo resistant DLBCL, refractory to conventional chemotherapy. She was then advised radiotherapy which she refused due to high cost issues.

She approached 'Rasayu Cancer Clinic' (RCC) at Pune for treatment in January 2015.

Patient maintained good quality of life ever since Rasayana therapy was initiated. Within fifteen days her fatigue, body pain, backache, anorexia and cough were resolved and her appetite improved significantly. No side effects were observed during Rasayana therapy. PET scan done at the end of eight months of treatment showed complete regression of tumor.

Since the chances of recurrence are high in DLBCL, she was advised to continue the treatment. The patient discontinued therapy against medical advice after four to five months of the Rasayana treatment. PET scan repeated after one and half years showed extensive spread of the disease with liver and lung involvement suggestive of the relapse. Therefore again she visited RCC and started Rasayana therapy. After one and half years PET Scan was repeated which showed complete regression of all targeted lung, liver tumors along with the regression of all non-targeted lesions. She was completely free of disease and also free from all symptoms.The treatment was continued to avoid the relapse.

She is continuing the treatment and follow-up from RCC. She is leading a normal life for more than three years when the reported median survival for this disease is 9.2 to 12.5 months.

It can be said based on this case study that Rasayana therapy can be the ray of hope for patients who do not tolerate chemotherapy or are resistant to chemotherapy.

Dr. Poonam Birari

Chemoresistance: Stage IIIA Lung cancer

Recently Rasayu Cancer Clinic (RCC) treated a 50 year old patient (A.R.) diagnosed with Stage IIIA Lung cancer. He underwent chemo radiation therapy but did not respond well to it and hence was put on anti-malignant Ayurvedic Rasayana Therapy with other Ayurvedic symptomatic treatment.

Mr. A.R. first approached RCC with complaints of shortness of breath, cough and hoarseness of voice. His first CT scan showed 47x34x28mm soft tissue mass in the peri bronchial part of the right upper lobe bronchus, prevascular and mediastinal regions. Patient further did biopsy which revealed squamous cell carcinoma of lung. Subsequently he was treated with radiotherapy and chemotherapy regimen with Paclitaxel and Carboplatin. His post treatment CT scan showed multiple lesions in Right upper lobe of lung and mediastinum and also nodules in left lung. Physiological uptake was noted in brain, vocal cords, myocardium, liver, spleen, renal pelvic-calyceal systems, urinary bladder and the gut.Unfortunately,he failed to respond to chemo/radiotherapy treatment. He decided to start Ayurveda therapy and with RCC for further management.Considering his symptoms and radiological findings, he was treated with Herbo-mineral Rasayana compounds for six months. After one month of follow-up there was considerable improvement in his symptoms. He experienced a relief from shortness of breath and hoarseness of voice and sore throat. Cough was intermittent in nature. After four months, the patient was totally asymptomatic and his general condition was also excellent. His PET-CT scan after six months showed complete tumor regression and no progression of the disease. He is living normal good health and was physically active. He continued further treatment and follow-up from RCC and led a normal healthy life.

Promising results from this patient suggests that Rasayana therapy can be an effective treatment option for Lung cancer patient who failed to respond to Chemotherapy.

Dr. Vaishali Patil

Advantages of Rasayana Therapy in the treatment of Chemo resistant Tumors

1) Introduction:

Chemotherapy is being used to treat several cancers since mid 20thcentury.Chemotherapy is given with intention to kill the cancerous cells. But in many cases cancer comes back or tumor does not shrink completely, leaving behind a mass of resistant cancer cells.This phenomenon is called as chemo resistance.

The concept of chemo resistance can be correlated with resistance to antibiotics. To know it in a better way let's take an example of antibiotics.Antibiotics have been used to treat various bacterial diseases. In the initial period bacteria were sensitive to antibiotics and thus were killed and good response to antibiotics was observed. But over a period of time, certain bacteria changed their nature and survived. These survived strains became resistant to antibiotics and started growing rapidly as antibiotics given against them were no more effective. Same is the case with chemotherapy.

2) Causes and mechanism:

There are several mechanisms present in our body which cause chemo resistance to develop. The primary cause of chemo resistance is the failure of chemotherapeutic treatment. Chemo resistance is affected by genetic and epigenetic alterations.

a. Tumor heterogeneity:

Different types of cells present within the tumor have different responses to chemotherapy agents. This is because of different properties of cells present within the tumor.

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b. Drug inactivation:

To act on cancer cells, a drug undergoes some metabolic changes. This is called as drug activation.In many instances the drug is inactivated by cancer cells leading to chemo resistance.

c. Apoptosis evasion:

Apoptosis is a programmed cell death leading to the elimination of cells without realizing harmful substances in the surrounding area.Elimination of old and unhealthy cells is an important process. Malignant cells have the capacity to evade apoptosis leading to chemo resistance.

d. Involvement of tumor microenvironment:

Epigenetic changes are equally important as genetic changes in causing chemo resistance.

3) Types:

There are two types of chemo resistances

a. Primary Chemo resistance:

Tumor is non-responding to any kind of chemotherapy regimen.

b. Acquired Chemo resistance:

Initially tumor responds to the therapy but after a few cycles tumor develops resistance.

4) Impact/Outcome of chemo-resistance:

Development of cross resistance:
If host cells are resistant to one chemotherapy agent then they are resistant to the other types too. So, the options of treatment are reduced, disease may advance and the patient may land into non-recoverable stage.

5) Solution: Rasayana therapy

The best way to overcome or prevent this problem is to prevent an inappropriate or irrational use of chemotherapy.

Rasayana therapy can be effectively given during the interim period of surgery and recurrence of cancer. If a patient develops recurrence of his primary cancer or metastasis to some other site, same chemotherapy regimen cannot be given. If the chemotherapy has been given immediately after surgery then chances of developing resistance are more as there is no specific target post surgery.

How Rasayana therapy may help in cases of Chemo-resistant tumors?

Rasayana therapy has proved its significant role in treating many neoplastic tumors including chemo-resistant tumors. Rasayana therapy does not directly act on cancerous cells. Vital ingredients of Rasayana acts on various systems in the body. It stimulates proper functioning of the systems resulting in increasing immunity. Improved immunity in turn induces apoptosis in cancerous cells. Rasayana also helps in maintaining homeostasis.

As chemo resistance is a serious issue from the point of view of cancer treatment, the world is desperately looking for natural solution to tackle it. Rasayana therapy has started to prove its potential as a natural and non-toxic option for patients with chemo resistant cancers.

Dr. Anand Patil

Cell Biology and Cancer

Chemoresistance is a complex process in which cancer becomes resistant or tolerant to chemotherapy. Chemoresistance develops due to various reasons. Some of them are as follows:

1. Mutations in genes: A gene mutation is a permanent alteration in the DNA sequence that makes up a gene, such that the sequence differs from what is found in most people. Mutations range in size; they can affect anywhere from a single DNA building block (base pair) to a large segment of a chromosome that includes multiple genes.
2. Damaged DNA repairing system: It hampers apoptosis leading to resistance to anticancerous drugs.
3. Drug activation gets reduced: Generally once a drug is introduced in the body, it gets activated metabolically to target cancerous cells. Reduced activation of drugs leads to development of chemoresistance in cancerous cells.
4. Some target sites like brain are unreachable or poorly reachable by chemotherapy drugs
5. Changes in autophagy and process of apoptosis can cause chemoresistance.
6. Malignant tumor shows cell heterogeneity: Some cells within this tumor have stem cell like properties. These cells are usually resistant to chemotherapy.
7. Changes in vascularity lead to chemo resistance.
8. Some stages of cell cycles are known to be resistant to some drugs.

Rasayu Cancer Clinic (RCC) is effectively treating patients with chemo resistant cancers.

RCC's therapy is non-cytotoxic Rasayana therapy and aims at improving immunity from systemic level to cellular level establishing normal cell cycle which is deranged in cancer. The RCC's Rasayana Therapy is based on herbo-mineral combinations which are easy to administer and are easily gets activated in the body. They are reachable to the exceptional sites like brain. Rasayana therapy gives excellent results in chemoresistant cancers.

Dr. Ketaki Jagtap

Occurrence of Chemoresistance

The concept of drug resistance first came on to the front-page when bacteria became resistant to some antibiotics. The same mechanism has been found in cancer as well. Chemotherapy is one of the treatments given in many cancers as a standard protocol. While chemotherapy is often capable to kill cancer cells and regress tumor, many cancer patients experience recurrence of the disease and ultimately death because of the treatment failure. Cancer cells are either intrinsically resistant to chemotherapy drugs or develop resistance during the course of treatment. This is called chemo resistance. Chemo resistance occurs when cancer cells have or develop the ability to tolerate exposure to one or more chemotherapy treatments. Several inherent factors within tumour cells and microenvironment around tumour in the body contribute to chemo resistance. Chemo resistance is influenced by genetic and epigenetic changes which affect drug uptake, metabolism and export of a drug at the cellular levels. Chemo resistance is a major challenge in treating cancer patients as it causes cancer recurrence, metastasis and death. As per the Drug Resistance Laboratory (Queen's University Belfast) Northern Ireland, Chemoresistance is responsible for causing treatment failures and mortality in more than 90% patients with metastatic cancers.

Dr. Pravin Gund

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