

AYURVEDA FOR CANCER THERAPY**Subha Ganguly***

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Article Received on
15 September 2014,

Revised on 09 Oct 2014,
Accepted on 02 Nov 2014

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ABSTRACT

Cancer, one of the most deadly challenges spreading drastically in 21st century, has now officially become the most dangerous killer in the world according to the World Health Organization. Cancer is related to adversary of modernization and advanced pattern of irregular and stressed life dominated by Western medicine. Scientists are making their best efforts to fight this disease; however the sure-shot cure is still awaited. The excruciating experience of dying cancer patients can be ameliorated by making use of Ayurvedic principles. Ayurveda can be helpful in the management of cancer in many ways such as prophylactic, palliative, curative and supportive. Ayurvedic medicines help to improve the quality of life of the patients through various pharmacokinetic mechanisms.

KEYWORDS: Ayurveda, Cancer, Chemotherapy, Radiation therapy, Treatment.

INTRODUCTION

Ayurveda, the oldest Indian indigenous medicine system of plant drugs is known from very early times for preventing or suppressing various tumors using these natural drugs. And nowadays scientists are keener to researches on complementary and alternative medicine for the management of cancer. The word 'cancer' may be new to the 5,000 year old Indian system of medicine, Ayurveda, which relies on natural substances for healing. But ancient Ayurvedic classics are aware of the clinical features, resembling cancer, with the names such as *Apachi*, *Gulma*, *Granthi*, and *Arbuda*. Following are names of some of the conditions mentioned in Ayurvedic classics that have relevance to cancer manifestations in modern medicine. In Ayurvedic concept, according to 'Charaka' and 'Sushruta Samhitas' cancer is

described as inflammatory or non-inflammatory swelling and mentioned either as 'Granthi' (minor neoplasm) or 'Arbuda' (major neoplasm).^[1, 2]

Mechanism of Action of Ayurvedic Drugs

Ayurveda helps in reducing the therapeutic dose of the various drugs used as proved in some studies using cow urine.^[3] Some Ayurvedic preparations can fight against tumors. They can be helpful in targeting the specific tissues as shown in some allopathic studies on nanoparticles of gold. Ayurvedic preparations can act as an adjuvant or a co-therapy along with chemotherapy or radiotherapy. It is also helpful in post-surgery care. Ayurvedic medicines help to minimise the side effects of these therapies. Ayurvedic preparations help to slow the progress of cancer in cases where chemotherapy, radiotherapy or surgery is contra-indicated, due to some reasons and patients have no other choice. The cell-protective activity of drugs prescribed in *Rasayana* therapy helps to improve comfort and the quality of life of individuals with cancer. The nervous system (Vata or air), the venous system (Pitta or fire) and the arterial system (Kapha or water) are three basics of Ayurveda and very important for normal body function. In malignant tumors all three systems get out of control (Tridoshas) and lose mutual coordination that causes tissue damage, resulting critical condition. Tridoshas cause excessive metabolic crisis resulting in proliferation.^[2, 4] Ayurvedic drugs acting as supplements with chemotherapy and radiation therapy in ameliorating cancer. Interestingly, *Snehana*, i.e., intake of various medicated oil preparations in a classical way a week or 10 days prior to the start of chemotherapy or radiotherapy, has been found to reduce the toxic effects of such therapies. Chemotherapy is the first and significant medical modality of cancer remedy, which involves the introduction of strong chemicals. These chemicals target the fast-multiplying mutant cells. However, the toxicity they cause to normal tissues of the body proves as an obstacle. The use of antioxidants during chemotherapy enhances therapy by reducing the generation of aldehydes. Natural drugs, which are used as *Rasayanas* in Ayurveda, have also been proved to have antioxidant properties. The modern cancer therapy which is known to be burdened by drug-induced toxic side effects hoping perfect cure of disease from the complementary and alternative medicine system. The main goal of Ayurvedic therapy is to find the ultimate cause of an illness while the therapeutic approach of Ayurveda is divided into four categories as *Prakritisthapani chikitsa* (health maintenance), *Rasayana chikitsa*, (restoration of normal function), *Roganashani chikitsa* (disease cure) and *Naishthiki chikitsa* (spiritual approach).^[2, 4]

Various Ayurvedic Herbal Preparations

Commonly used herbal decoctions reported in Ayurveda are made of multiple herbs possessing great potential for a cancer cure; scientifically these formulations work on multiple biochemical pathways and influence different organ systems all together and nourish the body as a whole by supporting body's defence systems. Herbs help total healing, reduces the side effects and cancer-associated complications. ^[5] *Andrographis paniculata*, *Annona atemoya*, *Phyllanthus niruri*, *Piper longum*, *Podophyllum hexandrum*, *Tinospora cordifolia*, *Semecarpus anacardium*, *Vitis vinifera*, *Baliospermum montanum*, *Madhuca indica*, *Pandanus odoratissimum*, *Pterospermum acerifolium*, *Raphanus sativus*, *Barleria prionitis*, *Prosopis cineraria*, *Amorphopallus campanulatus*, *Oxoxylum indicum*, *Basella rubra*, *Flacourtia romantchi*, *Moringa oleifera*, *Ficus bengalensis*, *Curcuma domestica*, *Allium sativum*, *Calotropis gigantean*, *Datura metel*, *Hygrophila spinosa*, *Juniperus indica*, *Moringa oleifera*, *Nigella sativa*, *Picrorrhiza kurroa*, *Rubia cordifolia*, etc. are various plants having scientific evidence of anticancer property. Nowadays, many herbs are under clinical studies and being investigated phytochemically to understand their anticancer potential. More than 25% of drugs used during the last 20 years are directly derived from plants, while the other 25% are chemically altered natural products. Nine plant-derived compounds including vinblastine, vincristine, etoposide, teniposide, taxol, navelbine, taxotere, topotecan and irinotecan have been approved for use as anticancer drugs. 10-hydroxycamptothecin, monocrotaline, d-tetrandrine, lycobetaine, indirubin, colchicinamide, curcumol, curdione, gossypol and homoharringtonine are few more plant-derived compounds of high hope. ^[6, 7] Each herb contains multiple active principles that often operate synergistically producing therapeutic benefits and lowering the risks of adverse effects; and avoids the need for supplemental therapy to manage cancer cachexia. Now it is important to raise awareness and encourage implementation of Ayurvedic therapies for combating cancer and suggest an integrated approach in tumor management and treatment. ^[8]

CONCLUSION

Most commonly, all the drugs which are used in *Rasayana* therapy have the ability to reduce the three doshas or imbalances related to *vaata*, *pitta* and *kapha*. The most commonly prescribed *Rasayana* drugs are *Triphala* (*Terminalia Chebula*, *Embellica officinale*, and *Terminalia ballarica*), *Guduchi* (*Tinospora cordifolia*) and *Punarnava* (*Bohervia diffusa*). According to clinical studies, such drugs have shown very impressive effects on protecting body from the side effects (of chemo and radio therapies) like alopecia, nausea, constipation,

anorexia and vomiting. The patients who receive Ayurvedic treatment along with chemotherapy have shown more regularity in maintaining the chemotherapy cycles as the hematological levels can be maintained up to a normal state. More than 50 research studies on cancer carried out at various post-graduate institutes, have shown that Ayurvedic preparations are very effective as chemo-preventive and radio-preventive agents.

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