

NUTRACEUTICALS –THE TRADITIONAL RASAYANA AND THEIR ROLE IN PREVENTION OF CANCER

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ABSTRACT

The term "Nutraceuticals" was coined from "nutrition" and "pharmaceutical" in 1989 by Stephen De Felice, MD, Founder and Chairman of the Foundation for Innovation in Medicine (FIM), Cranford, NJ. De Felice proceeded to define Nutraceuticals as, "a food (or part of a food) that provides medical or health benefits, including the prevention and/or treatment of a disease". When functional food aids in the prevention and/or treatment of disease and/or disorder other than anaemia, it is called a Nutraceuticals. Hence, Nutraceuticals is a broad umbrella term that is used to describe any product derived from food source with extra health benefits in addition to the basic nutritional value found in foods or else it is a food stuff (a fortified food or a dietary supplement) that is held to provide health or medical benefits in addition to its basic nutritional value.

KEYWORDS: Nutraceuticals, Rasayana, Chyawanaprasha avaleha.

INTRODUCTION

The term "Nutraceuticals" was coined from "nutrition" and "pharmaceutical" in 1989 by Stephen De Felice, MD, Founder and Chairman of the Foundation for Innovation in Medicine (FIM), Cranford, NJ. De Felice proceeded to define Nutraceuticals as, "a food (or part of a food) that provides medical or health benefits, including the prevention and/or treatment of a disease¹". Rasayana is one among the eight branches of Ayurveda, which can be correlated with Nutraceuticals. Rasa nourishes our body; it boosts our immunity and helps to keep the body healthy. Mounting evidence supports the observation that functional foods containing physiologically active components, either from plant or animal

sources, may enhance health. Clearly, all foods are functional, as they provide taste, aroma, or nutritive value. There has been an explosion of consumer interest in the health enhancing role of specific foods or physiologically-active food components, so-called functional foods.

People with cancer need to maintain a healthy body, weight and eat nutritious food. The side effects of surgery, radiation therapy and chemotherapy causes the person to eat less. In Ayurveda, the importance of particular diet in prevention and treatment of diseases was well known even in 1000 BC.

If wholesome diet is given in a planned way, then there is no need to administer medicines and if wholesome diet is not

being used then too there is no need to give medicine, as this is not going to cure the disease in the absence of wholesome diet². The factors responsible for the dhatu vaishyamata have to be avoided and the factors influencing the dhatu samyata have to be consumed³.

OBJECTIVES

1. To know about the Nutraceuticals.
2. To know the Rasayanas & their action in cancer prevention.

Nutraceuticals: can be considered as non-specific biological therapies used to promote general well-being, control symptoms and prevent malignant processes. The philosophy behind Nutraceuticals is to focus on prevention. The dietary supplement represents a product containing nutrients derived from food products and is often concentrated in liquid, capsule, powder or pill form. Nutraceuticals can include minerals, vitamins, and other dietary supplements. Nutraceuticals are usually natural substances and, unlike drugs, are not substances synthesized for a certain purpose.

Ahara has been described as one of the Trayopastambha of life. Ahara has been enumerated first, which shows its more importance. Diet is considered as vital for a human body as it provides the basic nutrients and promotes longevity. Ayurveda always emphasizes on consuming healthy and nutritious diet for maintaining good health⁴.

In Ayurveda, Rasayana therapy is concerned with the strengthening of the immune system. According to Charakacharya, Amalaki is considered as

one of the most nourishing and rejuvenating herb. It is a strong natural antioxidant containing high levels of vitamin C⁵. The aqueous extract of Amalaki has been tested for its radio protective properties against the sub lethal gamma radiation in Swiss albino rats and is found significant⁶. Other Ayurvedic drugs having antioxidant property are Haridra, Rasona (Garlic), Guduchi, Haritaki, Kanchar, Musali, Hiraka bhasma, Vaikranta bhasma, Swarna bhasma, Abraka bhasma etc. Ayurvedic formulations like Haridra khanda Rasayana, Guduchi Rasayana, Shilajatu Rasayana, Chavanprash, Guggulu Rasayana, Rasona Rasayana, Triphala Rasayana, Brahmi Rasayana, Amalaki Rasayana, Vardhamana Pippali Rasayana, Gandamala khandano rasa, Kanchara Guggulu etc.

Here are some of Rasayanas which are having proven effect on the prevention and control of Cancer.

Chyawanaprasha Avaleha:

It is a sugar and honey based preparation containing over 50 herbs, Tila tail and clarified butter traditionally used for ailments of respiratory tract. The main ingredient of this formulation is Amalaki (Indian Gooseberry), which is a rich source of Vitamin C, found to have anti-oxidant activities⁷; immuno-modulatory and cytoprotective activities⁸.

Brahmi Rasayana:

This is used for combating the day-to-day mental stress, improving memory and higher order cognitive functions. The present formulation is meant for this purpose. As per Ayurveda, Brahmi is a

Medhya Rasayana (memory enhancer). It exhibited anti-oxidant effect⁹.

Arjun Ksheerapaka:

The word Ksheerapaka means processed milk. This is a preparation of bark of the arjun tree (*Terminalia arjuna*), processed with milk. The main effect offered by Arjun is of cardio-protection, which is supported by many scientific studies. In a study of cases of chronic unstable angina, this led to improvement in clinical and treadmill exercise parameters comparable to the standard isosorbide mononitrate therapy, offered protection against the damage induced by myocardial necrosis, exhibited anti-oxidant activity¹⁰.

Rasona Ksheerapaka:

In this formulation de-husked and dried bulbils of garlic are processed with eight times milk. Garlic (*Allium sativum*) is a Rasayana drug in Ayurveda. Present formulation is said to be useful in ailments of Vata Dosha (e.g. sciatica, arthritis, cardiac disorders), although, the main use of this formulation by physicians is in hyperlipidemia. Retardative effect on development of atherosclerosis, relaxant effect on aortic rings in vitro¹¹.

Phala Ghrita¹²:

This formulation is a combination of around 30 herbs including chebulic myrobalans, Indian gooseberry, beleric myrobalans, long pepper, turmeric and sandal, processed with clarified butter and cow's milk. It is advocated in men and women for reproductive health, nowadays mainly used in females for primary and secondary infertility. The name Phala Ghrita is a symbolic representation of the activities attributed to this formulation.

The word 'Phala' means fruit, which is a product of fertilization.

DISCUSSION

Cancer develops over a long period. Foods can block the chemical activation, which normally initiates cancer. Antioxidants, vitamins can irradiate and repair some of the cellular damage caused by cancer. It may be important for the patients undergoing chemotherapy and radiotherapy because in that stage, requirement for antioxidant compounds increases.

Regular intake of Rasayana is beneficial in increasing the immune system of individual. Amalaki (Indian Goose Berry) is rich in Vitamin C which is a strong naturally occurring Antioxidant. It is having radio protective properties against the sub lethal gamma radiation. Brahmi is a Medhya Rasayana which helps in relieving the stress and improves the memory. Arjun is a cardio protective drug having antioxidant property. It offers protection against the damage induced by myocardial necrosis. Rasona (garlic) is a Rasayana drug having antioxidant property, helps in preventing stomach, lungs and liver cancer. It contains Diallyl sulphide, Quercetin and ajoene. These block the cancer causing agent such as nitrosamines and aflatoxin. Phala ghrita is a formulation which is advocated in improving the reproductive health of individual.

Thus the role of vitamins A, C, E helps in prevention of cancer. Their action may be through the modulation of immune function or through antioxidant properties or by direct effect. It may be important for

the patients undergoing chemotherapy and radiotherapy because in that stage, requirement for antioxidant compounds increases.

CONCLUSION

Thus, nothing in this world can compensate the richness of food. The food, consumed in proper quantity and having high nutritive value has an ability to prevent and cure the disease. Thus, these Nutraceuticals which are the natural bioactive materials that provide demonstrated physiological benefits or reduce the risk of chronic diseases, above and beyond their basic nutritional function are of much importance. It should be stressed, however, that functional foods are not a magic bullet or universal panacea for poor health habits.

Rasayana, an exclusive concept stated in Ayurveda specific in increasing the life span, significant improvement in quality of life and prevention of disease. Evidences state that Rasayana therapy provides significant efficacy and safety in treating cancer patients. Thus, supplementation with micronutrients as adjuvant in cancer patients may prove to be helpful. There are no "good" or "bad" foods, but there are good or bad diets.

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