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A single case study of treating Adenocarcinoma of colon with Ayurvedic medicine.

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Ayurvedic approach for Management of Adenocarcinoma of Colon: A case study

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Abstract

Cancer is one of the most dreaded diseases worldwide, which is a major cause of morbidity and mortality, with approximately 14 million new cases and 8 million cancer-related deaths in 2012. Colorectal cancer was the third highest incidence globally among male population. In Sri Lankan Indigenous systems of medicine are often considered effective for treating Adenocarcinoma of colon and many medical recipes which are successfully prescribed in cancer in order to decrease the spread of abnormal cells throughout body. This study was to assess the Ayurvedic treatment modality on the management of colon adenocarcinoma. The present study was carried out at the cancer clinic at the Bandaranaike Memorial Ayurvedic Research Institute for twenty weeks. Detailed history, clinical examinations, and relevant investigations were conducted at the clinic. Oral administration of three herbal formulations namely *Sharibhadyasawa* -60ml/day, *Cheena ala choorna* -10g/day and *Kaishora guggulu* -2/day were applied for the patient throughout the period of study. Initial CEA (Carcino Embryonic Antigen) of the patient was 14.5 ng/ml and CA125 of the patient was 343. After twenty weeks of the treatment, CEA of the patient was found 10.4 ng/ml, CA125 value was 155 and symptoms were decreased. According to *panchapadartha analysis*, *katu*, *tikta*, and *kashaya rasas* and *Laghu*, *Ruksha* and *tikshna gunas* are predominant of the drug modality. All of things are useful for the pacifying *kapha dosha* and *vata dosha* as well as cleansing the *srothas*. These mechanism leads to control tumour proliferation. According to that this regimen is helps to control the tumour development and symptomatic relief was maintained.

Key word: Adenocarcinoma of colon, Ayurvedic treatment modality, *Panchapadartha*

Introduction

Among non-communicable diseases, cancer places enormous strains on the health care systems of developing countries and non-developing countries in the world. Cancer is a major cause of morbidity and mortality, with approximately 14 million new cases and 8 million cancer related deaths in 2012, affecting populations in all countries and all religions. The five most sites of cancer diagnosed in 2012 were the lung (16.7% of the total), prostate (15%), colorectum (10%), stomach (8.5%) and liver (7.5%) in men and the five most common incident sites of cancer were the breast (25.2% of the total), colo-rectum (9.2%), lung (8.7%), cervix (7.9%) and stomach (4.8%) in women. According to statistics among women, the second highest incidence was colorectal cancer (14.3 per 100 000) ^[1]. Colo-rectal carcinoma has various etiological factors include inflammatory bowel disease, dietary factors (high intake of red meat, high intake of fat, increase intake of calcium, low intake of dietary fiber) smoking and alcohol intake. A family history of colorectal cancers or polyps, especially in *first-degree* relatives is also a strong risk factor^[2].

According to Ayurveda concept the renowned Ayurvedic classics *caraka samhita* described *Arbuda in the chapter of sophia* ^[3] and *Susrutha samhitas* has more information on *Arbuda, Granthi*, *Apachi*, *Gandamala* etc ^[4], *In Astanga hrudaya* was mentioned about *arbuda* of lips, tongue, nose breast etc. *Madava nidana* described cancer as '*Vidradhi* (Tumour). When the involvement of One or two *doshas*, it will occur non inflammation/ minor neoplasm (*Granthi*)

which is not harmful and when the involvement of three *doshas* it will occur inflammatory/malignant neoplasm (*Arbuda*) which is dangerous. According to *Samhitas*, they defined *Vata* & other *dosas* associated with *Kapha dosha* getting aggravated, vitiated muscle, blood, and fat tissues Which is round, static (immovable) with mild pain, big size, Deep seated, growing slowly and not ripening (forming puss): this disease called as '*Arbuda*'. The concept of Ayurveda, *Tridoshic* tumours are usually malignant because all three major body humors (*doshas*) lose mutual coordination. The action of ayurvedic drugs which are explained as '*panchapadartha*'. There are taste (*rasa*), physical properties (*guna*), the potency (*virya*), attributes of drug assimilation (*vipaka*), and the specific action (*prabhava*). All these factors represent different aspects of the *mahabhutas* of which the drug is composed. The objective of this case study was to evaluate the efficacy of the ayurvedic treatment modality of the colon adenocarcinoma in Ayurveda aspect.

Case presentation

A 56-year-old-female patient visited to cancer clinic, Bandaranaike Memorial Ayurvedic Research Institute, Navinna, with chief complains with flatulence, abdominal pain, and constipation since three months. The patient was diagnosed as bilateral ovarian and omentum deposits of a mucinous adenocarcinoma. They have suggested that the primary site was in large bowel. She was taken Colonoscopy report and found carcinoma of sigmoid colon at 25cm narrow luma and second growth at 40cm. She was done on chemotherapy in July 2013. She presented to our clinic in November 2015. She had not obtained any kind of treatment during this period. Her CEA (Carcino-Embryonic Antigen) count was 14.5ng/ml and CA 125 count was 343. By following treatment principles of Ayurveda, oral medicine administration of three herbal formulations namely *Sharibhadyasawa*, *Cheena ala choorna* and *Kaishora*

guggulu were applied for the patient throughout twenty weeks of period of study. Table 1 is mentioned as the treatment modality of this study.

Table 01

Oral drug	Dosage form	Dose	Drug vehicle	Duration
<i>Sharibhdyasawa</i>	Liquid	30ml- morning 30ml- evening	None	20 weeks
<i>Kaishora guggulu</i>	Pill	1 pill –morning 1 pill – morning	Warm water	20weeks
<i>Cheena ala powder</i>	Coarse Powder	5g – morning 5g - morning	Bee honey	20 weeks

Management & Outcome

Response of the treatment was recorded and therapeutic effects were evaluated by relevant investigational study of the patient [Table 2]. It was observed that the patient’s clinical symptoms were reduced gradually during the treatment.

Table 2

Date	CEA	CA125
Pre treatment	14.5 ng/ml	343
4 th week	12.2 ng/ml	
10 th week	12.2 ng/ml	196
20 th week	10.4 ng/ml	155

Initial CEA (Carcino Embryonic Antigen) of the patient was 14.5ng/ml and CA 125 was 343. After twenty weeks of the treatment CEA of the patient was 10.4 ng/ml, the value of the CA125 was 155 and symptoms (Gastritis, Abdominal pain, Constipation) were decreased. Ultrasound scan was normal.

Discussion

According to Ayurveda philosophy, pathogenesis of *Arbuda* described as, decrease state of *dhatwagni* (deranges of metabolism) which leads to excessive tissue growth. *Vata dosha* associated with anabolic phase of growth and *kapha dosha* associated with catabolic phase. As the result aggravation of *vata dosha* and suppression of *kapha dosha*, this leads to cell proliferation.

The action of herbal drugs which are described as taste (*rasa*), physical properties (*guna*), the potency (*virya*), attributes of the drug assimilation (*vipaka*) and the specific action (*prabhava*). All these factors inside the drug are mostly interconnected and interdependent. All the factors effect to the *dosha viz vata, pitta, kapha* [7, 8]. In this treatment modality different forms of preparation were mentioned. These recipes are mainly plant based and Ayurveda philosophy

has mentioned solid philosophy to define pharmacodynamics and treatment protocol. The pharmacodynamics of the drugs in this modality are analyze according to *panchapidartha*. When the *Rasa* is considered the majority of drugs have shown *katu*, *tikta*, and *kashaya rasas* as predominant *Rasa*. Also most of the drugs were bearing *Laghu*, *Ruksha* and *tikshna gunasa*^[12]. All of things are useful for the pacifying *kapha dosha* and *vata dosha* as well as cleansing the *srothas*. These mechanism leads to control tumour proliferation.

In addition Herbal drugs are known to control immunomodulatory properties and generally act by stimulating both specific and non-specific immunity^[5]. In Ayurvedic texts there are wide range of herbs and compounds used for cancer treatment. The immune system is a sophisticated defense system within mammals, to protect them from invading agents. The defense mechanisms of human protect an individual from microorganisms and potentially harmful material. It uses a variety of cells, tissues, and organs and is capable of recognizing and eliminating invading pathogens. Modulation of immune system denotes to any change in the immune response that can involve induction, expression, amplification, or inhibition of any part or phase of the immune response. Immunomodulator defined as a substance used for its effect on the immune system. There are two types according to their effects viz immunosuppressant and immune-stimulators. They have ability to mount an immune response or defend against pathogens or tumours. At present the active components of medicinal plants have been shown to be an important source of immunomodulators^[6]. There are a number of herbal compounds which can act as Immunomodulatory property Antioxidant and anticancer properties viz *Hemidesmus indicus*, *Cyperus rotundus* Linn, *Symplocos racemosa*, *Ficus benhalensis*, *Curcuma zedoaria* , *Prunus cerasoides*, *Cissampelos pareira*, *Phyllanthus emblica* , *Tinospora cordifolia*, *Moringa oleifera*, *Vitis vinifera*, *Andropogon muricatum*, *Santalum album*, *Pterocarpus santalinus*, *Trachyspermum ammi* , *Picrorhiza scrophulariflora*, *Cinnamomum tamala* , *Osbeckia*

octandra, Saussurea costus, Terminalia chebula, Cassia senna, Commiphora wightii, Terminalia bellerica, Piper nigrum, Piper longum, Embelia ribes, Baliospermum montanum, Smilax china (L.)^[13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40].

According to Ayurveda concept *Vyadhikshamatva* implies a resistance against the loss of the integrity, proportion, and interrelationship amongst the individual's *dosha* and *dhatu*. The factors which contribute to the body immunity are normal *doshas*, equilibrium state of *dhathu* and *agni*, potency of *srotas* (micro channels)^[10,11]. Therefore drug can influence 'ama' in two ways viz increase digestion capacity and prevent formation of *ama*. The pharmacodynamics of the above drugs, *ushna veerya* is significantly increased which leads to increase digestion capacity and prevent formation of 'ama'^[12].

Conclusion

Considering *Panchapadartha* of above drugs of the treatment regimen Majority of ingredients have *Katu, Tikta kashaya rasa, Laghu, Teekshna, Ruksh, Guna, Ushna veerya*. Therefore this treatment regimen is rich with *Tridosha shamaka, Srothas avarodha nashaka, Ama pachana*. Also a Pharmacological action of the ingredients of the treatment regimen has anti cancer immunomodulation and antioxidant. According to that this regimen is helps to control the tumour development and symptomatic relief was maintained. Further establish this treatment regimen in management of Adenocarcinoma of colon, a study involving larger sample size is needed. Further investigations are required to evaluate the efficacy of this drug modality in controlling Adenocarcinoma of colon.

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