

Original Research Article

# Prolongation of survival time of incurable terminal cancer patients with herbal medicines

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## Abstract

**Background:** Cancer treatment in a developing world is quite a challenging affair. In a country like India conventional cancer treatment is beyond the reach of many economically challenged patients. Moreover, due to lack of awareness in public, shortage of oncologists and cancer treatment hospitals majority patients present to a clinic with very advanced incurable disease. As a result many terminal cancer patients with limited conventional treatment options are compelled to try various complementary and alternative therapies like Ayurveda, homeopathy, herbal, traditional or even black magic. Little is known about the clinical efficacy about these therapies on cancer treatment; however, in some instances unexplained prolongation of survival period of terminal cancer patients has been observed with certain herbal medicines.

**Aim:** We followed two terminal patients with incurable advanced cancer treated with herbal medicines.

**Materials and methods:** One of the patients was suffering from multiple myeloma and the other with disseminated rectal cancer. Both these patients had advanced disease, refused conventional treatment and was treated with a herbal composition comprising of herbs, viz. *Azadirachta indica*, *Curcuma longa*, *Embelica officinalis*, *Ocimum sanctum*, *Semecarpus anacardium*, and *Tinospora cordifolia*.

**Results:** The patient suffering from multiple myeloma survived for 19 years and that of rectal cancer survived for 5 years, respectively.

**Conclusion:** In absence of any conventional therapy the prolongation of survival time observed may be attributed to the herbal treatment.

## Key words

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Herbal medicine, Cancer treatment, Life prolongation.

## Introduction

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Unexplained prolonged survival given a diagnosis of incurable advanced cancer is a puzzling phenomenon that recently has attracted more scientific attention [1]. In a developing country such as India due to lack of awareness and many other factors compels most of the cancer patients to present in a clinic with advanced disease [2, 3]. Many are advised against any aggressive curative therapy because of doubtful end results. Some are not in a position to undertake any conventional therapy primarily because of financial constraints. Hence, the next best option for many cancer patients is to try out some alternative cancer therapy. Be it Ayurveda, homeopathy, herbal, traditional or even black magic [4] patients will try out something till he/she is alive. Either the care givers of the patients, relatives, friends, and/or well-wishers carryout the research work to find some suitable treatment option. With the rapid proliferation of the internet in India it is now possible to try some exotic treatment option available outside the country. In most of the cases these alternative therapies are not much useful in cancer treatment, but there are reports of life prolongation and complete regression of the disease with certain alternative therapies, especially with homeopathic approach [5, 6], Chinese herbal medicine [7] and Ayurvedic medicines [8].

For centuries, natural plant remedies (many of them obtained from herbs) have been used to treat disease and maintain health [9]. Botanical medicines have been used traditionally by herbalists and indigenous healers worldwide [10]. In the developing countries such as India and China, herbal medicine plays an important role in cancer treatment [11]. At present herbal products are gaining popularity in the treatment and prevention of various diseases. Specific to cancer, there are reports that herbal products are mainly used to slow down the disease

progression and to relive symptoms [12]. Medicinal plants may promote host resistance against infection by re-stabilizing body equilibrium and conditioning the body tissues. Several reports describe that the anticancer activity of medicinal plants is due to the presence of antioxidants present in them. In fact, the medicinal plants are easily available, cheaper and possess no toxicity as compared to the modern (allopathic) drugs [13]. In this article we report prolongation of survival time of two terminal cancer patients treated with a poly herbal therapy. This alternative herbal therapy has been shown to be effective in complete regression of cancer/tumor in some patients [14, 15, 16].

## Materials and methods

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Two patients of advanced malignancy were given an herbal therapy to treat their disease. Both these patients refused convention therapy because of doubtful treatment outcome. One of the patients was suffering from multiple myeloma and the other with disseminated rectal cancer. The herbal formulation has been derived from various important Ayurvedic herbs, viz. *Azadirachta indica*, *Curcuma longa*, *Embelica officinalis*, *Ocimum sanctum*, *Semecarpus anacardium*, and *Tinospora cordifolia*, among others. The herbal medicines were orally administered and well tolerated by patients. Instances of adverse side effects were less due to individual dosing of the medicine. A detail about this therapy is published [15].

## Results

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**Case 1:** A 35 years old male patient who presented with severe back pain and walking difficulty in August 1995. He was admitted in the department of Neurology, King George Medical University (KGMU), Lucknow for investigation and treatment. X-ray of spine showed multiple vertebral collapse (**Figure – 1**). X-ray of skull showed multiple lytic areas. A bone marrow aspirated and biopsy performed possessed

features suggestive of lymphomatous infiltration. The patient was given one cycle of chemotherapy. However, his health condition deteriorated further because of the adverse side effects of chemotherapy. The patient did not want to continue further therapy and after leaving the hospital he started the poly herbal therapy from 28.08.1995. He was completely bed ridden at the start of therapy. Marked improvement in general health condition was noted after start of the alternative therapy. His back pain gradually came under control. A spinal X-ray done on March 10, 1996 indicated partial collapse of multiple vertebrae (T 7, T 9, T 12, and L 4) in dorsal and lower lumbar region. Bone marrow aspiration dated May 18, 1996 was reported as within normal limits except mild lymphocytic increase. A spinal X-ray performed on April 24, 1997 revealed partial collapse of multiple vertebrae with preserved intravertebral spaces and no paravertebral soft tissue shadows. Bone marrow aspirated performed on April 24, 1997 was reported as normal subsequently, the herbal therapy was stopped at this time. A bone marrow aspirates was repeated on February 11, 1999 and July 1, 2000 and reported as normal. A bone marrow aspirate performed on September 26, 2001 indicated presence of a few large atypical lymphocytes. As a precautionary measure the patients was given a light dose of the herbal medicine for 3 months every year for the next 12 years starting from 2002. We followed the patients and no adverse or any major incidence happened in these 12 years. In February 2015 the patient expired due to natural cases and there was no indication of recurrence of his earlier disease.

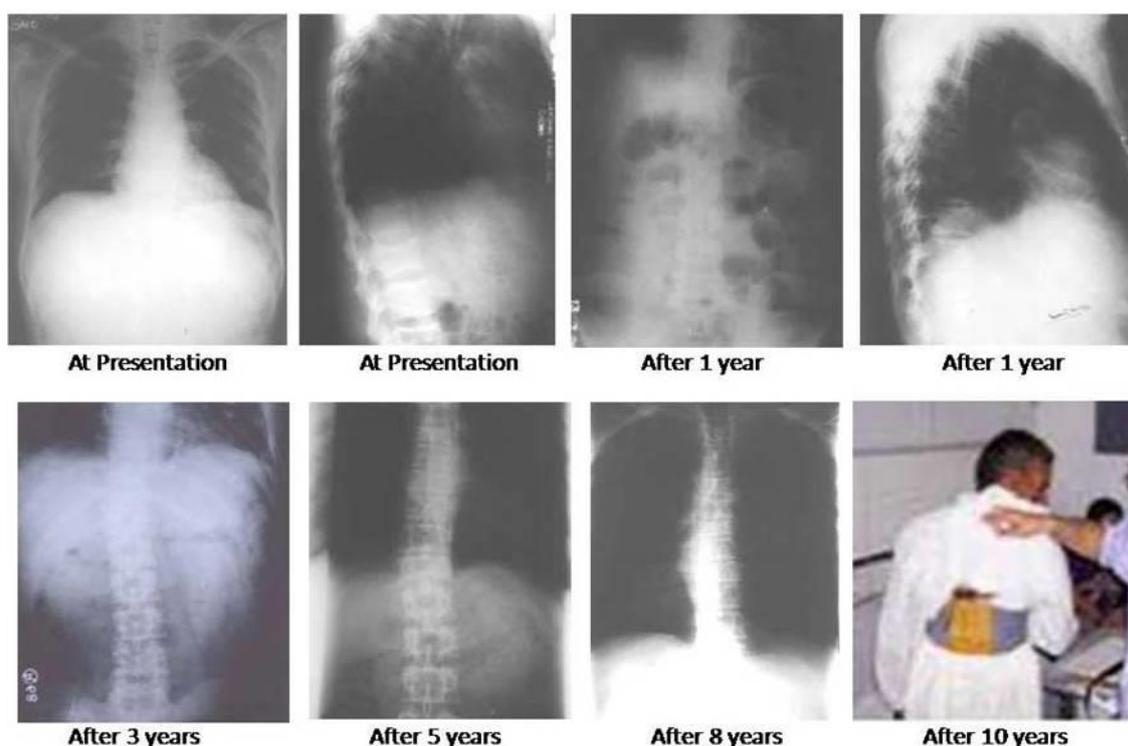
**Case 2:** A male patient 42 years old presented in a clinic with lower gastrointestinal bleeding. Colonoscopy revealed a single ulcerated lesion with everted margins and irregular bleeding floor at lower 1/3<sup>rd</sup> of rectum and anal canal approaching the anal verge. It involved 1/4 - 1/3 of anal lumen and was about 3-4 cm in length. Biopsy of the lesion revealed well-differentiated adenocarcinoma. Ultrasonography (USG) revealed multiple solid opaque lesions (SOL) in

liver and a mass in the rectum (**Figure – 2**). An abdominal CT scan dated February 21, 2002 revealed two well-defined focal lesions in the liver (one measuring 2x2cm posterior to the right hepatic vein and one measuring 1.5 x 1.5cm adjacent to the left hepatic vein). The patient was admitted in Sanjay Gandhi Postgraduate Institute of Medical Sciences (SGPGIMS), Lucknow on March 30, 2002, where laprotomy with transverse loop colostomy was done. During exploration 2-3 small 5 mm nodule on the omentum, a small nodule on the left side of the falciparum ligament of the surface of the liver, suggestive of metastasis were found along with a large rectal growth occupying the whole of the pelvis extending upto the sacral promontory, with restricted mobility. The patient was advised for salvage radiotherapy; however, the patient refused radiotherapy / conventional therapy. He wanted to try the poly herbal therapy. When the patient present at the clinic for alternative treatment he was extremely ill, cachexic, anorexic, and was unable to walk without support. After the start of alternative therapy (April 15, 2002) gradual clinical improvement in the performance status of the patient was observed. His strength and appetite improved and within a period of 2 -3 months the patient started performing his routine activities. However, USG done on May 07, 2003 indicated that the status of his rectal mass and liver SOL was unchanged. The patient was event free following 13 months of the alternative therapy; however, following this he began passing small pieces of tissue mixed with blood during defecation. Histopathology performed on the tissue dated August 18, 2003 revealed dysplastic epithelial cells suggestive of adenocarcinoma. However, patient kept performing his routine work till March 2004 when the patient presented at SGPGIMS with acute abdominal pain and gastrointestinal bleeding associated with mild off and on passage of tissue per rectum. An abdominal CT scan performed on March 16, 2004 revealed regression of the rectal mass with rectal wall thickening. There was no evidence of fresh spread of the tumor. About a month later the patient expelled the whole tumor mass

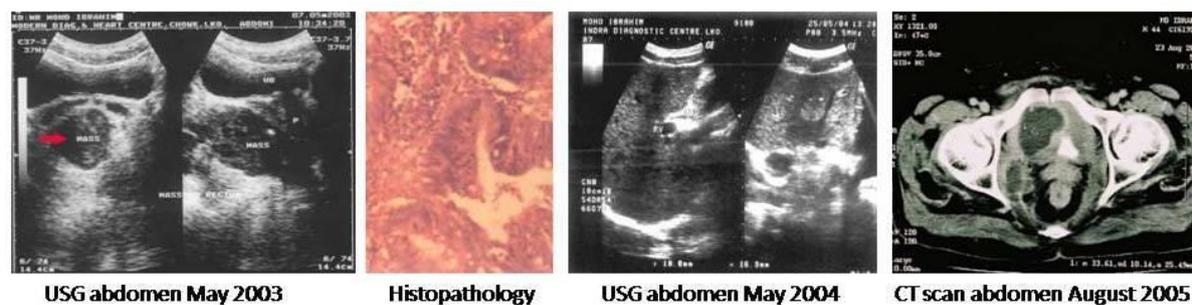
through the anus, followed with episodes of bleeding for 15 – 20 days thereafter. The patient soon regained his normal life style and began doing his routine work without any problem. After about 3 months the patient underwent a routine colonoscopy check-up on July 26, 2004. A fresh biopsy taken from the rectum lesion indicated well differentiated adenocarcinoma. The next 4 months were event free. In December 2004 the patient complained of abdominal distention and pain, loss of weight approx. 5 kg in 2 months and also had low grade fever. The colostomy was also not moving for few days. He was again admitted in SGPGIMS for 2 weeks in January 2005 with an abdominal perforation and an asymptomatic right pleural effusion and underwent a temporary right subphrenic catheter placement. The alternative herbal therapy was stopped for 7 days and restarted following discharge and continued on a regular basis for approximately four months. In August 2005, the patient returned with fever, acute abdominal pain, and rectal bleeding. A large pelvic mass extending into and compressing the bladder was noted on an abdominal CT scan dated August 23,

2005. The mass was lobulated conglomerate lymph node with marked area of necrosis. On August 24, 2005 the patient had a heavy pus discharge per rectum, following which his fever subsided completely. With some antibiotics coverage the patient recovered fast within a week.

After about 2 weeks he again started doing his routine activity / work. At this juncture the dose of the herbal medicines was stepped up (increased) for the next 6 months. The patient was relatively event free for the next 1 year, thereafter, as his condition improved further he requested the surgeons to operate upon his residual tumor/cancer. After the surgeons of the SGPGIMS refused his request, he went to Tata Memorial Hospital (TMH), Mumbai against our wish. At this point we lost contact with the patient. From a neighbour of the patient we received information that the surgery at TMH was not successful and the patient started passing urine per rectum, following which his condition deteriorate fast and he expired in March 2007.



**Figure 1 - Treatment of multiple myeloma with poly herbal therapy**



**Figure 2 - Treatment of rectal tumor with poly herbal therapy**

## Discussion

The prolongation of survival time observed in both the patients indicates that the poly herbal therapy definitely had some role to play. Without any anti-cancer therapy the life expectancy as predicted by the oncologist/clinicians in both these cases was quite limited. In absence of any other conventional therapy we strongly believe that the poly herbal therapy was directly responsible for prolongation of expected survival period. The quality of life of both the patients even with active disease was remarkable good. Our earlier experience with this herbal formulation indicated that complete regression of cancer/ tumor without any adverse side effects was possible in some patients [14, 15, 16].

Standard cancer therapy prolongs survival, but can be detrimental to the quality of life, compromise the immune system, and leave residual disease that can cause recurrence years or decades in the future [17]. Tumor dormancy with herbal therapy is a novel therapeutic approach that may improve these shortcomings, promote quality of life, and prolong survival. In a study it was found that Traditional Chinese Herbal Medicine (TCHM) has an important potential value for improving the prognosis of patients with advanced gastric cancer [18]. A report indicates that a 51-year-old lady patient with squamous cell carcinoma of the lung ( $T_2N_2M_0$ ) survived for 8 years after receiving treatment with TCHM. The herbal prescription consisted of nine Chinese medicinal herbs. These herbs have been reported to possess anti-tumor and immune enhancing effects [19].

In poly herbal therapy used to treat the patients comprised of known anticancer Ayurvedic herbs [20]. The anticancer potential of *Ocimum sanctum* [21], *Azadirachta indica* [22], *Embelica officinalis* [23], *Semecarpus anacardium* [24], *Tinospora cordifolia* [25] and *Curcuma longa* [26] are well proven in experimental studies. Aqueous extracts of *Embelica officinalis* at 100  $\mu\text{g/ml}$  can significantly modulate the basal levels of oxidative markers and enhance antioxidant defences of HepG2 cells [27]. Limonoid that is present in leaves and flowers of *Azadirachta indica* have been shown to induce apoptosis by both intrinsic (Bax, Bad, Bcl-2, BclxL, Mcl-1, XIAP-1 and caspase-3, 9) and extrinsic (TRAIL, FasL, FADD and caspase-8) pathways in estrogen dependent (MCF-7) and estrogen independent (MDA-MB-231) human breast cancer cell lines [28]. Extracts of *Ocimum sanctum* leaves inhibit proliferation, migration, invasion, and induce apoptosis of pancreatic cancer (PC) cells *in vitro*. The expression of genes that promote the proliferation, migration and invasion of PC cells that include activated ERK-1/2, FAK, and p65 (subunit of NF- $\kappa$ B) downregulate in PC cells after *Ocimum sanctum* treatment [29]. Curcumin from *Curcuma longa* has shown to suppress TNF induced NF- $\kappa$ B activation and NF- $\kappa$ B-dependent reporter gene expression. TNF-induced NF- $\kappa$ B regulated gene products that are involved in cellular proliferation (COX-2, cyclin D1, and c-Myc), anti-apoptosis (IAP1, IAP2, XIAP, Bcl-2, Bcl-xL, Bfl-1/A1, TRAF1, and cellular cFLIP) and metastasis (VEGF, MMP-9, ICAM-1) have been shown to be downregulated by curcumin [20]. Octacosanol

isolated from *Tinospora cordifolia* downregulates VEGF gene expression by inhibiting matrix metalloproteinases and nuclear translocation of NF- $\kappa$ B and its DNA binding activity [20].

### **Conclusion**

The wisdom of the past in the shape of folkloric and traditional uses served the better source for treatment of various human diseases including cancer [30]. Unlike western medicine which generally uses purified chemical compounds and targets single physiological endpoints, natural products/herbal medicines usually consist of multiple components and herbs which act/interact simultaneously through various cellular signal mechanisms and molecular targets [31]. These multiple herbs serve various functions; some may improve the efficacy while others may increase the bioavailability or decrease the toxicity. Even isolated compounds from natural products/herbal medicines may display multiple effects, such as improving the efficacy and decreasing the toxicity of chemotherapy and/or radiotherapy [32]. Herbal medicine formulations, including Ayurvedic and Chinese herbal medicine, have been originated from empirical observations in humans over thousands of years. We believe that in absence of any conventional therapy the prolonged survival observed in both the patients could be due to the herbal medicines. The herbs that were used in the present therapy are all known to have anti-cancer properties; however, the real potential of this herbal combination may be ascertained with well-designed clinical studies.

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### **Relevant Information**

Both these cases were presented to the Office of the Cancer Complementary and Alternative Medicine (OCCAM), NCI-NIH, Bethesda for the Best Case Series Presentation.

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