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& Nutrition*

Six Stages to Nutrition

*Oral Cancer Treatment with an
Alternative Poly-Herbal Therapy*

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2 ELEMENTS

Oral Cancer Treatment with an Alternative Poly-herbal Therapy 'HUMA' in two Patients with Advanced Disease

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Abstract:

An alternative poly-herbal cancer therapy 'HUMA' is very popular in northern India. This therapy was first advocated by Dr. S M Atiq in mid 1980's. HUMA was derived from various important Ayurvedic herbs viz. *Azadirachta indica*, *Acacia catechu*, *Asparagus recemosus*, *Curcuma longa*, *Calotropis procera*, *Catharanthus roseus*, *Embelica officinalis*, *Ocimum sanctum*, *Plumbago xylanica*, *Semecarpus anacardium*, *Tinospora cordifolia*, *Tiliacora racemosa*, *Withania somnifera*, etc. Every year over 500 cancer patients from all over India try this therapy primarily for palliation. Marked regression of cancer / tumor with out any side effects has been observed in many patients. We report the follow-up of two patients suffering from oral cancer who tried this therapy. Complete regression of tumor was observed in both the patients. However, the disease relapsed after the therapy was stopped in one patient and after repeat FNAC to know the status of residual disease in other. The oral cancer scenario in India is very different from the cancer problem from other parts of the world in term of challenges and magnitude. Majority patients with oral cancer present with advance stage have incurable disease. HUMA therapy can be a promising alternative for oral cancer treatment in India. Hence, properly designed clinical trial should be undertaken.

According to IARC-WHO estimates, cancer rates are set to increase at an alarming rate, from 10 millions new cases globally in 2000, to 15 millions in 2020. Although cancer of the oral cavity is largely related to lifestyle and can be easily detected and diagnosed at early stages through visual inspection of the oral mucosa, actual figures concerning its prevention and early detection are dismal. Most oral cancers are detected at an advanced stage, requiring complex, costly and often ineffective therapies (1). Cancer of the oral cavity is one of the commonest cancers accounting for a major health problem in India (2, 3). Though this is one among the few human cancers with a vast potential for prevention (4). Tobacco is the single most important cause of avoidable morbidity and early mortality in many countries. Tobacco-related cancer (TRC) cases constitute 48.2% in men and 20.1% in women of the total cancers seen in India per year. The age-adjusted rate (AAR) of TRC ranges from 44 to 67 among males and from 23 to 27 among females in different registries in India. Oral cancer is shown to have a strong association of tobacco - betel quid chewing and bidi smoking (5). In south-east Asia, smoking, alcohol consumption and chewing of betel quid with or without tobacco or areca nut with or without tobacco are the predominant causes of oral cancer. In most areas, betel quid consists of a mixture of areca nut, slaked lime, catechu and several condiments according to taste, wrapped in a betel leaf. Almost all habitual chewers use tobacco with or without the betel quid (6). It has been estimated that more than 10 percent of the world's population chew areca nut either alone or as a component of the betel quid for its mild psychoactive effects.

In India the misconception is widespread that tobacco is good for teeth (7). Tobacco is used in country in various forms. It is smoked in the form of cigarettes, bidi, chutta, chillum, hookah, etc. It is also chewed as scented tobacco (Zarda), crude tobacco leaf, and powder. In some parts of India the practice of reverse smoking (the lit end of the cigarette is kept in the oral cavity while inhaling) is quite prevalent. Yet another form is keeping crushed tobacco and lime in the gingivo-buccal sulcus for long period of time. Burnt tobacco is used as tooth-powder and as a paste. Finely powder tobacco is used as snuff (5). In the last few decades, small, attractive and inexpensive sachets of betel quid substitutes have become widely available. The product is basically a flavoured and sweetened dry mixture of areca nut, catechu and slaked lime with tobacco (gutkha) or without tobacco (pan masala). These products have been strongly implicated in the recent increase in the incidence of oral submucous fibrosis, especially in the very young, even after a short period of use (6). The use of tobacco with lime, betel quid with tobacco, betel quid without tobacco and areca nut has been classified as carcinogenic to humans. Despite mounting evidence of health hazards of gutkha (8) it could not be banned in total. Guthka pouches are freely available in market despite the Government have recently put a banned on its manufacture and sale (9).

The oral cancer pattern in India differs from the Western world in term of its challenges and magnitude. Far-advanced disease is common at the time of diagnosis. As a result, patients commonly present with huge ulcers, often with maggot infestation. Sex ratio reveals a 2:1 preponderance of male patients. Only 10% to 15% of cases present in localized stages (10). Various factors like lack of proper awareness and early screening programme in primary health care sector, socio-economic problems and above all financial constraints are responsible for this epidemic. Many cancer patients worldwide use various Complementary and Alternative Medicine (CAM) for treatment and palliation (11). In India many patients from rural areas are apprehensive about conventional cancer therapy and hence, at first they try various sorts of alternative / local therapy for treatment of their disease. They report to clinics when their problems become unmanageable. Moreover, financial constraints are a major factor that compels many patients to try something alternative. Indian alternative cancer therapy includes: Ayurveda, homeopathy, biopathy, naturopathy, herbal therapy, home remedies, autourine therapy etc. Little information is available on the therapeutic efficacy of these alternative therapies in treatment of cancer. The present investigation was aimed to investigate the efficacy of a popular poly-herbal therapy HUMA in the treatment of oral cancer. The follow-up of two patients who were offered this therapy is discussed here.

Case reports:

Case 1: A 45-years- old male habitual tobacco edict presented with a big lesion in his lower lips (Fig 1A). He was advised

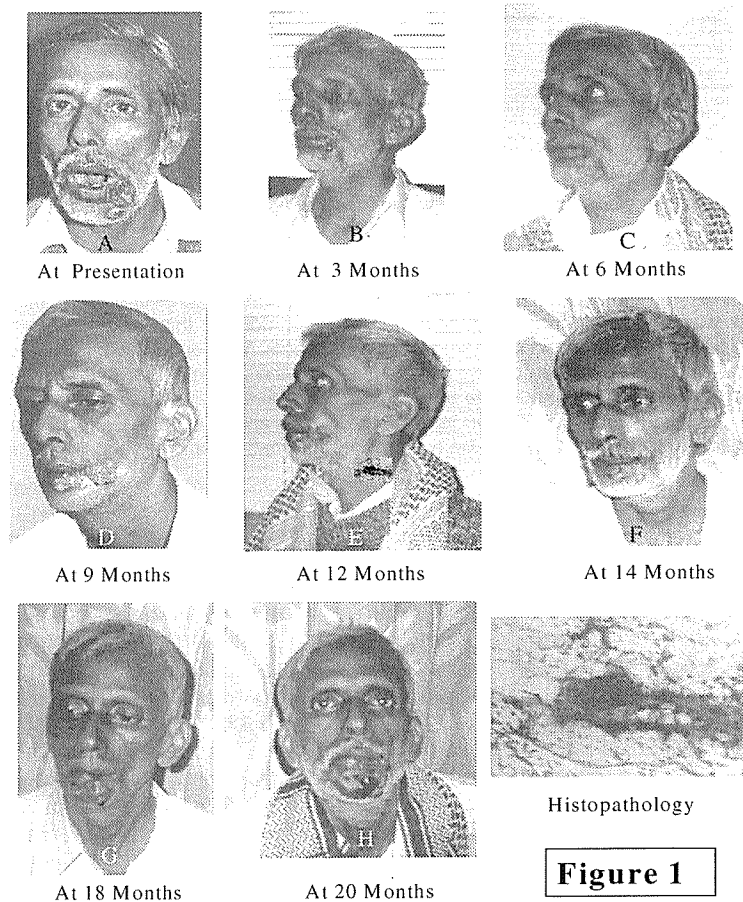


Figure 1

for biopsy; however, the patients refused biopsy because of social and financial problems. The patient was too poor to afford any conventional therapy or management. The patient wanted to try HUMA as one of his friend suffering from oral cancer had been benefited with this therapy. His lesion regressed almost 90% after 3 months of therapy (Fig 1B). After 6 months when the lesion had healed completely the therapy was stopped. However, the patient had a relapse after 3 months (Fig 1D). There was a fresh tumor growth in the lower lip. Therapy was restarted and the patient responded to it. His growth regressed after another 3 months of therapy (Fig 1E). However, the therapy was continued for another 3 months and stopped on the request of the patient when his lesion had again healed completely. The reason behind this was financial problems. However, after 3 months after this incidence the patient again reported in our clinic with another relapse (Fig 1G). Fine Needle Aspiration Cytology (FNAC) of the lesion was done. The findings indicated grade III Dysplasia with early malignant changes as epidermoid carcinoma. The therapy was again restarted. However, there was no effect on the lesion. The patient continued the therapy till he expired.

Case 2: A 60-year-old male, chronic tobacco edict presented with a growth in the right cheek (Fig 2A). Biopsy from the growth indicated verrucous squamous cell carcinoma (Fig 2 B). He

wanted to try HUMA because of financial problems and deep belief about the effectiveness of this therapy. His growth regressed completely after 8 months of intensive therapy (Fig 2 E). FNAC was done from the tumor site to know the presence of the residual disease. No malignant cells were found from the tumor site. However, after 15 days after this incidence the patient reported to the clinic with massive swelling in his cheek (Fig 2 F). The puncture site which was made for doing FNAC got infected. He was also having pain in his jaws. X-ray was done which indicated dental cares. He was treated with antibiotics but he did not respond. After a month there was fresh growth in his cheek. FNAC was done, which indicated relapse of the disease. Along with the HUMA therapy now he was also given 5-FU and Vincristin for about a month. However, the combination therapy did not have much effect. The patient refused for other conventional therapy and continued the HUMA therapy. However, he did not respond to any therapy. The patient health condition gradually deteriorated as he was unable to take any solid food and he expired after 2 months.

Discussion

The alternative poly-herbal cancer therapy HUMA was advocated by a Lucknow based Ayurvedacharya Dr. S M Atiq in the mid 80's. The herbal preparation HUMA evolved after years of research on various important Ayurvedic herbs viz. *Azadirachta indica*, *Acacia catechu*, *Asparagus recemosus*, *Curcuma longa*, *Calotropis procera*, *Catharanthus roseus*, *Embelica officinalis*, *Ocimum sanctum*, *Plumbago xylanica*, *Semecarpus anacardium*, *Tinospora cordifolia*, *Tiliacora racemosa*, *Withania somnifera*, etc. This herbal preparation was tested in Central Drug Research Institute, Lucknow and was found to be non-toxic in animal model. After publication of news reports of few long-term cancer survivors with HUMA therapy (12, 13), hundreds of cancer patient all over the country now try this therapy every year. This therapy was effective in treatment of many advanced stage cancer patients without any adverse side effects (14). Over the years this therapy has become very popular among patients because it is cost effective, free from serious adverse side effects, orally administrated, and has shown to be effective in improving quality of life in some terminal cancer patients (15). Objective evidence about the effectiveness of this alternative therapy in regression of oral cancer was recently reported (16). In the present investigation pre and post treatment histological comparison was possible in one patient. The result indicated that no cancer cell could be detected from the tumor site post treatment.

Ignorance and financial problems are two main hurdles in the process of prevention and treatment of oral cancer in our country. Studies have suggested that low socioeconomic status (SES) is associated with a higher risk of oral cancer, because of difficulty to access medical care, proper education, health related behaviors, living environment or psychosocial factors (17)

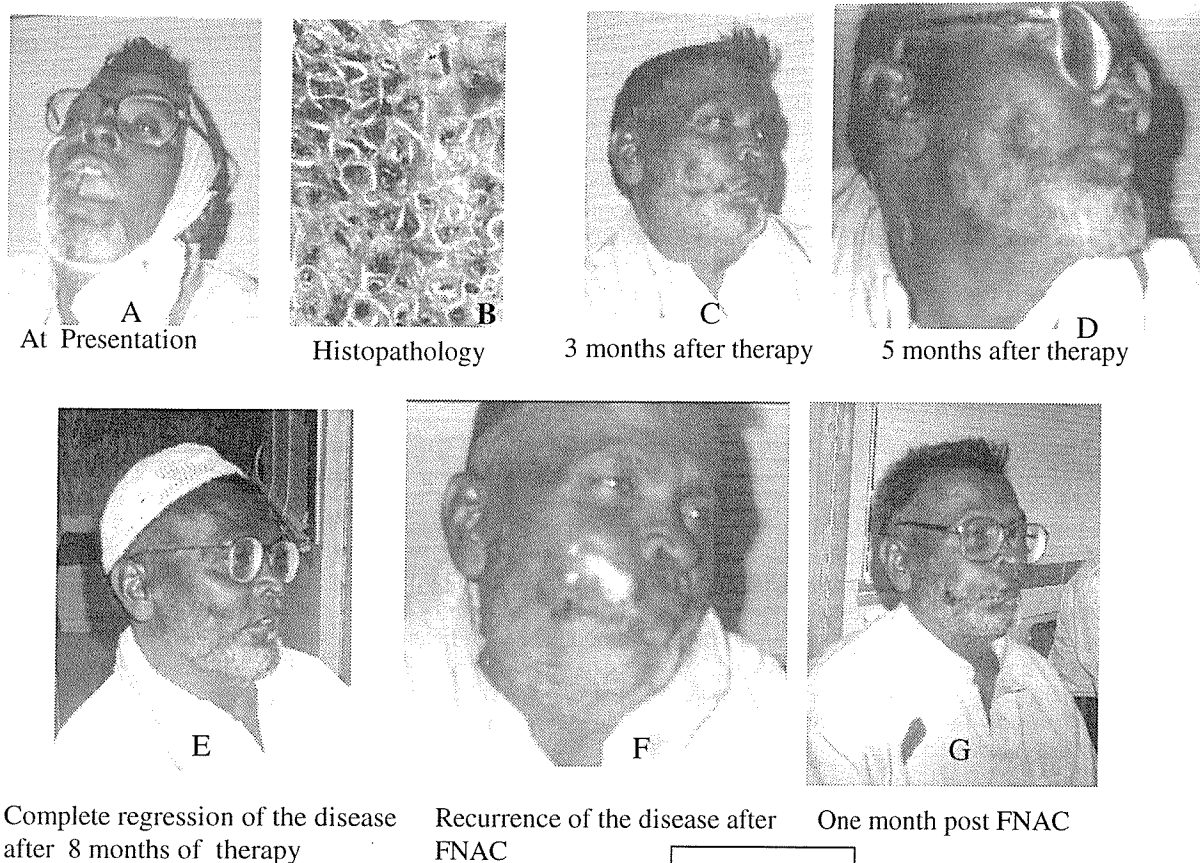


Figure 2

Majority of patients who try HUMA are from the poor strata of the society and financial constraints is a major problem for them. There is a common belief among patients who try this alternative therapy that it is effective for cancer treatment and above all free from adverse side effects. Even then most who come for treatment are in advance stage of the disease. Patients generally come to know about HUMA through other patients / family members and relatives who have tried this therapy. The follow-up of the two oral carcinoma patients indicates that this therapy was partly effective in them. However, these patients lack proper nutrition, hygiene and post therapy management. The patient (case no 1) was so poor that he could not continue a prolonged therapy and discontinue it in between because of financial problems.

Both the patients who received HUMA therapy were chronic tobacco edicts. Habitual mastication of plant products has prevailed in the Indian subcontinent since antiquity. Gutkha started to become popular in our country in the early 1980s, at that time it was sold in tins. By 1985, gutkha was sold in low cost sachets. The sale of Gutkha since the eighties has blossomed into Rs. 3000 – 4000 crores industry (18). Despite the recent ban on sale of Gutkha, it is still freely available in the market. The ban is also challenged in the Supreme Court (19). Moreover, in India 80% of the tobacco is consumed in form of bidi, tobacco-betel quid, tobacco toothpaste (creamy snuff) and tooth powder (lal dant manjan), Gul (a pyrolysed tobacco product), mishri (roasted and powdered tobacco), and gadakhu (paste of tobacco and molasses) etc. are commonly used and the use of new products is increasing, not only among men but also among children, teenagers, women of reproductive age (20). There is a misconception in India that tobacco is good for the teeth (7). Gutkha, which was targeted toward youth, has become extremely popular in India. An evolving epidemic of oral submucous fibrosis attributed to gutkha use has been documented among youth, with a resultant increase in oral cancer in lower age groups (21, 3). Smokeless tobacco users studied prospectively in India had age-adjusted relative risks for premature mortality of 1.2-1.96 (men) and 1.3 (women). Current male chewers of betel quid with tobacco in case-control studies in India had relative risks of oral cancer varying between 1.8 - 5.8 (20). Among men, 35% of oral cancer is attributable to the combination of smoking and alcohol drinking and 49% to pan-tobacco chewing. Among women, chewing and poor oral hygiene explained 95% of oral cancer (22). In South Indian female tobacco / betel chewers, a diet deficient in foods of animal origin appears to be a more significant risk factor for oral pre-malignancy than is a diet deficient in fruits and vegetables (23).

Patients worldwide explore various herbal / alternative therapies for the treatment of disease including cancer. Herbal remedies typically are part of traditional and folk healing methods with long histories of use. Certain herbal products may

act in a pathway similar to pharmaceuticals yet without side effects (24). Some form of herbal medicine is found in most areas of the world and across all culture historically (25). There is emerging scientific evidence that Chinese medicine can play an important role in the supportive care of cancer patients (26). Chinese medicinal herbs are traditionally used to prevent and treat a variety of diseases, including cancer. These herbal preparations are purported to have many biological effects including direct antiproliferative effects on cancer cells, anti-mutagenic activity, and stimulatory or suppressive effects on immune responses (27). Few herbal remedies have already gained substantial popularity as alternative cancer therapies. Essiac is popular in North America for decades. Iscador, a derivative of mistletoe, is a popular cancer remedy in Europe. Pau d'arco made from the bark of an indigenous South American evergreen tree is said to be an old Inca Indian remedy for many illness, including cancer. Several mushroom derived compounds are approved for use as cancer treatment in Japan. The Chinese herbal medicine extracts OLEN, SPES and PC-SPES were found to be cytotoxic to both drug-resistant and drug-sensitive lung cancer cells (24). Garlic extract and curcumin have also shown to inhibit 7,12-dimethylbenz [a] anthracene (DMBA)-induced hamster buccal pouch (HBP) carcinogenesis (28, 29). EGCG [(-)-epigallocatechin-3-gallate], the major constituent of green tea was shown to have chemopreventive role in oral leukoplakia (30). Combination therapy with levamisole plus Chinese medicinal herbs have shown to be effective in achieving a shorter duration of treatment for getting complete remission in major or minor type erosive oral lichen planus (EOLP), than the single therapy with either levamisole or Chinese medicinal herbs only (31).

Ayurveda, an Indian traditional system of medicine, is a very popular alternative cancer treatment option in India. A recent study has indicated that Ayurveda is tried by a large number of patients suffering from leukemia (32). An Ayurvedic approach to treat Acute Myeloid Leukemia developed by the scientist of the Vaidya Chandra Prakash Cancer Research Centre, Dehradun is now undergoing clinical trial (33). *Maharishi Amrit Kalash*, an Ayurvedic formulation has proved to be effective in controlling the side effects of chemotherapy (11). Ayurvedic therapy *CARCTOL* comprising of eight herbal plants is popular in Jaipur, Rajasthan. A dietary regimen known as Sarvapisti developed by the scientist of Daya Sankar Research Centre, Varanasi is also very popular among cancer patients (34). Regression of ovarian metastatic cancer has been reported with *Tinospora cordifolia* a plant with remarkable immunomodulatory and Rasayana effect (35). Similarly, *Curcuma longa* has been shown to be antimutagenic and cancer preventive in basic studies (36). The plant also showed a response in oral submucous fibrosis (34). Similarly *Semecarpus anacardium* was shown to have a varying degree of response in esophageal cancer (37). The poly herbal preparation HUMA is similar to Ayurvedic Rasayana. This formulation contains concoction of many important Ayurvedic herbs.

Conclusion: Oral cancer is one among the few human cancers with a vast potential for prevention. However, recent reports predicts towards an increase of oral cancer incidence in India. This increase will be mainly due to lack of awareness of the harmful long-term effects of tobacco use. Current health texts do not provide adequate information to educate future adults about oral cancer prevention and early detection methods (38). Above all poverty is a stumbling block in the process of treatment, as majority of patients does not have any health insurance. In India majority of population obtains medical help from private physicians, practicing some form of alternative or traditional medicine. The present investigation reveals an objective evidence that the polyherbal cancer therapy HUMA was effective in providing some help to cancer patients. More data are now being collected on case by case basis for proper documentation of the effectiveness of this therapy. Planned clinic trials are now being designed to study the effectiveness of this therapy in cancer treatment and palliative care.

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व्यानेन रसधानुर्हे विक्षेपोचित कर्मणा ।
युगपत् सर्वतोऽजसं देहे विक्षिप्यते सदा ॥ ३६ ॥

The end product of digested food juice (nutrients) enters rasa dhatu (Plasma) and is constantly circulated throughout the body by Vayana vayu bathing all the tissues with proper nourishments. Charak Chapter 12.

The nutrition nourishes dhatus (tissues), ojas, and is the pure essence of all bodily tissues. It maintains strength, vigor, vitality and color complexion, via the medium of agni. Proper "ahar ras" cannot be produced from undigested food. Therefore, the process of healthy digestion is important for optimal health (1-3).

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