



Case Study

ROLE OF HERBOMINERAL DRUGS IN THE MANAGEMENT OF DIARRHEA AND LATE EFFECTS OF CHEMOTHERAPY IN THE PATIENT OF ORAL CAVITY CANCER

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ABSTRACT

Cancer is a state of uncontrolled proliferation of cells that leads to various types of malignancies. It is a type of non-communicable disease that causes millions of deaths every year. For the management of cancer various types of surgical and nonsurgical intervention are practiced. Chemotherapy is the widely used nonsurgical intervention for the management of cancer. After chemotherapy side effects like diarrhea/constipation, hair loss, nausea, vomiting, fatigue etc are seen in patients. Side effects of chemotherapy include damage to rapidly growing cells of body such as mucosal lining from mouth to the gastrointestinal tract. Damage to gastrointestinal mucosal lining due to drugs used in chemotherapy, surface area available for nutrient and water absorption significantly reduced. Patients suffer with recurrent diarrhea due to toxicity of chemotherapeutic drugs on GIT. In modern medicine some selected drugs are used to treat the chemotherapy induced diarrhea (CID). In Ayurvedic texts *Atisar* is elaborately discussed by *Acharyas* which closely resembles diarrhea. Treatment of chemotherapy induced diarrhea by using Ayurvedic medicines is much effective and less costly. In Ayurveda, herbomineral medicines are used to treat diarrhea (*Atisar*). In present study some herbomineral drugs used in a patient suffering from diarrhea and late effects of chemotherapy and result was enthusiastic.

INTRODUCTION

Cancer is a complicated disease in which the body's cell grows uncontrollably and spread to other parts of the body. Cancer represents a significant economic burden for the global economy and is now the 3rd leading cause of death worldwide. By 2030, it is projected that there will be 26 million new cancer cases and 17 million cancer death per year.^[1] Oral cavity carcinoma is the 6th leading cause of cancer in the world. Although it accounts for only 0.6% to 5% of all cancers in western countries but it is extremely prevalent in India, representing nearly 45% of all cancers.^[2] There are different treatment options available for oral cavity cancer which includes surgery, radiotherapy, chemotherapy, immunotherapy,

targeted drug therapy etc. The complexity of treating cancer has increased over the last decade as more drugs, including those with targeted mechanisms of action have been approved by FDA and introduced into general practice.^[3] Chemotherapy is treatment with anticancer drugs that are injected into a vein or taken by mouth, which allows them to enter the blood and reach most part of the body.^[4] Chemotherapy can be used to cure cancer, reduce the chances of it returning, stop or slow its growth and eases symptoms. Chemotherapeutic drugs are not specific for cancer cells. They work on proliferating cells in the body and have anti-proliferative action on rapidly growing cells.^[5] Chemotherapeutic drugs acts on rapidly growing cells in the body, so they can target the cancer cells present in the body. On the other hand, cells in bone marrow, mucosal lining of the mouth and gastrointestinal tract, hair follicles etc are also rapidly growing cells and are affected by the use of these drugs. Thus, chemotherapeutic drugs not only destroy the cancer cells but also rapidly dividing healthy cells, including mucosal lining of the gastrointestinal tract.

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Toxicity in gastrointestinal tract usually manifests as diarrhea and many other symptoms. This is usually a dose related adverse effect and may be associated with other features. CID appears to be a multifactorial process whereby acute damage to the intestinal mucosa causes an imbalance of absorption and secretion in the small bowel.^[6] Gastrointestinal symptoms can range from mild symptoms loose stool to life threatening diarrhea leading to dehydration and electrolyte imbalances.^[7]

In Ayurveda, symptoms of diarrhea can be correlated to *Atisara*. *Atisara* is a condition in which loose stool passes frequently. Various *Ayurvedic Granthas* mentioned *Atisara* as independent disease as well as symptoms of other ailments. *Atisara* may be acute or chronic in origin depends on time duration. According to *Acharya Sushruta*, due to various types of *Nidana sewan apya dhatus* becoming greatly increased which diminish the strength of *Jathragni*. These *Apya dhatus* get mixed with faeces and increase the quantity of faecal matter that moves in downward direction and pass out frequently through anus which is initiated by *vata*.^[8] *Acharya Charak* mentioned six types of *Atisara* in *Charak chikitsasthan*, these are *Vataja atisara*, *Pittaja atisara*, *Kapahja atisara*, *Tridosaja atisara*, *Bhayaja atisara* and *Shokaja atisara*.^[9]

Case History

A 48 years old male patient came to the OPD of *Kayachikitsa* in Government Ayurvedic College and Hospital with complaint of frequent loose stool passing, excessive bowel gas and bloating for 2

months. Patient was already diagnosed with oral cavity cancer and treated with chemotherapeutic drugs.

General Examination

Pallor- present (+), Icterus- absent, Cyanosis- absent, Clubbing- absent, Lymph node- not palpable, Oedema- absent

BP- 124/78 mm of Hg

Pulse- 84 per minute

Temperature- 97°F

Systemic examination

RS- B/L air entry present, no any abnormality.

CVS- No any abnormality detected in cardiovascular system

CNS- conscious and well oriented to person, time and place

P/A- Soft, non-tender. Bowel sound- Increased, fluid thrill- absent

Stool examination

Stool frequency- 5 to 6 times/day

Stool colour- light brown

Consistency- loose

Bowel habit- Irregular

Treatment plans

Diarrhea and other gastrointestinal problems are common side effects of chemotherapy. Chemotherapy associated diarrhea can be mild to severe which develops other complications in the cancer patients when remains untreated. Chemotherapy induced diarrhea can be managed by herbomineral drugs mentioned in Ayurvedic texts.

Formulations & Dosage	Anupan	1 st follow-up	Total duration
<i>Bilwadi churna</i> - 3gm <i>Hingwastak churna</i> - 2gm <i>Panchamrit parpati</i> - 250mg BD	Lukewarm water/ <i>Takra</i>	7 days	1 month
<i>Gangadhar churna</i> - 3gm BD	Lukewarm water/ <i>Takra</i>	7 days	1 month
<i>Kutajarishtha</i> - 20 ml BD	Equal amount of water	7 days	1 month
<i>Ashwagandha churna</i> - 3gm <i>Amrita satva</i> - 250mg BD	Milk	7 days	1 month

DISCUSSION

Chemotherapy may have transient or permanent side effects. Some permanent side effects include damage to heart, lungs, kidney, bone marrow, mucosal lining of gastrointestinal tract, nerves etc. Although chemotherapy is a lifesaving method of cancer treatment but its complications can't be ignored. Patient needs regular consultation and symptom wise specific management. It will be better if we can manage such types of complications through

herbomineral drugs. Constitutions of herbomineral drugs are *Panchabhautic* in nature and can easily assimilated in our body. Herbal drugs are also known for its very few side effects. In present study some compound drugs were selected which are mentioned in Ayurvedic classical texts for the purpose to cure *Atisara* (diarrhea).

Bilwadi churna^[10]- This drug has been mentioned by Acharya Govind Das in *Bhaisajya Ratnawali, Atisara chikitsaprakaran*. Its main contents are *Bilwaphal majja, Nagarmotha, Dhatripushpa, Mocharas, Shunthi, patha*. It has been said that it can be cure diarrhea of any type which is not easily treatable. It seems that this drug is very effective in diarrhea because of its various ingredients and so why selected in present study.

Panchamrit parpati^[11]- It is a classical *Rasaushadhi* which contains *Parad, Gandhak, Louh, Abhrak* and *Tamra*. Ayurvedic seers has mentioned that it can be used in *Sangrahani, Aruchi, Chronic Diarrhea, fever* and also can boost *Jathragni*. On the basis of above-mentioned indications, it is thought to be a good drug for post chemotherapy diarrhea.

Hingwastak churna^[12]-*Hingwastak churna* mentioned in *Bhaisajya Ratnawali Agnimandya chikitsa prakaran*. Its main contents are *Trikatu, Ajmoda, Saindhav lavana, Shweta* and *Krishna jeerak*. It can boost *Jathragni* and alleviates all types of *Vaat vikar*. *Mandagni* is present in *Atisara* so this drug is selected in the present study.

Kutajarishta^[13]- *Kutajarishta* is a fermentation product of many herbal drugs like *Kutaj twak, Gambhari twak, Munakka, Madhuk pushpa, Dhataki pushpa* and *Guda*. It is mentioned in *Bhaisajya ratnawali, Atisara chikitsa prakaran*. *Kutajarishta* is very effective in *Grahani* and *Raktatisara* and also boost *Jathragni*.

Ashwagandha churna^[14]- *Ashwagandha* is a potent herb which is used in Ayurveda since long time. It is considered as *Rasayana* in Ayurveda. *Ashwagandha churna* is excellent herb used as *Balya, Brimhana, Vajikara, Shothahara* etc. It is effective in reducing stress, weakness and has antitumor effect. *Ashwagandha churna* also exhibit neuroprotective, anti-inflammatory, anti-diabetic, immunomodulatory, anticancer and many more properties.^[15]

Guduchi satva^[16]- *Guduchi Satva* is well known herbal drug and it is the extract of *Guduchi* stem. It is used in various ailments like fever, chronic diarrhea, skin disorders, *Mutra vikar, Basti shotha* etc. It can be used alone or combination with other drugs.

CONCLUSION

Last some decades cases of various types of cancer are increasing because of changes in lifestyle pattern especially food habits. In other hand with advancement of tools and techniques, early diagnosis and management has also increased the life expectancy of cancer patients. Chemotherapy is not less than blessing for cancer patients but its side effects are troublesome. It is need of time to address post chemotherapy side effects through alternative system of medicines. After present study we can say that herbomineral drugs can effectively work and give

relief to post chemotherapy patients who are suffering from various side effects especially diarrhea and other gastrointestinal symptoms. In present study patient responded completely in just after one month. Further large-scale study is needed to prove this fact.

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