Role of *Kalpa Chikitsa* in the management of Lynch syndrome- A case report

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**ABSTRACT**

Lynch syndrome (hereditary non-polyposis colorectal cancer) is an autosomal dominant condition and it is caused by germline mutations in the DNA mismatch repair genes. The present case report was conducted to evaluate the efficacy of *Madhuyasti* (Glycyrrhiza glabra) *Ksheerpaka kalpa* in Lynch syndrome. A 28-year-old male was diagnosed with Lynch syndrome in 2016. The patient was operated three times followed by chemotherapy. In 2019, he was diagnosed with adenocarcinoma and advised for surgery. But despite getting surgery patient prefer to take Ayurvedic consultation considering his miserable condition after previous surgeries. It is decided to give the kalpa method of therapy prescribed in Ayurveda for rejuvenation and overall improvement of health. After the 15 days of treatment with *Madhuyasti* (Glycyrrhiza glabra) *Ksheerpaka Kalpa chikitsa*, the patient showed significant improvement in quality of life (P < 0.001 for SPF) and CT abdomen showed a reduction in circumferential thickening from 2.8 to 1.5 cm (~50% improvement) with no worsening complications. Although the pathogenesis cannot be revert back to the normalcy as the patient already had resection of the total colon, it can be concluded that with the help of Ayurveda, the appearance of complications can be delayed and the quality of life can be improved in such patients. It is further suggested that better result may obtained if the Ayurvedic therapy starts at earlier stage.

**Keywords:** *Kalpa chikitsa*, Lynch syndrome, *Madhuyasti Ksheerpaka*

**Introduction**

Lynch syndrome is one of the most common cancer susceptibility syndromes. Individuals with Lynch syndrome have a risk of developing colorectal cancer, endometrial, stomach and intestine cancer.¹-³ A lack of effective screening methods and the relative paucity of presenting symptoms contribute to a high percentage of cases at the advanced stage at the time of diagnosis in small bowel cancer.⁴ Small bowel adenocarcinoma has a poor prognosis at all stages, with a 5-year overall survival rate ranging from 14% to 33%.⁵

**Case History**

A 28-year-old male was brought by his wife to the OPD of Kayachikitsa, All India Institute of Ayurveda hospital, New Delhi in July 2019 in a severe condition with an orogastric tube in his mouth. The chief complaints of the patient is increasing the frequency of stool 9-10 times/day with blackish and green loose stool, pain in abdomen after eating food, whatever he used to eat, he vomits out each and everything, bilateral legs mild swelling, difficulty in sitting and walking, loss of appetite and gradual weight loss since last 6 months. History of the present illness revealed that the patient was normal till 2009, and then he gradually noticed constipation since followed by bleeding per rectum for 2 years. Thus he took some local treatment, and after 1 year, he noticed mass per rectum then he underwent treatment of colonoscopic polypectomy in May 2012 at a private hospital but they told him to consult at some higher center. Hence, he
went to AIIMS in New Delhi for consultation and was diagnosed with sigmoid and descending colon carcinoma by CT scan and biopsy, for which subtotal colectomy with ileorectal anastomosis was done on July 2012 at AIIMS and 8 cycles of chemotherapy was done on March 2013. He was apparently fine for the last 2 years, and then suddenly he developed vomiting 7-8 times in a day with a loss of weight and appetite. Again he went to AIIMS on November 2015 and was evaluated for these complaints and found to have a large growth in the duodenum and diagnosed with carcinoma of the duodenum with the involvement of ampulla of vater, pancreatic head with metastasis to para aortic mesenteric nodes for which Whipple's pancreaticoduodenectomy with segmental jejunal resection was done and again he received adjuvant chemotherapy that was completed in July 2016, on follow-up upper gastrointestinal endoscopy was done and he was found to have jejunal polyp for which polypectomy was done followed by a biopsy, CECT chest which suggested adenocarcinoma, the final diagnosis was made as Lynch syndrome with jejunal adenocarcinoma on December, 2016 and for this jejunal resection, anastomosis was done. Again the patient was fine for the last 2 years and suddenly he noticed increase frequency of motion 9-10 times in a day and vomiting, again he went to AIIMS in July 2019, was evaluated for these complaints and CECT abdomen revealed that asymmetric circumferential wall thickening (2.8 cm) distal body, gastrojejunosotomy site and proximal jejunal-biopsy proven adenocarcinoma.

General examination revealed that bilateral hands and foot nails black due to chemotherapy, bilateral foot planter fascia removed, his teeth color was mild brown blackish, and his weight was 40 kg, blood pressure 90/60 mmHg, pulse rate 70/minute, temperature −98.2°F, pallor- (+++), clubbing grade (1), icterus and cyanosis both are absent. Personal history of the patient showed that appetite was good, micturition regular, sleep decrease, dreams – he was seen dead persons in the dreams.

Systemic examination revealed that he had a very large scar mark of a surgery over the abdomen and tenderness in the whole abdomen. A family history of malignancy revealed that his mother died at the age of 35 years with endometrial carcinoma and abdomen. A family history of malignancy revealed that his mother died at the age of 35 years with endometrial carcinoma and his brother died of some biliary malignancy at the age of 25 years. His father died at the age of 35 years with endometrial carcinoma and even his grandmother died at the age of 25 years.

After completion of treatment, results were assessed which shows the frequency of stool was improved 2 times/day, semisolid stool with normal in color, bilateral legs swelling reduced within 4 days, a patient can walk 20 minutes morning and evening daily. Mild significant changes in blood investigation after the treatment. CECT abdomen revealed that asymmetric heterogeneously enhancing wall thickness 15 mm (1.5 cm) of the body of the stomach, gastrojejunosotomy site, proximal jejunal loops [Figures 1 and 2] better improvement was seen in Agni bala, Deha bala, Satra bala and SPF as mentioned in [Table 1].

Discussion

In Ayurvedic concept, according to ‘Charaka’ and ‘Sushruta’ cancer is described as inflammatory or non-inflammatory swelling and mentioned either as ‘Granthi’ (minor neoplasm) or ‘Arbuda’ (major neoplasm).[6] The modern cancer therapy that is known to burdened by drug-induced toxic side effects hoping the perfect cure of disease form the complementary and alternative medicine system. The main goal of Ayurvedic therapy is to find the ultimate cause of illness while the therapeutic approach of Ayurveda is divided into four categories as Prakritishapani chikitsa (health maintenance), Rasayana chikitsa, (restoration of normal function), Roganashani chikitsa (disease cure) and Naishthiki chikitsa (spiritual approach).[7]

It was very difficult to correlate Lynch syndrome with any Ayurvedic disease, some of the features of Vataja grahini chikitsa was found in this patient. The symptoms indicated totally dhatu (~body tissues) Kshaya, on the basis of Madhuyasti (Glycyrrhiza glabra) Ksheerpaka kalpa chikitsa was decided.

Ayurveda kalpa chikitsa is a distinctive approach of therapy, where a specific drug is administered in a gradually increasing dose and decrease inverse order to the level of the initial dose.[9]

Glycyrrhiza glabra has various pharmacological activities like antibacterial activity, antithrombotic effect, hepatoprotective effect, anticonvulsant effects, cerebroprotective effect, anti dyslipidaemic activity, memory-enhancing activity, antioxidant potential activity, hair growth-promoting activity, etc.[8] Madhuyashti (glycyrrhiza glabra) has been mentioned in medhya Rasayana,[11] jivaniya mahakashaya[12] group of drugs. Madhuyashti[13] being a cost-effective drug, holding rasayana property and capable of alleviating many disorders proves beneficial in attaining dhatusamya in the body and resulting in a complete state of wellbeing through different modes of action. It strengthens and promotes the swastbhava

Ksheerpaka of Madhuyasti in varibhaman karma, starting the dose from 6 gm on the first day was given. It was increased by 6 gm daily up to a maximum dose of 48 gm then it was tapered by 6 gm daily to a dose of 6 gm. The patient was kept on, mnda yusha and takra with Trikatu churna.

McPherson RA, Papanicolaou G, Harker LA, Buzaz L. (2002) Practice guidelines for the evaluation of patients referred for colonic polypectomy. J Am Med Assoc 288: 2523-2529.

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Sharma and Kajaria: Kalpa Chikitsa in Lynch syndrome

DEPARTMENT OF RADIO-DIAGNOSIS
All India Institute of Medical Sciences (AIIMS)
Ansi Nagar, New Delhi - 110029

Patient Name:   Sex:   Age:
Patient ID: 2020107006   Report date: 07.06.2016
OPD No: 4097: Praveen Aggarwal I S. Surgery
EXAMINATION DESCRIPTION: CECT ABDOMEN
PERFORMED OR: 07.06.2016 16:43
CR No:

Admitting diagnosis:
F/U/O Lynch syndrome
Status post total proctocolectomy with ileoanal anastomosis for carcinoma colon followed by
Whipple procedure for duodenal carcinoma in 2015
New O/O melanoma, abdominal distension, loss of appetite and loss of weight

Report:
CT ABDOMEN
For the abdomen was performed with (1.5 T) using 24 x 0.5mm collimation.

Adenoma
Status post total proctocolectomy and Whipple procedure with multiple surgical staples seen in
pancreatic and retroperitoneal locations.
There is asymmetric thickening circumferential wall thickening maximum thickness -
2.0 cm in the transverse colon, gastric, hepaticojejunostomy site and proximal jejunum. The wall thickening
has been fat plaques with jejunal loop adjacent to it. Multiple lymph nodes are seen in mesenteric
adjacent to a larger area of air in SBP.
Liver is normal in size and attenuation. No focal lesions I+III II.
Portal vein is dilated (1 cm).
Spleen is normal in size, shape and contours. No focal lesion. Splenic vein is of normal caliber.
Both kidneys are normal in size, shape and contour. No hydronephrosis or calculus.
Adrenals are normal in size, shape and contour. No masses seen.
Pneumonia head and body not seen - post op. Pancreatic tail is normal.
Urinary bladder is normal.

[Image of a CT scan]

Adequate scan dated 07/06/2016. The lesion has significantly improved with new finding of

Figure 1: (a) and (b) Before treatment

| Table 1: Assessment before and after treatment |
|-----------------------------------------------|
| Criteria | Symptoms | Before treatment | After treatment |
|---------|----------|-----------------|-----------------|
| 1. Agni bala | (a) Jaranashakti (food digestion capacity) | 5 | 1 |
|         | (b) Abhyavaharan Shakti (desire of intake food) | 3 | 1 |
|         | (c) Ruchi (appetite) | 1 | 0 |
|         | (d) Vata mutra parish retasam mukti (bowel and urine) | 1 | 0 |
| 2. Deha bala | (a) Balavridhi (physical) | 4 | 3 |
|         | (b) Swara varna yoga (texture, luster and voice) | 2 | 1 |
|         | (c) Sharaia upachaya (body built) | 0 | 0 |
| 3. Satva bala | (a) Nidra labho yathakalam (adequate sleep at night) | 3 | 2 |
|         | (a) Sukkhera-cha-pratibodhanam (feeling well at physical and mental levels) | 3 | 1 |
|         | (b) Vaikarikanama-cha-swapanam adarshanam (dreams) | 1 | 0 |
|         | (c) Mano buddhi-arya avyapatti | 3 | 2 |
| SF-36 QOL | (a) Physical functioning | 10% | 40% |
|         | (b) Role limitations due to physical health | 0% | 20% |
|         | (c) Role limitations due to mental | 0% | 20% |
|         | (d) Problems | 0% | 20% |
|         | (e) Energy/fatigue | 0% | 20% |
|         | (f) Emotional wellbeing | 16% | 30% |
|         | (g) Social functioning | 0% | 10% |
|         | (h) Pain | 0% | 10% |
|         | (i) General health | 40% | 50% |
|         | (j) Health change | 0% | 20% |

Madhuyasti Ksheerpaka, it is very beneficial in primary care, as it is easily available and cheapest medicine, a lot of research

or the dhatusamya. He got significant relief in overall health and quality of life was improved.
has been done on it, which proved it has anti-cancer property and can be given in cancer patient as an adjuvant with chemotherapy.

**Conclusion**

*Madhuyasti Ksheerpaka* has the capabilities to address the manifestation of Lynch syndrome. A good result was obtained in this case. Informed consent was taken from the patient for this case report. This approach may be useful for clinical practices and further studies on treating Lynch syndrome.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

**Conflicts of interest**

There are no conflicts of interest.

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