

# 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 SPFI) 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 be 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.<sup>[1-3]</sup> 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.<sup>[4]</sup> Small bowel adenocarcinoma has a poor prognosis at all stages, with a 5-year overall survival rate ranging from 14% to 33%.<sup>[5]</sup>

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### 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

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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, gastrojejunostomy site and proximal jejunum-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 brother died of some biliary malignancy at the age of 25 years.

The following laboratory studies was done before treatment started; hemoglobin 8.5 g/dl, total RBC  $3.10 \times 10^6$ /cumm, platelet count  $143 \times 10^3$ /cumm, TLC  $5.9 \times 10^3$  cumm, neutrophils 86%, lymphocytes 07%, Eosinophil 01%, Monocytes 01%, ESR 44 mm/h, total protein 5.15 gm/dl, albumin 2.18 gm/dl, ECG revealed that poor R wave progression (V2), stool routine and microscopic investigation showed that no RBCs in the stool.

*Madhuyasti* (Glycyrrhiza glabra) *Kalpa* therapy is mentioned in Ayurvedic classics. According to the principle of kalpa chikitsa, the broad-spectrum activity of *Madhuyasti Ksheerpaka* was given for 15 days.

*Ksheerpaka* of *Madhuyasti* in *vardhamana 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, *mudga yusha* and *takra* with *Trikatu churna*.

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, gastrojejunostomy site, proximal jejunal loops [Figures 1 and 2] better improvement was seen in *Agni bala*, *Deba bala*, *Satva 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).<sup>[6]</sup> The modern cancer therapy that is known to be 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 *Prakritisthapani chikitsa* (health maintenance), *Rasayana chikitsa*, (restoration of normal function), *Roganashani chikitsa* (disease cure) and *Naishthiki chikitsa* (spiritual approach).<sup>[7]</sup>

It was very difficult to correlate Lynch syndrome with any Ayurvedic disease, some of the features of *Vataja grahani*<sup>[8]</sup> were 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.<sup>[9]</sup>

*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.<sup>[10]</sup> *Madhuyashti* (*glycyrrhiza glabra*) has been mentioned in *medhya Rasayana*,<sup>[11]</sup> *jivaniya mahakashaya*<sup>[12]</sup> group of drugs. *Madhuyashti*<sup>[13]</sup> being a cost-effective drug, holding *rasayana* property and capable of alleviating many disorders proves beneficial in attaining *dhatu-samyak* in the body and resulting in a complete state of wellbeing through different modes of action. It strengthens and promotes the *swasth bhava*

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Report Signed Date/Time:  
2019.06.12 20:02

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**Patient:** date of birth: 11.06.1989  
ascites and left sided pleural effusion.

**Dr. Mohit Gambhir**      **Dr. Madhusudhan K S**  
Consultant

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This document was signed-off electronically!

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**Patient Name:**      **Sex:**      **Age:**  
**Patient ID:** 20120197998      **Report state:** Signed-off

**OPD/Ward:** 40<sup>th</sup> Dr. Praveen Aggarwal/G.I. Surgery

**EXAMINATION DESCRIPTION:**      **PERFORMED ON:**      **CR No.:**  
CECT ABDOMEN      07.06.2019 16:43

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**Admitting diagnosis:**  
F/U/C/O lynch syndrome

Status post total proctocolectomy with ileorectal anastomosis for carcinoma colon followed by Whipple pancreaticoduodenectomy with jejunal resection and anastomosis for duodenal carcinoma in 2015

Now C/O melena, abdominal distension, loss of appetite and loss of weight

Biopsy (30/8/2018) - adenocarcinoma

**Report:**  
CECT ABDOMEN

CT scan of the abdomen was performed with I.V. contrast using 24 x 0.6mm collimation.

**Abdomen:**  
Status post total proctocolectomy and Whipple procedure with multiple surgical staples seen in pancreatic and retroperitoneal locations.  
There is asymmetric heterogeneously enhancing circumferential wall thickening (maximum thickness - 2.8 cm) seen involving distal body, gastrojejunostomy site and proximal jejunum. The wall thickening has ill defined fat planes with jejunal loop seen inferior to it. Multiple lymph nodes are seen in mesentery adjacent to it largest of size 8 mm in SAD.  
Liver is normal in size and attenuation. No focal lesion / IHBRD seen.  
Portal vein is dilated (14mm).  
Spleen is normal in size, shape and outlines. No focal lesion. Splenic vein is of normal caliber.  
Both kidneys are normal in size, shape, outline and attenuation. No hydronephrosis or calculus.  
Adrenals are normal in size, shape and outline. No mass seen.  
Pancreas head and body not seen - post op. Pancreatic tail is normal.  
Urinary Bladder is normal.  
Mild ascites is seen.  
Bones are normal.  
Mild left sided pleural effusion is seen with few atelectatic bands in b/l lower lobes.

**Impression:**  
Status post total proctocolectomy with ileorectal anastomosis and Whipple procedure with jejunal resection anastomosis with current scan showing asymmetric circumferential wall thickening involving distal body, gastrojejunostomy site and proximal jejunum - biopsy proven adenocarcinoma with mild ascites and left sided pleural effusion.

Compared to previous scan dated 7/7/2018, the lesion has significantly increased with new finding of

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

Criteria	Symptoms	Before treatment	After treatment
1. Agni bala	(a) <i>Jaranashakti</i> (food digestion capacity)	5	1
	(b) <i>Abhyavaharan Shakti</i> (desire of intake food)	3	1
	(c) Ruchi (appetite)	1	0
	(d) <i>Vata mutra purish retasam mukti</i> (bowel and urine)	1	0
2. Deha bala	(a) <i>Balavridhhi</i> (physical)	4	3
	(b) <i>Swara varna yoga</i> (texture, luster and voice)	2	1
	(c) <i>Sharaia upachaya</i> (body built)	0	0
3. Satva bala	(a) <i>Nidra labho yathakalam</i> (adequate sleep at night)	3	2
	(a) <i>Sukhena-cha-pratibodhanam</i> (feeling well at physical and mental levels)	3	1
	(b) <i>Vaikarikanama-cha-swapnam adarshanam</i> (dreams)	1	0
SF-36 QOL	(c) <i>Mano buddhi-indriya avyapatti</i>	3	2
	(a) Physical functioning	10%	40%
	(b) Role limitations due to physical health	0%	20%
	(c) Role limitations due to emotional	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%	

or the dhatusamya. He got significant relief in overall health and quality of life was improved.

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

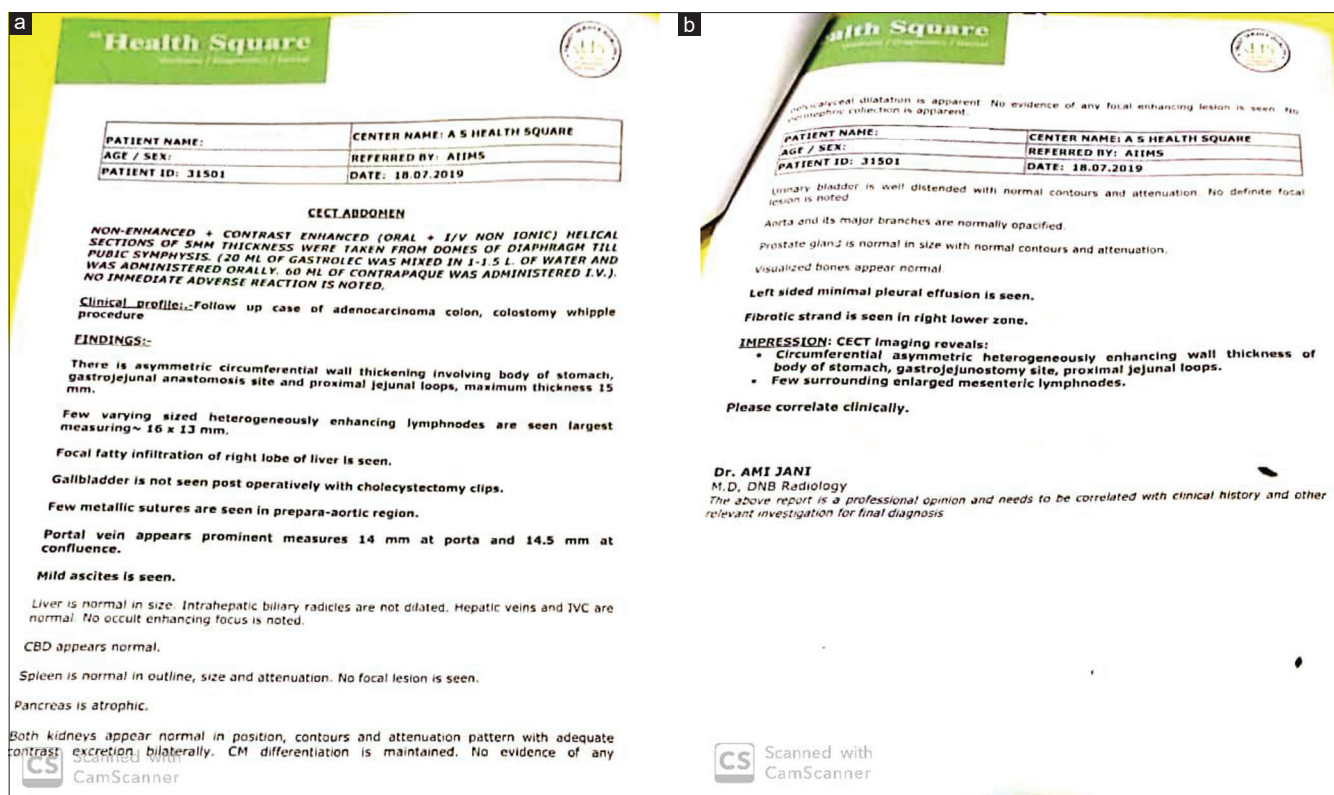


Figure 2: (a) and (b) After treatment

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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