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Case Study JoAYUSH

Ulcerative Colitis: An Ayurvedic Review and Treatment–A Case Study

Khushbu R. Prajapati[1,*], Ram Shukla[2], Haresh Vyas[3]

Abstract

Ulcerative colitis is a chronic autoimmune disease that causes inflammation and ulcers of the large intestine. It is one of the most common gastrointestinal disorder. Usually the pain affects only the intestinal mucosa and sub mucosa, causing small ulcers in the intestinal lining called ulcers. In majority of patients, the disease begins from the anus and continues to spread. Its pathogenesis is multifactorial and includes genetic predisposition, epithelial barrier defects, dysregulated immunity, and environmental factors. It can affect the entire intestine. Inflammation causes the intestine to move rapidly and cause discomfort. Bacteria can cause bleeding, discharge of mucus and pus, and symptoms. The aim of medical treatment is firstly to promote rapid treatment and normalize biomarkers and secondly to achieve endoscopic normalization to control the treatment and prevent disability for a long time. Medications such as aminosalicylates, steroids, antibiotics, biological therapy and in severe cases surgery are required. A 26-year-old woman from Ahmedabad, Gujarat, suffered from sa-ama malapravriti (5 times a day), sa-bala with mala, Bhaya-shoka kale uarah gauravata, niyamita purva apeksha alpa artava slava. Swasanaa Kasthata came to Ayurved Chikitsa Mandir and Panchkarma Research Center in Ahmedabad, India. She was prescribed with Smriti sagara ras, Udumbaradi leham, Darvi ghrita, grita bhrusta nisha, Tapyadi loha, Loha rasayana, and Maha vata vidhvansaka rasa. The patient benefited from the colonoscopy in the 7th month of treatment, but her symptoms continued, so medication was continued for 2 years and 2 months.

Keywords: ulcerative colitis, *Atisara roga*, Ayurveda, ulcerative proctitis, computed tomography scan, magnetic resonance imaging

INTRODUCTION

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Ulcerative colitis (UC) is an autoimmune disease that affects the digestive system, starting from the anus and continuing to the proximal part of the colon. It is the most common disease and pathogenesis involves multiple factors. The exact cause of UC is unknown. There is no direct cause, but factors such as genetics, environment, hyperactive immune system, and disregulated immune system, changes in gut bacteria, western diet and lifestyle factors are also associated with gastrointestinal (GI) symptoms. Early removal of the supplement can prevent this condition [1].

Risk Factors: It is diagnosed in patients between 15 and 30 years of age and in patients over 60 years of age. The risk is greater for close family members (parents, siblings or children). It is usually observed

in people who are stressed, overeat, drink or smoke. Many autoimmune diseases are associated with UC, viz-celiac disease, psoriasis, lupus, rheumatoid arthritis, episcleritis, and scleritis chronic porphyria.

Types

Ulcerative Proctitis: Inflammation limited to the anus.
Proctosigmoiditis: Inflammation of the rectum and sigmoid colon.
Left-sided colitis: Inflammation involving the lower and greater sigmoid colon.
Panocolitis: Inflammation involving the entire colon.

Stage

The severity of abdominal pain is graded from mild to severe based on rectal bleeding:

Mild: Less than four rectal bleeding per day.
Moderate: More than four rectal bleeding per day.
Severe: The number of rectal bleeding is more than four times a day and the patient has features of the disease with hypoalbuminemia.

Prognosis

The total mortality rate in UC is not higher than the population rate. However, mortality increases in patients who undergo shock and surgery. When the muscularis propria is affected, nerve damage can occur and cause swelling, peristalsis, and ischemia. Today, the most common cause of death from UC is toxic megacolon. The risk increases as the duration of the disease increases. Unlike Crohn's disease, stricture formation is rare.

SYMPTOMS

The primary symptoms of active infections are abdominal pain and diarrhea, blood loss, weight loss, and fever. Symptoms usually occur continuously, with periods of no attack symptoms.

The symptoms of UC often worsen. Symptoms of mild UC includes abdominal pain (which may or may not be bloody), frequent bowel movements or diarrhea (four or fewer per day), intestinal obstruction tenesmus (such as needing to have a bowel movement but not having one yet), abdominal pain cramping or tenderness. Serious symptoms of UC include frequent bowel movements or diarrhea (four or more per day), blood, mucus, or pus in the stool, severe abdominal pain, fatigue (very tired), loss of consciousness, nausea, and fever. Others UC symptoms including frequent fevers, bloody diarrhea, nausea and severe abdominal cramps also affecting body parts other than colon [2]. The inflammation can spread to bones, joints, eyes, skin, and liver. Symptoms include joint pain and swelling, red or burning or itchy eyes, episcleritis, scleritis, uveitis, peripheral arthropathies, erythema nodosum, pyoderma gangrenosum, painful bumps, and rashes or ulcers on the skin.

Complications

The complications associated with UC are anemia, colon cancer, osteoporosis, primary sclerosing cholangitis, growth and development issues in children, dehydration, perforation, severe bleeding, toxic megacolon, clotting in the blood vessels (veins, arteries and capillaries), leak from anastomosis, pelvic abscess, enterocutaneous fistulas, pouch prolapse, pouchitis, sexual dysfunction, toxic megacolon, and colon/rectal cancer.

DIAGNOSIS AND TESTS

UC is diagnosed according to physical examination, symptoms, and family history of the disease. Tests and procedures include complete blood count, electrolyte studies, kidney function tests, liver

function tests, imaging such as X-ray or computed tomography (CT) scan, magnetic resonance imaging (MRI), stool routine, stool culture, inflammatory markers such as erythrocyte sedimentation rate or C-reactive protein. Lower endoscopy to evaluate the rectum and distal large intestine (sigmoidoscopy) or entire colon and end of the small intestine (colonoscopy), double barium enema, serum albumin, and vitamin D are also employd.

Differential Diagnosis [3]

Crohn's disease, infectious colitis, nonsteroidal anti-inflammatory drug enteropathy, and irritable bowel syndrome are considered for differential diagnosis of UC. Other causes of colitis, such as ischemic colitis (insufficient blood flow to the colon), radiation colitis (if previously treated with radiation therapy), or drug colitis or fulminant UC, should also be considered. Pseudomembranous colitis is caused by *Entamoeba histolytica*—a protozoan that causes intestinal inflammation. Some patients are misdiagnosed with UC due to corticosteroid use and poor outcomes.

Treatment

Treatment of UC depends on the involvement and severity of the disease. The aim is to eliminate the drug with medication and then use the drug in a way that prevents its recurrence. Abstinence, induction and rehabilitation conditions are very important. Surgery can be conducted, if necessary.

Many medications are used to treat and manage symptoms, including aminosalicylates such as mesalazine or sulfasalazine, steroids, immunosuppressants such as azathioprine, and biological therapy. Surgery is conducted in necessary circumstances to remove the colon called colectomy, proctocolectomy with ileal pouch-anal anastomosis (IPAA). Treatment may be necessary if the disease is severe, does not respond to treatment, or complications such as cancer occur. Removing the intestines and rectum usually cures this condition.

CASE REPORT

A 26-year-old woman living in Ahmedabad, Gujarat, India visited Ayurved Chikitsa Mandir and Panchkarma Research Center with complaints of *sa-ama malapravriti* (five times per day), *sa-bala, alpa-alpa mala pravriti, tivra daurbalyanubhuti, dirge kale amla katu udgarotpatti, uarah gauravata, Swasanubhti* on May 7, 2021. The doctor recommended regular stool test, calprotectin in stool, abdominal and pelvic examination ultrasound. The patient was admitted on May 8, 2021. On 10 May 2021, the patient had *baddha mala pravriti* (two days), *suska kas, Kanthe kaphanubhuti, mukha shuskata, sharira bhara hrasa* (2 kg), *dirga adhah swasana, dirga adhah. swasana, mala pravriti kale vishhatava Agnimandhya, Udara gauravata, Bhaya-shoka kale uarah gauravata, niyamita purva apeksha alpa artava srava*.

*Past History***:** The patient had a history of anxiety and depression (past three years), *Nasa naha, Nasa strava, Shiro gauravata, Kshavathu*. The patient has fallen down in 2016 and injured on back head (occipital lobe and neck) then she continuously suffered from *Bhrama.* At the same time she had *Karnanada, Karnapuya* and *Karna shola* (on every monsoon), *Badhirya* (20%, 2020), *Swasa* (since 16th April, 2021), and *Guda kandu, Kshudra sweta mandala*.

On 24th April, 2021, she suffered from *Ati durgandhita, Sa-phena atisara* (7–8 times per day diarrhea with foul smell and mucoid). She took allopathy medicine through oral and intravenous route and got relief. After sometimes she stopped all medicines on her own, and diarrhea got started again. This time she took Ayurvedic medicine-*Kutajaristra, Kutaja ghana vati, Bilvadi leham, Suvarna parpati, Grahani kapata ras* by another doctor but did not get positive result. So she approach the Ayurveda Chikitsa Mandir and Panchakarma Research Center, Gujarat, India. She was prescribed *smriti sagara ras, Udumbaradi leham, Darvi ghrita, grita bhrusta nisha, Tapyadi loha, Loha rasayana,* and *Maha vata vidhvansaka rasa*. Blood reports (Tables 1 and 2), colonoscopy, stool routine test, stool culture test, fecal calprotectin, ultrasound (USG) abdomen with pelvis were conducted (before treatment and after treatment).

Table 1. Blood report (Before treatment).

Thyroid function test (On 17-2-22)			
F.T4	2.12	B12	395
TSH	2.882	D3	24.72
ANTI-TPO	<3		

Table 2. Blood reports (On 23-7-22)

Vitamin	Result
B12	337
D3	19.9

Colonoscopy (On 22-2-2022): Terminal ilium showed single apthous ulcer. Figure 1
Histopathology Report (On 23-2-2022): Section revealed colonic mucosa with focal ulcerarion. Cryptitis and crypt abscesses were seen. There was prominence of mixed inflammatory cells in lamina consisting of neutrophils, lymphocytes, plasma cells and few eosinophils. Inflammatory cells were extended to muscularis mucosae. Figure 2
Diagnosis: The condition was diagnosed as acute and chronic transmural inflammation with fibrosis.
USG Abdomen *(*On 8-5-2022): Left kidney showed stone of 4 mm in lower calyx without changes of hydronephrosis.
Stool Routine Test *(On 11-5-22):* Pus cell 6–8%.
Stool Culture Test *(On 11-5-22):* Organism: *Escherichia coli*; Growth: profuse.
Fecal Calprotectin *(On 11-5-22):* Normal (<5).

After Treatment: ***Colonoscopy*** *(On 26-9-2022):* Mucosa from rectum to cecum visualized normal, no polyp, no mass, no ulcer noted. Figure 3

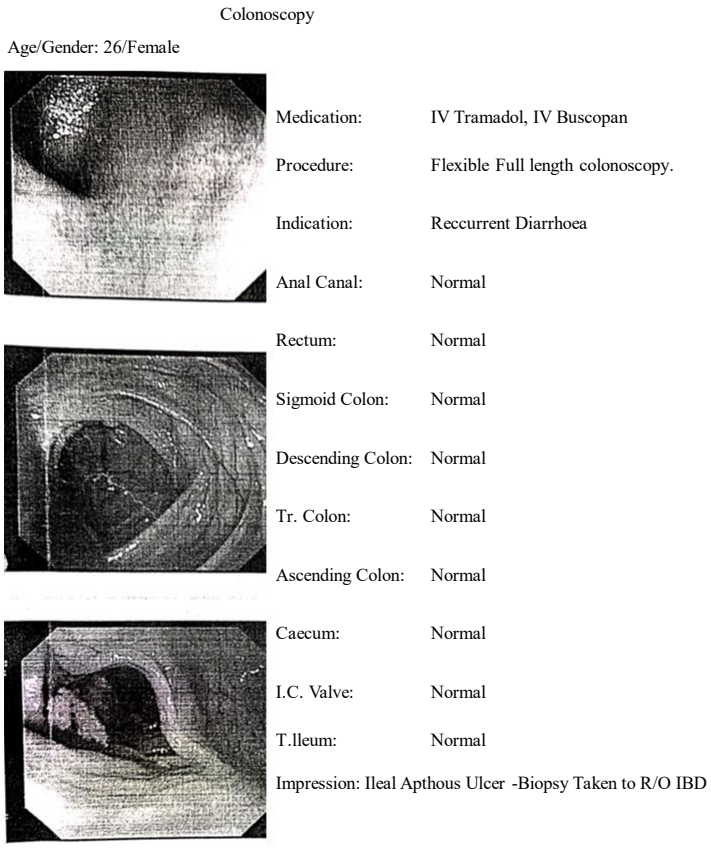

Figure 1. Colonoscopy Report.

Histopathology Report

Specimen	:	Ileal ulcer biopsy.
Gruss Description	:	Specimen consists of multiple, greyish & brownish, soft tissue, aggregate measure 0.4 x 0.3 cm. All taken.
Microscopy	:	Sections reveal colonic mucosa with focal ulceration. Cryptitis & crypt abscesses are seen. There is prominence of mixed inflammatory cells in lamina consisting of neutro-philes, lymphocytes, plasma cells and few eosinophiles. Inflammatory cells extends to muscularis mucosae. No granulomas are seen.
Diagnosis	:	Acute and chronic transmural inflammation with fibrosis. Possibility of Crohn's disease is likely.
Note	:	Slides and blocks are returned with this report, please preserve carefully.

Figure 2. Histopathology report after treatment.

COLONOSCOPY

Preparation: Good

Anal Canal: Normal

Mucosa From Rectum to Ceacumvisualized Appears Normal No Polyp, Mass, Ulcer Noted

IC Valve: Normal

Ileum: Normal Till 5 cms

Impression: Normal Study

Figure 3. Colonoscopy Report after treatment.

Impression: Normal Study

Samprapti

- *Dosha-Vata pradhana Tridoshaja vyadhi*
- *Dushya-rasa, rakta, ambu*
- *Agni-Jatharagni, Dhatvagni*
- *Srotas-Annavahasrotasa*
- *Dushti-Atipravriti*
- *Vyadhiudbhavasthana-Pakwashaya Vyadhi*
- *Adhisthana-pakwashaya*
- *Avastha-Chirakari*
- *Prabhava-Kruchhasadhya, Asadhya*.

Smriti sagara ras, Udumbaradi leham, Darvi ghrita, grita bhrusta nisha, Tapyadi loha, Loha rasayana, Maha vata vidhvansaka rasa were prescribed by Ayurved Chikitsa Mandir and Panchkarma Research Center, Ahmedabad, India (Table 3).

Observation

We have assessed patient's symptoms firstly at an interval of 20 days and after some time monthly with above medicines running. All symptoms were gradually decreased but *ati chinta, bhayaja–shokaja* conditions got aggravated. Although reports were normal after seven months of treatment. Patient was very sensitive, depressive and anxious in nature. Symptoms got decreased as mentioned in Tables 4–7.

Table 3. Medication.

Drug	Dose	Time	Duration (Date)
Smriti sagara ras	250 mg	Two times	From 25-5-21 to 12-8-21 From 11-1-22 to 31-1-22 From 10-6-22 to 8-8-22 From 6-3-23 to 20-7-23
Udumbaradi leham	5 ml	Two times	From 12-8-21 to 12-10-21
Darvi ghrita	5 ml	Two times	From 28-2-22 to 25-11-23
Grita bhrusta nisha	1 g	Three times	From 28-3-22 to 27-5-22
Tapyadi loha	250 mg	Two times	From 12-5-22 to 28-11-22
Loha rasayana	250 mg	Two times	From 7-2-22 to 5-9-22
Maha vata vidhvansaka ras	250 mg	Two times	From 5-9-23 to 25-11-23

Table 4. Observation During 7-05-2021 to 11-01-2022.

	7-5-21	10-5-21	4-6-21	10-6-21	6-7-21	12-8-21	2-9-21	22-10-21	9-11-21	9-12-21	11-1-22	11-1-22
Sa-ama malapravriti	++++	+++	++	+++-	–	–	–	–	+++	–	–	
Sa-bala, alpa-alpa mala pravriti	++++	++++	++++	+++	+	–	–	–	+	–	–	++
Amla katu udgarotpatti,	++++	++++	+	+	–		+	–	–	+	–	–
Suska kasa	–	–	–	–	–	+++	++	–	–	–	–	–
Kanthe kaphanubhuti	–	–	–	–	–	++		–	–	–	–	–
Mukha shuskata	–	–	–	–	–	++++	++	–	–	–	–	–
Sharira bhara hrasa	++	++	++	++	++	++	++	++	++	++	++	++
Dirga adhah swasana	++++	–	–	–	–	++++	+	–	–	–	–	–
Uraha gauravata,	++++	–	–	–	–	+++	++	–	–	–	–	–
Agnimandhya,	++++	++	++	_	+	++	+++	++	++	+	+	_
Anidra	++++	_	_	_	_	+++	++++	++++	++++	++++	++++	++++
Daurbalyata	++++	++++	++++	++	++	++++	+	+	++++	++	+	++

Table 5. Observation During 31-01-2022 to 23-07-2022.

	31-1-22	28-2-22	10-3-22	28-3-22	12-4-22	26-4-22	12-5-22	27-5-22	10-6-22	24-6-22	8-7-22	23-7-22
Sa-ama malapravriti	+	++	_	_	_	_	++	++	++++	+++	++	+
Sa-bala, alpa-alpa mala pravriti	+	+	_	_	_	_	_	_	_	_	_	_

Amla katu udgarotpatti,	+		–	–	–	–	–	–	–	–	–	–
Suska kasa			–	–	–	–	–	–	–	–	–	–
Kanthe kaphanubhuti			–	–	–	–	–	–	–	–	–	–
Mukha shuskata			–	–	–	–	–	–	–	–	–	–
Sharira bhara hrasa	++	++	++	++	++	++	+					+
Dirga adhah swasana	+											+
Uraha gauravata	+								++++			+
Agnimandhya	+	+	+	+	+	+			++			+
Anidra	+	++	+++	++	++	+	+	++	++++			
Daurbalyata				++	++++			++				++++

Table 6. Observation During 08-08-2022 to 12-05-2023.

	8-8-22	**5-9-22**	**10-3-22**	**3-10-22**	**21-10-22**	**31-10-22**	**28-11-22**	**26-12-22**	**7-2-23**	**6-3-23**	**3-4-23**	**12-5-23**
Sa-ama malapravriti	–	++	–	–	–	–	+	++	–	–	–	–
Sa-bala, alpa-alpa mala pravriti	–	+	–	–	–	–	+	–	–	–	–	–
Amla katu udgarotpatti	–	+	–	–	–	–	+	–	–	–	–	–
Suska kasa	–		–	–	–	–		–	–	–	–	–
Kanthe kaphanubhuti	–		–	–	–	–		–	–	–	–	–
Mukha shuskata	–		–	–	–	–	+	–	–	–	–	–
Sharira bhara hrasa	–		–	–	–	–	–	–	–	–	–	–
Dirga adhah swasana	–	–	–	–	–	–	–	–	–	–	–	–
Uraha gauravata,	–	–	–	–	–	–	++	+	–	–	–	–
Agnimandhya,	–	–	–	–	–	–	–	–	–	–	–	–
Anidra	++	+			+			++	++	+	+	+
Daurbalyata		++++	+	++	++	+	+	-	++			

Table 7. Observation During 20-07-2022 to 25-11-2022.

	20-7-22	**5-9-22**	**25-11-22**
Sa-ama malapravriti	+	-	-
Sa-bala, alpa-alpa mala pravriti	-	-	-
Amla katu udgarotpatti,	-	-	-
Suska kasa	-	-	-

Kanthe kaphanubhuti	-	-	-
Mukha shuskata	-	-	-
Sharira bhara hrasa	-	-	-
Dirga adhah swasana	-	-	-
Uraha gauravata	+	+	-
Anidra	-	-	-
Daurbalyata	++	+	-

PROBABLE MODE OF ACTION OF DRUGS

Smriti sagara ras: It contains *Sudhha parade, Sudhha Haratala, Sudhha Manahshila, Tamra Bhasma. Bhavana Dravyas-Vacha, Bhramhi Kwath, Malakangani Taila*. It directly works on psychiatrics and other related disorders. Through *ushna, tikshana, vyavayi gunas,* it affects *Manovasa strotas, Sushumna nadi, Sahastrara nadi, Agyavahinis* in the *sharira*. These agents decrease oxidative stress and repair oxidative damage in the cells and improve brain function by stablizing the mood and reducing stress, hyperactivity, and anxiety [4].

Udumbaradi leham [5]: It has *Sheeta, Guru, Kashaya, madhura rasa, Grahi, Dipana-rochana, Krimighna, Kapha-pitta Shamaka* properties. It has *Rakta prasadaka, Rakta Shamaka, Vrana Shodhana, Vrana ropan*a properties. Therefore, it is used in bleeding disorders including gastrointestinal disease, central nervous system (CNS) disease, and gynecological disorders.

Darvi ghrita [6]: It has *Darvi, Twaka, Pipali, Sunthi, Laksha, Indrayava, Katuki. Rasayana, Balya, Vata-Pitta shamaaka, Ropana, Dipana-Pachana* properties. It maintains *dhatu pariposhana karma*. So it directly works on seven *dhatus, Tridoshas*.

Grita bhrusta Nisha [7]: It has *Rasayana, Balya, Vata-Pitta shamaaka, Ropana, Dipana-Pachana, Rakta prasadaka, Rakta Shamaka, Krimighna* properties. So it works on *Annavaha, Rasavaha, Raktavaha strotas* in the body.

Tapyadi loha* [*8]: It contains *Triphala, Trikatu, Chitraka moola, Vidanga, Musta, Devadaru, Daruharidra, Twaka, Chavaka, Sudhha Shilajatu, Sudhha Suvarna makshika, Raupya Bhasma, Loha Bhasma, Mandur Bhasma, Sarkara*. So it works on *Annavaha, Manovaha, Rasavaha, Raktavaha strotas* in the body. It mainly woks on *Amashaya, Pakwashaya, Urdhva*, and *Madhya Grahani*. It has *Rakta prasadaka, Rakta Shamaka, Mutrala, Balya, Rasayana, Akshepanashaka, Dipana-Pachana* properties, this maintains *dhatu pariposhana karma*.

Loha rasayana [9]: It has *Amavishanashaka, Rakta prasadaka, Rakta Shamaka, Balya, Rasayana, Akshepanashaka, Dipana-Pachana* properties. It maintains *dhatu pariposhana karma.*

Maha vata vidhvansaka ras [10]: It contains *Shuddha Parada, Shuddha Gandhaka, Naga Bhasma, Vanga Bhasma, Loha Bhasma, Tamra Bhasma, Abhraka Bhasma, Kana, Tankana Bhasma, Maricha, Shunti, Pippali.*

Shuddha Vatsanabha, Trikatu kwatha or Triphala kwatha, Haritaki, Vibhitaki, Amalaki, Chitraka Bhringaraja, Kushta, Nirgundi, Arka, Tamalaki, Chandrashura, and *Nimbu Swarasa* mainly works on *Vata dosha.* So *vata* dominating *vyadhis* are cured by this medicine. *Manahvaha strotas, Asthivaha, Rasavaha strotas* related *vyadhis* are treated by this medicine.

CONCLUSION

The present study concluded that no disease in *Ayurveda* can be completely ruled out by UC. The study concluded that pathological diseases are treated with the help of *Ayurvedic* principles and effective medicine. UC also benefits from oral medications.

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