

## ABSTRACT

### **Management of Ulcerative Colitis through Ayurveda: A Case report**

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**Introduction:** Ulcerative colitis (UC) is a chronic, idiopathic, inflammatory bowel disease with a relapsing nature. Its incidence is higher between 20 and 40 years of age, and 5–10 people per 100,000 are at risk. Its pathophysiology is linked to a number of causes, including the effects of certain environmental and genetic factors on immune cells, intestinal epithelial cells (IECs), and gut microbiota, which ultimately result in a chronic state of dysregulated inflammation. Diarrhoea, rectal bleeding, tenesmus, mucus passage, abdominal pain, and aberrant structural pathology in the descending colon, especially the sigmoid colon, are the main characteristics of UC.

#### **Aims and Objectives:**

1. To prove the efficacy of *Ayurvedic* treatment in the management of UC.
2. To find an effective treatment for UC patients that might reduce the need for surgery and steroids.

**Methodology:** A female patient suffering from UC for 3 years and taking steroids presents with complaints of diarrhoea (10-12 times/day) along with rectal bleeding, pain in abdomen, weakness and weight loss. She was managed by *Yastimadhu ghritha matra basti* and *Piccha basti* for 16 days and oral medications such as, *yamaka sneha* 20ml empty stomach, *Pittajatisara nashaka yogas*, *grahi* and *vata-pitta shamaka aushadhis* for 3.4 months (5 follow-ups in between).

**Results:** After completion of treatment, diarrhoea is significantly reduced (loose stool 1 time/day) with no rectal bleed, Hb levels rise from 7.5 to 10 g/dL and there is a noticeable rise in weight from 38 to 47 kg.

**Discussion:** As per *Ayurveda*, UC is a disease of *Purishavaha srotas*, which is caused by *Pitta Pradhana Vata dosha*. *Raktatisara* is mentioned as an advanced stage of *Pittatisara*, and *Piccha basti* is mentioned for its treatment in *Charaka Samhita* along with *Shamana yogas*. The treatment regimen designed with this in mind has a tremendous impact on UC management.

**Keywords:** UC, *Purishavaha srotas*, *Raktatisara*, *Piccha basti*.

## Introduction

Ulcerative colitis (UC) is one of the two major types of Inflammatory bowel disease (IBD).<sup>[1]</sup> Ulcerative colitis (UC) chiefly affects the mucosa and submucosa of the rectum and descending colon, though sometimes it may involve the entire length of the large bowel.<sup>[2]</sup> Prevalence of IBD known to be high in western countries but now there is rising incidence and prevalence of disease in India topping the Southeast Asian (SEA) countries<sup>[3]</sup> and India is projected to have one of the highest disease burden across the globe<sup>[4]</sup>. Peak incidence of UC is in the second to fourth decades, with 51% of UC studies reporting the highest incidence among those age 20-29 years old. A second modest rise in incidence occurs between the seventh and ninth decades of life. The female-to-male ratio ranges from 0.51 to 1.58.<sup>[5]</sup>

The major symptoms of UC are diarrhoea, rectal bleeding, tenesmus, passage of mucus, and crampy abdominal pain.<sup>[6]</sup> The severity of symptoms correlates with the extent of disease. Other symptoms in moderate to severe disease include anorexia, nausea, vomiting, fever, and weight loss.

Its pathogenesis combines the role of three major groups of etiologic factors i.e., in a genetically predisposed individual, the effects of exogenous and endogenous host factors result in dysregulation of mucosal immune function, which gets further modified by certain environmental factors. Ulcerative colitis can be treated with a number of medications, including mainly 5-ASA drugs, corticosteroids, immunosuppressants and biological agents (e.g., infliximab and adalimumab). If there is no response to conservative treatment, the patient may have to undergo an operative procedure. The risk of colon cancer causes the largest mortality to occur in the early years of the illness and over an extended period. As a

result, patients are always searching for complementary therapies that offer safer and more effective outcomes.

As per *Ayurveda*, UC is a disease of *Purishavaha srotas*, which is caused by *Pitta Pradhana Vata dosha*. In *Ayurveda*, *Pittatisara* and *Raktatisara* shows bleeding with stool and can be correlated with symptoms of Ulcerative colitis. According to *Acharya Charaka*, *Raktatisara* occurs due to intake of *Pitta* vitiating food and drinks by patients suffering from *Pittatisara*. So, we can say that people with *Pittatisara* have tendency to develop *Raktatisara* (chronic stage of *Pittatisara*) when they do not follow *Pathya Aahara* and *Vihara*. Due to increased quantity of blood in stool in *Raktatisara*, it can be considered as active stage of Ulcerative colitis. Bloody diarrhoea along with *Shula* (abdominal pain), *daha*, *Gudapaaka* (rectal burning), and *Trushna* (excessive thirst) are the clinical features of *Raktatisara*. In the *Charaka Samhita*, *Basti Chikitsa* along with *Shamana chikitsa* are listed as a method of managing *Raktatisara*.

## Case report

### Patient information

A 17-year-old female patient visited O.P.D of Institute for Ayurved Studies & Research, Kurukshetra, Haryana on 06/07/23 complaining of bloody stool with the frequency of about 10-12 times per day. In addition, she reported having colicky abdominal pain, anorexia, weight loss, anal pain after defecation, mouth ulcers and generalized weakness. There were no symptoms of fever, jaundice, or joint pains.

The patient had experienced bloody stool firstly in September, 2021 with a frequency of about 5–6 times per day. There was no positive family history. Patient had frequent habit of eating spicy, oily and outside junk food. Colonoscopy reports confirmed that the patient is suffering from ulcerative colitis (Pancolitis- severe disease). She was being managed with wysolone 40 mg OD, Cap. Bevon, Tab. Folvite, Azoran 50 mg OD, and Mesacol 1.2 mg (2 pills in the morning) and Mesacol enema (1g HS) on and off for last 2 years. This treatment didn't provide much relief in her signs and symptoms. Relapses occur as soon as medication is stopped. She had no history of food allergies.

## Clinical findings

### General examination-

- Patient was afebrile, temp.- 36.6 °C
- Weight- 38 kg
- Blood pressure-124/82 mmHg
- Pulse rate- 98/min and Respiratory rate- 20/min.
- On inspection-  
Skin, mucous membranes and nails were normal. Mouth ulcers were present. No icterus, oedema, no lymph nodes were palpable. Conjunctival pallor was seen.
- On abdominal palpation-  
Tenderness present in periumbilical region, right and left iliac region but no palpable abdominal mass, hepatomegaly, or splenomegaly was present.

### Timeline

**Table no. 1: Historical and current events of the case report**

S. no.	Date	Symptoms	Interventions
1.	August, 2021 to September, 2021	Started having complaints of constipation or sometimes diarrhoea, abdominal pain and indigestion	Not any specific treatment taken
2.	15/09/21	Watery diarrhoea with mucus 5-6 times per day with fresh red blood every time, weakness, anorexia, abdominal pain Hb- 12.5 gm%, ESR- 35 mm/hr, body weight- 55 kg	Consulted a general physician at a private hospital which prescribed tab. mesacol 1.2 gm 2 tab. OD, tab. Folvite 5 mg OD, mesacol enema 1 gm HS and advised sigmoidoscopy (refused by patient at that time). Initially got some relief but symptoms worsen after some time
3.	18/11/21- 23/11/21	Watery diarrhoea with mucus 11-12 times per day with blood every time, abdominal pain, mouth ulcers, anorexia, weakness, pain on defaecation, Hb- 10.5 gm%, ESR- 40 mm/hr, body weight- 48.5 kg	Diagnosed with ulcerative colitis (sigmoidoscopy). Adv. Tab. Wysolone 5 mg for 1 week and 2.5 mg for next week then stop, tab mesacol 1.2 gm 2 tab. at morning and 1 tab. At night, cap. Bevon, tab. Shelcal, tab. Azoran. Not any significant relief was obtained

4.	24/11/21-30/12/21	Watery diarrhoea 7-8 times per day with blood every time, abdominal pain, mouth ulcers, anorexia, weakness, pain on defaecation,	Diagnosed with active-chronic proctocolitis (Histopathology report), treatment same as above
5.	01/01/22-21/01/22	Watery diarrhoea 8-9 times per day with blood every time, abdominal pain, anorexia, weakness, pain on defaecation,	Diagnosed with UC (pancolitis-severe disease). Adv. Tab. Wysolone 40 mg OD along with above medication.
6.	25/05/22-12/12/22	Relapses and remissions were present on stopping medications	Above treatment was given on /off
7.	06/07/23-26/07/23	bloody stools 10-12 times per day, abdominal pain, anorexia, weight loss, anal pain after defecation, mouth ulcers and generalized weakness	1. <i>Yamaka Sneha (Go-ghrita+ tila taila)</i> 2. <i>Niloutpaladi yoga</i> 3. Cap. Mebarid 4. Tab. <i>Raktada</i> 5. <i>Panchavalkal kwatha</i> for anal douching
8.	27-07-23 to 11-08-23	Watery stools 6-7 times per day with blood frequently, mouth ulcers, abdominal pain	2, 3, 4, treatments continued with <i>Matra basti</i> for 8 days ( <i>Yastimadhu ghrita</i> )- 60 ml just after taking meal at morning
9.	12-08-23 to 02-09-23	Loose stools 3-4 times per day with blood occasionally, no mouth ulcers, no abdominal pain	1, 2, 3, 4, treatments continued
10.	04-09-23 to 19-09-23	Loose stools 2-3 times per day with blood occasionally	<i>Yastimadhu ghrita matra basti</i> and <i>Piccha basti</i> for 16 days and 2, 3, 4, treatments continued
11.	20-09-23 to 19-11-23	Formed stool, 1 per day, no blood in stool	<i>Rasayana chikitsa (Sitopladi churna+ Satavari ghrita)</i>
12.	19/11/23	Formed stool, 1 per day, no blood in stool	Treatment was stopped

***Asthavidha Nadi Pariksha***

- *Nadi*- 117/min
- *Mutra*- *Samyaka*
- *Mala*- with blood and mucus, 10-12 times per day
- *Jivha*- *Sama*
- *Shabda*- *Spashta*
- *Sparsha*- *Samsheetoshna*
- *Drika*- *Samanya*
- *Aakriti*- *Madhayama*

**Diagnostic assessment**

Before starting the treatment; routine haematological tests were done. Initial investigation revealed a haemoglobin of 7.5 mg/ dL, a total leukocyte counting of 6800/mm<sup>3</sup>, a neutrophil differential of 56%, and a lymphocyte differential of 39%. Platelets were counted at 2.46 lac/cmm<sup>3</sup>. ESR was 33 mm/hr and CRP was 21 mg/L. Urinalysis, renal function tests, and coagulation tests were normal. On fecal examination, there were brown liquid stools with mucus in it. The Mantoux test was negative.

On visit, the patients had sigmoidoscopy, histo-pathological and colonoscopy reports with her.

**Sigmoidoscopy (18/11/21)**- showed diffuse loss of vascular pattern, erythema, small erosions and mucosal friability seen in rectum, recto-sigmoid and sigmoid colon.

**Histopathology (24/11/21)**- Active chronic procto-colitis present.

**Colonoscopy (01/01/22)**- showed diffuse loss of vascular pattern, superficial ulcers, erosions, spontaneous ooze, erythema seen from rectum up to hepatic flexure. Rectal biopsy tissues showed pancolitis (severe disease).

**Abdominal ultrasonography (20/07/23)**- showed ascending colon wall thickening caused by a suspected inflammatory process.

**Therapeutic intervention**

Following oral medications were given along with *Panchkarma* procedures.

**Table 2: Oral medications and *Panchkarma* Procedures**

Date	Treatment given			
<b>06-07-23 to 26-07-23</b>  (1 <sup>st</sup> day-20 <sup>th</sup> day)	Name	Dose	Anupana	Time
	1. Yamaka Sneha (Go-ghrita+ tila taila) <sup>[7]</sup>	20 ml	Lukewarm water	Early morning (empty stomach)
	2. Niloutpaladi yoga <sup>[8]</sup>	3gm bd	Navneet+ honey+sharkara	After meal
	3. Cap. Mebarid	1 tds	Lukewarm water	After meal
	4. Tab. Raktada	2 tds	Lukewarm water	After meal
	5. Panchavalkal kwatha <sup>[9]</sup>	For local douching of anal region		
<b>27-07-23 to 11-08-23</b> (21 <sup>st</sup> day-36 <sup>th</sup> day)	2, 3, 4, treatments continued with Matra basti for 8 days (Yastimadhu ghrita)- 60 ml just after taking meal at morning			
<b>12-08-23 to 02-09-23</b> (37 <sup>th</sup> day-56 <sup>th</sup> day)	1, 2, 3, 4, treatments continued			
<b>04-09-23 to 19-09-23</b> (57 <sup>th</sup> day-72 <sup>th</sup> day)	<div>Matra basti- Yastimadhu ghrita- 60 ml</div> <div><div>Basti chikitsa (for 16 days in Kala pattern)</div><div><div></div><div></div></div><div>Niruha basti- Pichha basti (dose given in table no. 2)</div></div> <div>2, 3, 4 treatments continued with Basti chikitsa</div>			
	Name	Dose	Anupana	Time
<b>20-09-23 to 19-11-23</b>  (72 <sup>th</sup> day-102 <sup>th</sup> day)	Sitopladi churna+ Satavari ghrita	5gm+ 5ml	Lukewarm water	Before meal
Total duration of treatment- 3.4 months (with 5 follow-ups in between)				

**Table no. 3: *Pichha basti* contents<sup>[10]</sup> and dose**

S. no.	<i>Dravya</i>	Quantity
1.	<i>Madhu</i>	120 ml
2.	<i>Sharkara</i>	10 gm
3.	<i>Sneha</i> (cow's ghee)	80 ml
4.	<i>Kalka</i> ( <i>mocharasa, manjistha, raktachandan, Utapala, vatsaka, priyangu, padmakesara</i> )	30 gm
5.	<i>Kwatha draya</i> ( <i>yavasa, kusha, kasa, shalmali, nyogrodha-udumbara-pippal shunga</i> ) <i>ksheerpaka</i>	240 ml
<b>Total quantity- 480 ml</b>		

**Follow-up and outcome**

Patient was assessed before and after the treatment on the basis of UC activity index as per proposed American College of Gastroenterology. Total 5 follow-ups were done in 3.4 months duration of treatment. Changes are listed below in table no. 3:

**Table no. 4: UC activity index as per proposed American College of Gastroenterology**

S. no.	Striking features	BT (0 <sup>th</sup> day)	20 <sup>th</sup> day	36 <sup>th</sup> day	56 <sup>th</sup> day	72 <sup>th</sup> day	102 <sup>th</sup> day
1.	Bowel frequency	Fulminant (>10 times in a day)	Moderate to severe (>6 times in a day)	Mild (<4 times in a day)	Mild (<4 times in a day)	Remission (formed stools)	Remission (formed stools)
2.	Blood in stools	Continuous	Frequent	Intermittent	Intermittent	None	None
3.	Urgency	Intermittent	often	Occasional	None	None	None
4.	ESR	33 mm/hr	24 mm/hr	18 mm/hr	14 mm/hr	16mm/hr	15 mm/hr
5.	CRP	21 mg/L	12 mg/L	Normal	Normal	Normal	Normal
6.	Hb gm%	7.5 gm/dL	7.5 gm/dL	8.4 gm/dL	8.6 gm/dL	9.4 gm/dL	10 gm/dL
7.	Mouth ulcers	++++	+	-	-	-	-
8.	Body weight	38 kg	37.6 kg	39.7 kg	43 kg	49 kg	47 kg



## Discussion

Due to increased quantity of blood in stool in *Raktatisara*, it can be considered as active stage of Ulcerative colitis. Bloody diarrhoea along with *Shula* (abdominal pain), *daha* (burning sensation), *Gudapaaka* (rectal burning), and *Trushna* (excessive thirst) are the clinical features of *Raktatisara*.<sup>[11]</sup> *Raktatisara* is caused by *pitta pradhana vata dosha*. Excessive bowel frequency causes *Vata* to become vitiated in its genesis place (i.e., *pakwashaya*), which further vitiates *Pitta dosha*<sup>[12]</sup> and is hence responsible for abdominal cramps, urgency and blood in stool. The entire course of treatment for *Raktatisara* was designed with this principle in mind.

## *Shamana chikitsa*

***Yamaka Sneha (Go-ghrita+ tila taila)***- A proportionate quantity of *ghrita* and *taila* diminishes the vitiated *Vata-Pitta dosha*, which in turn lessens urgency, cramping in the abdomen, and blood in the stool.<sup>[13]</sup>

***Niloutapaladi yoga***- ingredients are *Niloutpala*, *Mocharasa*, *Samanga*, *Padmakesara*. *Acharya Charaka* mentioned in *Ch. Su.* 25 that *Utpala* and *Padmakesara* are *sangrahi* and *rakta-pitta prashamananam shrestham*. *Mocharasa* is mentioned by *Acharya Charaka* in *Sandhaniya mahakashaya*<sup>[14]</sup>, *Purish-sangrahiya mahakashaya*<sup>[15]</sup>, *Shonitasthapana mahakashaya*<sup>[16]</sup> and *Vedanasthapana mahakashaya*<sup>[17]</sup>. It is also described in *Kashaya Skandha*<sup>[18]</sup>. *Samanga* is mentioned in *Sandhaniya mahakashaya*<sup>[19]</sup>, *Purish-sangrahiya mahakashaya*<sup>[20]</sup>. These *dravyas* reduce bleeding and the frequency of bowel movements. In *durbala* patients, if *sangrahana* isn't done in a reasonable amount of time, death may result.

**Cap. Mebarid**- contains *Kutaja*, *Daruharidra*, *Bilwa*, *Dadima*, *Jaiphal*, *Mocharasa* and *Panchamrita parpati*. *Acharya Charaka* indicated *Bilwa* and *Dadima* in *Deepaniya-Sangrahi gana*<sup>[21]</sup>. *Kutaja*, *Bilwa*, *Dadima*, *Mocharasa* and *Daruharidra* are mentioned in *Pittaja atisara nasaka yogas*<sup>[22]</sup>. All these *Dravyas* do *Vata-Kaphanashana*, *deepana*, *pachana*, *amahara*, *sangrahi*, *balakaraka* and *ruchya*.

**Tab. Raktada**- contains *Amla*, *Yastimadhu*, *Giloy*, *Shilajit*, *Kanta Lauh Bhasma*, *praval pishti*, *Muktashukti pishti*, *Sankha Bhasma*, *tejpatra*, *draksha*, *pippali*, *Madoor Bhasma*, *elaichi* and

*Mishri*. It helps in restoring iron levels in the body and improves nutritional anemia in this case.

#### ***Sitopladi churna+ Satavari ghrita-***

During the patient's remission phase, this combination was planned to serve as a *Rasayana chikitsa*. As we know chronic ulcerative colitis (CUC) is an inflammatory destructive disease of large intestine. In the past decade, attention has been paid to the role of neuronal structures and mast cells in regulating inflammatory and immune responses in IBD. It is concluded that interactions between neuronal elements and mast cells plays a significant role in the progress and maintenance of inflammatory processes in CUC. So, *Rasayan chikitsa* was planned here to combat relapses of UC.

*Sitopladi churna* is found to have mast cell stabilizing activity, anti-histaminic and anti-allergic activities.<sup>[23,24,25,26]</sup> *Satavari* is of therapeutic interest due to its role as immunomodulant, galactogauge, adaptogen, antioxidant, antidiarrheal and as a general tonic.<sup>[27,28,29,30,31,32]</sup> *Satavari ghrita* also relives mental stress which is a contributory factor to the disease.

jāa foV~lfgra iwoZ i'pk}k ;ks·frlk;ZrsA  
'krkojh?k`ra rL; ysgkFkZeqidYi;sRAA<sup>[33]</sup>

*Acharya Charaka* also mentioned role of *Satavari ghrita* on *Raktatisara*.

**Table no. 4: Pharmacological research on *Satavari***

S. no.	Research	Reference
1.	Anti-ulcerogenic action	Singh and Singh (1986)
2.	Anti-stress action	Bhattacharya et al. (2002)
3.	Immunomodulatory and immune-adjuvant	Gautam et al. (2004), Thatte et al. (1987), Diwanay et al. (2004), Rege et al. (1989), Mashitha et al. (2015)
4.	Antioxidant	Kamat et al. (2002)
5.	Anti-diarrhoeal action	Nanal et al. (1974), Venkatesan et al. (2005)
6.	Anti-dyspeptic action	Dalvi et al. (1990)
7.	Reversal of neuronal damage	Parihar and Hemnani (2004)

**Panchavalkal kwatha-** if excessive blood loss occurs in stool than *Panchavalkal kwatha* douching should be done.

;FkksäS% lspuS% 'khrS% 'kksf.krs·frL=oR;fi A

xqno {ka.kdV;w: lsp;sn~ ?k`rHkkfore~AA<sup>[34]</sup>

### **Basti Chikitsa**

iouks·frço`Ükks fg Los LFkkus yHkrs·fèkde~A

cya rL; lfiÜkL; t;kFksZ cfLr#Üke%AA<sup>[35]</sup>

In *Atisara Roga*, excessive bowel frequency causes *Vata* to become vitiated in its genesis place (i.e., *pakwashaya*), which further vitiates *Pitta dosha*. Basti is best efficient therapeutic modality for vitiated *Vata-Pitta doshas*. *Vata* and *Pitta dosha* are responsible for ulcerations and inflammation on intestinal mucosa which leads to bleeding, pain, burning sensation etc.

**Matra basti- Yastimadhu ghritha-** *Matra Basti* was scheduled with *ghrita*, as *Basti* is the most effective treatment for *Vata dosha* and *ghrita* is ideal for vitiated *Pitta dosha*. In the context of managing *Sadya kshatavrana*, *Yastimadhu ghritha* is described in classical *Ayurvedic* literatures such as *Ashtanga hrudaya*, *Sushruta Samhita*, *Bhaishajyaratnavali*, and *Chakradutta*. *Yasthimadhu* (*Glycyrrhiza glabra* Linn.) has *Madhura rasa*, *Sheeta virya*, *Madhura vipaka*, *Vata-Pitta Shamaka*, *Vrana shodhana*, *Vrana ropana*, *Shothahara* and anti-inflammatory properties. The base of *Yastimadhu ghritha* is *Go-ghrita* which has soothing properties and form a thin-film layer over the ulcers that allows early epithelization of ulcers or wounds. Thus, *Yastimadhu Ghritha Matra Basti* was given here for 8 days.

### **Pichha basti**

—rkuqokluL;kL; —rlaltZuL; pA

orZrs ;|rhk% fiPNkofLrjr% ijeaAA<sup>[36]</sup>

*Acharya Charaka* states that if blood in the stool still appears after taking *Anuvasana Basti*, then *Pichha basti* should be administered. *Acharya Chakrapani* mentioned that in

*Raktatisara*, *Niruha* and *Anuvasana basti* should be given until *Vata* and *Pitta dosha* do not subside.

vYikYia cgq'kks jaa l'kwyeqios';rsAA  
 ;nk ok;q/Eoc)'p —PN<sup>a</sup>a pjfr ok u okA  
 fiPNkcfLr lnk rL; ;FkksäeqidYi;sr~AA<sup>[37]</sup>

In *Raktatisara*, *Pichha basti* is recommended when there are frequent bowel movements, blood in the stool, and pain in the abdomen. *Pichha basti* has *Vata-Pitta shamaka*, *Agnideepaka Sothahara*, *Vrana ropaka*, *Vrana shodhana*, *Raktasthambhaka* (haemostatic agent) and *Sangrahi/ Sthambhana* (anti-diarrhoeal & anti-dysentery) properties which facilitates healing of intestinal mucosa.

In this Case study, *Matra basti* with *Yastimadhu ghrta* and *Pichha basti* were given for 16 days in *Kala basti* schedule.

Following the use of these treatment modalities, a significant improvement was noted in all aspects of ulcerative colitis. Body weight increased from 37 kg to 47 kg, frequency of bowel movements was normal, and there was no blood in the stool, no anorexia or indigestion. After that, the treatment was discontinued, and there haven't been any UC recurrences till date.

## Conclusion

This case study illustrates the potential of *Ayurvedic chikitsa* in the management of ulcerative colitis. Thus, it may be inferred from the context provided above that Ulcerative Colitis responds positively to *Ayurvedic* treatment. Ulcerative colitis is a challenging medical problem. Continuous deterioration of health interferes with the patient's daily routine and mental wellness. *Basti chikitsa* and other oral *Ayurvedic* medications play a key role in the treatment of UC.

In this instance, it can be said that *Ayurvedic* treatment is a hope for individuals with Ulcerative colitis who are resistant to conventional medicine, although longer follow-up and a larger number of patients are needed to draw any conclusions.

## Informed Consent

The patient has given written consent for publication of this case study.

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