

## Inflammatory bowel disease in the Hubei Province of China

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### Abstract

**AIM:** To analyze clinical features and response to treatment in inflammatory bowel disease (IBD) patients from the Hubei Province of China.

**METHODS:** Clinical data was collected retrospectively from 74 patients with IBD [66 with ulcerative colitis (UC) and 8 with Crohn's disease (CD)] admitted to The Second Hospital, Hubei Medical University from 1986 to 1995.

**RESULTS:** The most common symptoms in IBD patients were abdominal pain, diarrhea, blood and mucus in stool, and constipation. Extraintestinal manifestations of IBD were not common. In these patients, inflammation was predominantly located in the sigmoid and left colon in UC cases, and in the ileum and colon in CD cases. Treatment with sulphasalazine and corticosteroids was effective in 95% of UC cases; However, about 42% of UC patients showed disease recurrence during the follow-up period of 1.11 years. Five out of eight CD patients had part of their intestine removed, whereas three were treated with anti-tuberculosis drugs or the antibiotic metronidazole. Out of four patients we followed up for 1-8 years, one died of severe complications after surgery, two experienced recur-

rence while in treatment with drugs, and one remained in remission under sulphasalazine treatment after surgery.

**CONCLUSION:** Five percent of the patients reported a family history of IBD. About 34% of the patients were smokers and 32% of the patients were alcoholic. Epidemiological studies are urgently needed in the Hubei Province of China to assess the role that genetics and environmental factors play in the pathogenesis of inflammatory bowel diseases.

**Key words:** Colitis; Ulcerative; Crohn's disease

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### INTRODUCTION

Inflammatory bowel disease (IBD) has traditionally been considered rare in China. Epidemiological studies have shown that the incidence of IBD in Europe and North America is about 3-14.3/100000/year for ulcerative colitis (UC) and 0.7-11.6/100,000/year for Crohn's disease (CD). The prevalence of UC and CD is 39-234/100000 and 34-106/100000, respectively<sup>[1]</sup>. The pronounced difference in the distribution of IBD in Europe/North America and China suggests that genetic factors may play a significant role in the variation among ethnicities<sup>[2]</sup>. On the other hand, environmental factors may also contribute to this difference<sup>[3]</sup>. Up to this date, the exact incidence of IBD in China is not known. However, clinical reports indicate that the number of IBD patients has surprisingly increased over the past 10 years. In the present report, we studied 74 patients with IBD from the Hubei Province (a central region of China) admitted to The Second Hospital, Hubei Medical University from 1986 to 1995. We analyzed the clinical features of these patients and followed up their response to the treatment of choice.

### CLINICAL DATA

#### Patient characteristics

A total of 74 patients with IBD, including 66 with UC and 8 with CD, were studied. UC and CD cases were diagnosed according to the Chinese Non-infectious Diarrhea Symposium criteria<sup>[4,5]</sup>. Fifty-two out of the 74 patients were male and 22 were female (ratio: 2.4:1). The mean age of the patients was 38 years (range: 16-64). Fifty-one patients lived in cities, 19 lived in towns, and four lived in the countryside. Twenty-five (34%) patients had a smoking history and

**Table 1 Clinical manifestations of ulcerative colitis and Crohn's disease in inflammatory bowel disease patients (n = 74)**

Clinical manifestation	Ulcerative colitis (n = 66)	Crohn's disease (n = 8)
Diarrhea	65 (98%)	5 (63%)
Abdominal pain	52 (79%)	8 (100%)
Blood and mucus stool	52 (79%)	2 (25%)
Constipation	9 (14%)	5 (63%)
Oral aphthous ulcer	4	3
Arthritis	4	1
Chronic gastritis	3	
Liver disease	3	
Nephropylitis	2	
Schistosomiasis	1	1
Peripheral neuritis	2	
Diabetes mellitus	1	
Tuberculosis		1
Fistula in anus	1	
Fistula in urinary bladder		1

**Table 2 Type of disease according to location of inflammation in inflammatory bowel disease patients (n = 74)**

Type of disease	Ulcerative colitis (n = 66)	Crohn's disease (n = 8)
Proctitis	12	
Sigmoiditis	26	
Left colitis	14	1
Transversal colitis	4	
Ascending colitis		1
Total colitis	10	
Ileum and cecum disease		6

**Table 3 Medical treatment of choice in inflammatory bowel disease patients (n = 74)**

	Sulphasalazine	Steroids	Antibiotics	Chinese medicine	Surgery
Ulcerative colitis (n = 66)	44	17	21	6	1
Crohn's disease (n = 8)	1		6		5

24 (32%) were alcoholic. Six patients had a history of schistosomiasis. Only four (5%) patients had a family history of IBD.

**Clinical features**

Duration of disease varied from < 1 to 38 years, with a mean interval of 3.4 years. Out of the 74 patients, 36 presented a mild version of the disease, 24 had a moderate manifestation, and 13 showed severe illness. The clinical features of the group are shown in Table 1. The most common symptoms of UC patients were abdominal pain, diarrhea, and blood and mucus in the stool. In patients with CD, abdominal pain, diarrhea, and constipation were the dominant symptoms. Extraintestinal manifestations of the disease were not common in this group of patients.

In the 66 UC patients, colonoscopic manifestations included mucosal edema, congestion, stiffness, ulceration, and polyps. Occasionally, white or yellow exudates were seen. The localization of inflammation in these patients was determined by endoscopy and X-ray barium enema (Table 2). Out of 8 CD patients, diagnosis was confirmed by surgery in 5 cases and by endoscopy and histology in 3 cases, which showed colonic stricture and segment disease.

Barium enema was carried out in 52 IBD patients; in only 18 (35%) patients the findings of this procedure were in accordance with those obtained by endoscopy, histology, or surgery.

**Treatment and follow-up**

Medical treatments of choice are shown in Table 3. Sulphasalazine (SASP), corticosteroids, and antibiotics were commonly used. In UC patients (n = 66), SASP, SASP in conjunction with steroids, or SASP in conjunction with antibiotics (metronidazole, berberine) were effective in 63 (95%) patients after short-term observation. Thirty-one UC patients were followed up for 1-11 years. Sixteen (52%) patients remained in remission, whereas 13 (42%) patients experienced disease recurrence. One patient died of bile duct carcinoma and another died of unknown causes. Out of eight CD patients, the disease progressed in five, who underwent intestinal resection or partial colectomy. Two patients were treated with anti-tuberculosis drugs and one with the antibiotic metronidazole. We followed up four CD patients for 1-8 years. One patient with partial colectomy died of severe complications after three surgical interventions. Two patients treated with anti-tuberculosis agents or metronidazole experienced disease recurrence after 5 and 8 years respectively. One patient treated with SASP after ileum resection remained in remission for one year.

**DISCUSSION**

In the past, diseases such as UC and CD were considered uncommon in the Hubei region. However, an increasing number of IBD cases has been observed in patients admitted to The Second Hospital, Hubei Medical University, as shown in the present survey (1986-1995). Five percent of the studied patients reported a family history of IBD. About 34% of the patients had a history of smoking and 32% were alcoholic. Epidemiological studies would assess the role that genetic and environmental factors may play in the pathogenesis of IBD in the Hubei region of China.

It is important to differentiate the diagnosis of IBD from that of infectious colitis and intestinal tuberculosis. The latter two can clinically, radiologically, and endoscopically mimic UC and CD.

Our data show that the most common symptoms of IBD in these patients were abdominal pain, diarrhea, blood and mucus in stool, and constipation. Extraintestinal manifestations were not common. We found that inflammation was preferentially localized to the sigmoid and left colon in UC and to the ileum and colon in CD.

Treatment of UC patients with SASP and corticosteroids was effective. However, about 42% of UC patients experienced disease recurrence during the follow-up period of 1.11 years. For CD patients undergoing surgery, the use of SASP and corticosteroids should be continued during remission.

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