

# An analysis of 10218 ulcerative colitis cases in China

Xue-Liang Jiang, Hui-Fei Cui

Xue-Liang Jiang, Department of Gastroenterology, Chinese PLA General Hospital of Jinan Command, Jinan 250031, China  
Hui-Fei Cui, Department of Biochemical Pharmaceutics, Shandong University, Jinan 250012, Shandong Province, China  
Supported by the Key Research Fund of Jinan Command, No.9801  
Correspondence to: Dr. Xue Liang Jiang, Department of Gastroenterology, Chinese PLA General Hospital of Jinan Command, 25 Shifanlu, Jinan 250031, Shandong Province, China. chfjxl@jn-public.sd.cninfo.net  
Telephone: +86-531-2600132 Fax: +86-531-2600132  
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## Abstract

**AIM:** To analyze the characteristics of ulcerative colitis (UC) in China.

**METHODS:** From 1981 to 2000, a total of 10218 patients of UC reported in Chinese medical literature and including our cases diagnosed were analyzed according to the diagnostic criteria of Lennard-Jones.

**RESULTS:** The number of cases increased by 3.08 times over the past 10 years (2506 patients were diagnosed from 1981 to 1990 while 7512 patients were diagnosed from 1991 to 2000). Lesion range were described in 7966 patients, 5592 (70.20%) were proctosigmoiditis or proctitis, 1792 (22.50%) left-sided colitis, 582 (7.30%) pancolitis. Among the 8122 patients, 2826 (34.8%) had first episode, 4272 (52.6%) had chronic relapse, 869 (10.7%) were of chronic persist type, 154 (1.9%) were of acute fulminant type. The course of the illness were described in 5867 patients, 4427 (75.5%) were less than 5 years, 910 (15.5%) between 5 and 10 years, 530 (9.1%) more than 10 years. Six hundred and sixteen patients (6.1%) had extraintestinal manifestations. The mean age at the diagnosis was 40.7 years (range 6-80 years, and the peak ages 30-49 years). The male to female ratio was 1.09. Among 270 patients diagnosed in our hospital, 36 had histories of smoking, there was no negative association between the severity of UC and smoking ( $P > 0.05$ ), 21 smokers were followed up for one year, 15 of them had given up smoking when the disease were diagnosed, and one year later, 7 patients relapsed, another 6 patients continued smoking, and one year later, 2 patients relapsed. Among 270 UC patients diagnosed in our hospital, 4 patients (1.48%) from 2 families had familial history of UC. Treatment was mentioned in 6859 patients, only 5-ASA and/or corticosteroid only in 1276 patients (18.6%), only Chinese herbs in 1377 patients (20.1%), combined Chinese and western medicine in 4056 patients (59.1%), surgery was performed in 87 patients (1.3%), other treatments in 63 patients (0.9%).

**CONCLUSIONS:** In China, number of UC patients increased significantly in the past 10 years. Lesions are commonly located to left side colon. The course is short with rare extraintestinal manifestations. The age of onset is relatively high. Males and females are nearly equally affected. No negative relation was found between smoking and severity of the disease. Familial relatives are rarely involved

## Traditional Chinese medicine (TCM) is widely used in the treatment of UC.

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## INTRODUCTION

Ulcerative colitis (UC) was first described by Wilks in 1859. In China, the first case of UC was reported in 1956<sup>[1]</sup>. The diagnostic criteria of UC was published firstly in 1978 and was revised in 1993 on the National Conference of Chronic non-infective Diarrhea Disease in Taiyuan city, China<sup>[2-4]</sup>. The criteria are similar to Lennard-Jones, on the three major aspects: mainly by exclusion. A multi-center study was set up in Chinese PLA General Hospital of Jinan Command (Shandong province, China) in 1999, with eight comprehensive hospitals from different areas using unique diagnostic criteria and method treatment<sup>[1]</sup>.

UC was thought to be infrequent in China in the past, however, it was increasing over the last 20 years<sup>[1,2,5]</sup>. Figure 1.

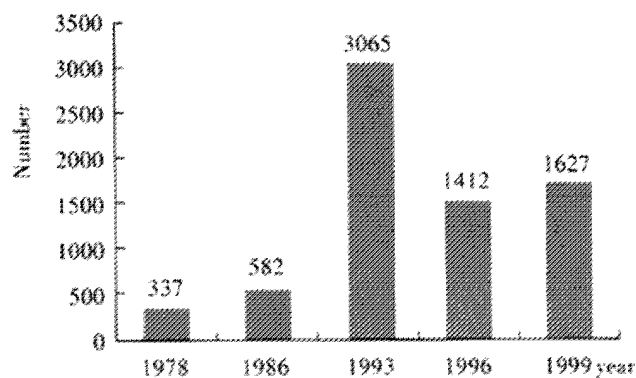


Figure 1 Cases reported on the conferences in China.

No precise statistics are available in China, in our hospital, 57 cases were admitted from 1981 to 1990, whereas 213 cases were hospitalized from 1991 to 2000<sup>[1]</sup>. According to the statistics of World Digestology Network (<http://www.wd.org.cn>) data base, more than 1560 Chinese papers on this subject were published in the past 20 years, of which, 102 articles were published on World Chinese Journal of Digestology (founded in 1993) and World Journal of Gastroenterology (founded in 1995), regarding the animal model<sup>[6-16]</sup>, etiology and pathogenesis<sup>[17-36]</sup>, diagnostic criteria<sup>[1-4]</sup> and results of treatment, etc<sup>[37-102]</sup>. Of these 1560 papers, a total of 10218 patients of UC were reported in Chinese medical literature including those diagnosed in our hospital.

## MATERIALS AND METHODS

The diagnosis of UC was based on endoscopic or radiological findings and mucosal biopsies or surgical pathology using Lennard-Jones criteria. Only those verified were included in the study. A total of 10218 patients of UC reported in Chinese medical literature including ours according to the diagnostic criteria of Lennard-Jones were

analyzed. Ridit test was used, a value of  $P < 0.05$  was regarded as statistically significant.

**RESULTS**

**Case number**

From 1981 to 2000, a total of 10218 cases of UC were reported, of these, 2506 were diagnosed from 1981 to 1990 whereas 7512 were diagnosed from 1991 to 2000, an increasing to 3.08 times in the past 10 years.

**Extent of lesions range**

As described in 7966 patients, 5592 (70.20%) were proctosigmoiditis/proctitis, 1792(22.50%)left-sided colitis, 582 (7.30%) pancolitis.

**Clinical types**

Of those described in 8122 cases, 34.8%(2826 patients) were first presentation, 52.6%(4272 patients) were chronic relapsing, 10.7%(869 patients) were chronic persistent, 1.9%(154 patients) were acute fulminant.

**Course**

Of those described in 5867 cases, 4427(75.5%) patients were less than 5 years, 910 patients(15.5%) between 5 and 10 years, 530 patients(9.1%) more than 10 years.

**Extraintestinal manifestations**

618 patients(6.1%) had extraintestinal manifestations.

**Age**

The mean age at the diagnosis was 40.7 years(range 6-80 years, peak age range 30-49 years).

**Sex**

The male to female ratio was 1.09.

**Smoking**

In our 270 patients, 36 patients (30 male, 6 female) had histories of smoking(more than 20 cigarette one day), there was no negative association between the severity of UC and smoking( $P > 0.05$ , Table 1), 21 smokers were followed up for one year, 15 of them had given up smoking when the disease were diagnosed, and one year later, 7 patients relapsed, another 6 patients continued smoking, and one year later, 2 patients relapsed.

**Table 1** The association between the severity of UC and smoking

Group/severity	mild	moderate	severe
Smokers	20	11	5
Non-smokers	130	72	32

Ridit test,  $P > 0.05$

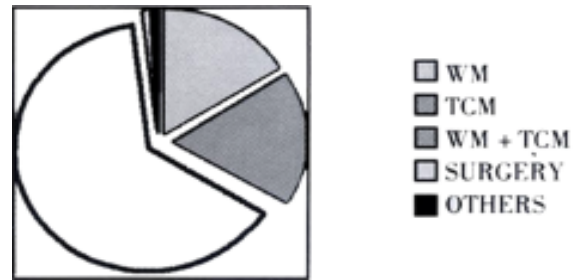
**Family study**

In our 270 UC patients, 4 patients(1.48%) from 2 families had familial history of UC. In one family, the patients were mother and son, in the other family, the patient were two sisters, and their mother had a history of bloody stool more than 9 years without seeking medical advise.

**Treatment**

Of the 10218 patients, treatment was mentioned in 6859 cases, only 5-ASA and/or corticosteroid only in 1276 patients(18.6%), only

Chinese herbs in 1377 patients(20.1%), combined Chinese and western medicine in 4056 patients(59.1%),surgery was performed in 87 patients(1.3%),other treatments in 63 patients(0.9%).Figure 2.



**Figure 2** Treatment of UC in China. WM:western medicine TCM:traditional Chinese medicine.

**DISCUSSION**

The characteristic features of UC in China are as follows:

**UC increased significantly in the past 10 years**

The incidence of UC varies greatly in different geographical areas of the world<sup>[90-92,95,101-102]</sup>. A high incidence is seen in Northern Europe and North America. In the western world, a sharp rise in the incidence of UC has been observed since early 1950s<sup>[95]</sup>, and now the incidence is stable. UC has been thought uncommon in China, however, an analysis of 1560 papers and 10218 cases indicate that the incidence is rising in recent years. From 1981 to 1990, 2506 patients were diagnosed while 7512 patients were diagnosed from 1991 to 2000. The number of cases increase by 3.08 times in the past 10 years. This is due to increasing awareness, better health care and improved study diagnostics. However, it may also be a real increase, reflecting changes in life style and dietary composition. These may shed some light on the role of environmental factors in the etiology of UC<sup>[1]</sup>.

**Lesions mostly affect left sided colon**

In China, UC is usually restricted to the rectum, sigmoid and descending colon, proctocolitis are common. Our data showed 92.7% were restrict to left colon(70.20% proctosigmoiditis/proctitis, 22.50% left-sided colitis), 7.30% pancolitis, the later was commonly seen in the Western countries<sup>[101]</sup>.

**The course of illness is shorter with less extraintestinal manifestations**

Occasionally, the disease may present as a single mild episode of diarrhea, but may at anytime relapse. In China, 34.8% were first presentation, 52.6% chronic relapsing, 10.7% chronic persistent, only 1.9% acute fulminant. Usually, the history revealed months or years of general ill health with continuous or intermittent diarrhea. In China, among that, the course of UC is commonly less than 5 years(75.5%), only 9.1% more than 10 years. Symptoms may be mild, systemic complications are rare, only 6.1% has extraintestinal manifestations, much less than that in the Western countries<sup>[99]</sup>.

**The onset of illness is relatively higher**

In china, the onset of UC is relatively higher in the middle and old-age group(30-49 years old), mean age at the diagnosis was 40.7 years, but may occur at any age ( range 6-80 years), while in the western countries the peak age is 30 years old<sup>[91]</sup>.

**Male and female are nearly equally affected**

The reports on sex difference are variable, but there seem to be a

tendency to a male preponderance especially in high incidence areas. Our data suggest that the male to female ratio was 1.09, with nearly equal frequencies.

### No relation between smoking and severity of illness

Smoking is the only consistent risk factor in case-control studies of UC, and there is no apparent relation seen between ulcerative colitis and cigarette smoking in our cases.

### Familial relatives are rarely involved

Genetic study of UC are rarely performed in China. In our 270 UC patients, 4 patients(1.48%) from 2 families had family history of UC, which is much rarer than expected. The familial tendency may be much lower than that seen in western countries<sup>[91,102]</sup>.

### Traditional Chinese medicine are widely used for the treatment of UC

SASP, is still the major drug used for the treatment of UC in China, which is effective in inducing remission and maintenance in mild-to-moderate cases. 5-ASA is too costly, corticosteroids are more commonly used, whereas 6-MP is only used by some authors. Heparin or oral low molecular weight heparin has been found to paradoxically induce remission in occasional patients with corticosteroid-resistant UC in China<sup>[48,57,60]</sup>. In China, herb medicine as heartleaf houttuynia<sup>[12,13]</sup>, has been widely used in patients with mild-to-moderate disease, as well as an adjunct to patient with moderate-to-severe disease. Combined Chinese and western medicine is the predominance treatment in China.

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