Characteristics of Ulcerative Colitis According to the Age of Onset

Chung Ryul Lee, M.D., Jung Hoon Suh, M.D., Chang Hoon Hahn, M.D., Hae Won Chung, M.D., Hyun Woong Lee, M.D., Jae-Hoon Lee, M.D., Chang Hwan Choi, M.D. and Won Ho Kim, M.D.

Department of Internal Medicine, Yonsei University College of Medicine, Seoul, Korea

Background/Aims: Ulcerative colitis (UC) exhibits a bimodality in age-specific incidence rates, with a first peak in the young age and a second peak in the old age. We attempted to determine whether UC actually behaves differently in the elderly compared with the young. Methods: Patients with UC were divided into two groups (early vs. late onset) by the onset age of 40. Results: Incidence rate reached a peak in the forth decade in female patients, whereas it showed a bimodal age distribution with a first peak in the third decade and a second peak in fifth decade in male patients. Symptom duration before diagnosis was longer in the patients with late-onset UC than in the patients with early-onset UC (p value<0.05). There were no significant differences in the extent of lesion, the positive rate of serum anti-neutrophil cytoplasmic antibody, the disease activity, the frequency of admission, the use of steroid, and concern about the disease between the patients with early and late-onset UC. Conclusions: Age and sex distribution in this study were similar to those in other countries, and a bimodal age distribution was noted in males. The late-onset patients had longer duration from the onset of symptoms to diagnosis than the early-onset patients. However, there was no significant difference in clinical characteristics between the patients with early-onset UC and the patients with late-onset UC. (Korean J Gastroenterol 2001;37:196-202)

Key Words: Ulcerative colitis, Age of onset

1.3.4.9.10 (bimodality) 가 가 가 1. : 2001 18, : 2001 2 1990 2000 1 8 134 , 120-752,

Tel: (02) 361-5410, FAX: (02) 393-6884

51

203

7 .

2. 40 123 80 41 가 St. Mark (SMI) . SMI 가 (Table 1).11 (proctitis), (left colitis), (extensive colitis) 가 가 가 가 가 가 inflammatory bowel disease questionnaire (IBDQ) 32

Table 1. St. Mark Index (SMI) in Ulcerative Colitis

.12 Guyatt

Indicant	Score	Guide to scoring
Well being	0	No impairment
C	1	Impaired, but also
		to continue activities
	2	Activities reduced
	3	Unable to work
Bowel frequency	0	<3 per 24 hours
	1	3-6 per 24 hours
	2	>6 per 24 hours
Stool consistency	0	Normal
	1	Semi-formed
	2	Liquid
Sigmoidoscopic grade	0	No hemorrhage
	1	Trace
	2	More than a trace

IBDQ 2 32 가 1, (bowel symptoms, 10), (systemic symptoms, 5 (emotional (social functioning, 5 functioning, 12), . Rating form of IBD patient concern (RFIPC) 25 .12 RFIPC (impact of disease), (sexual intimacy), (complication), (body stigma) 0 100 , 100 0

1. (45.3%),111 (55.7%) 가 35.9 ± 14.1 (Table 2), 30 가 20 40 40 50 , (Fig. 1). 73 , 41 42 , 38 (Table 3). 40 가

Table 2. Age and Sex Distribution in Patients with Ulcerative Colitis

Age at onset (yr)	Male (n=92)	Female (n=111)	Total (n=203)
Range	12-75	12-79	12-79
Mean	37.5 ± 14.9	37.1 ± 13.5	35.9 ± 14.1
Median	35	35	35

Table 3. Grouping in Patients with Ulcerative Colitis According to the Age of Onset

	Male	Female	Total
	(n=92)	(n = 111)	(n=203)
Early onset	50	73	123
Late onset	42	38	80

	Early onset (n=123)	Late onset (n=80)	Total (n=203)	p value
Symptom duration (mo)				0.015
Range	0-116	0-444	0-444	
Mean	15.5 ± 23.2	32.9 ± 7.01	21.8 ± 46.6	
Median	4.0	7.0	5.0	
Follow up period (mo)				NS
Range	0-228	6-231	0-228	
Mean	37.8 ± 36.8	31.7 ± 32.9	35.6 ± 35.5	
Median	27.5	16.0	24.5	

Table 4. Symptom Duration before Diagnosis and Follow-up Period after Diagnosis

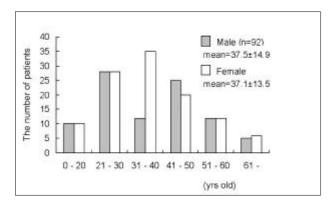


Fig. 1. Age and sex distribution. Overall patterns of age distribution were different between men and women. Single peak in the thirties was observed in female, whereas in men a bimodal pattern was identified.

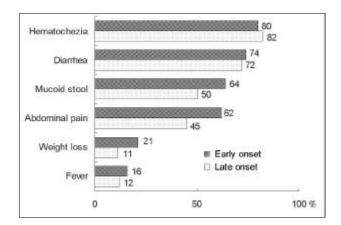


Fig. 2. Symptoms of ulcerative colitis at onset. The most common symptom was hematochezia, and there were no difference in symptoms between the early onset and late onset patients.

2.

40

 21.8 ± 46.6

====		Extent	-	Lesion			111110		- Diugnosis
Table	5.	Extent	of	Lesion	at	the	Time	of	Diagnosis

Extent of lesion	Early onset (n=122)	Late onset (n=79)	Total (n=201)
Proctitis	22 (18.0%)	20 (25.3%)	42 (20.9%)
Left colitis	60 (49.2%)	42 (53.2%)	102 (50.7%)
Extensive colitis	40 (32.8%)	17 (21.5%)	57 (28.4%)

$$15.5 \pm 23.2 \qquad , 41$$

$$32.9 \pm 70.1$$
(Table 4).
$$35.6 \pm 35.5 \qquad , 40$$

$$37.8 \pm 36.8 \quad , 41 \qquad 31.7$$

$$\pm 32.9$$

3.

(Table 5). Anti-neutrophil cytoplasmic antibody (ANCA) 40 51.8%, 41

46.8% ANCA

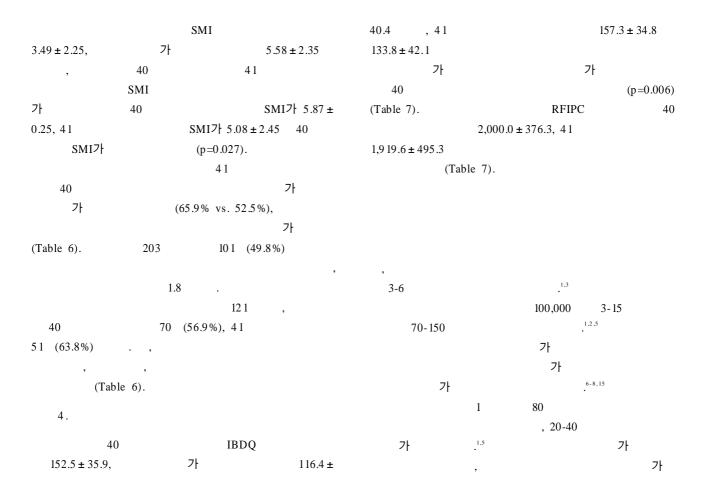


Table 6. Clinical Course in Ulcerative Colitis

	Early onset (n=123)	Late onset (n=80)	Total (n=203)	p value
Pattern of disease course				NS
Remission/relapse	81 (65.9%)	42 (52.5%)	123 (60.6%)	
Chronic persistent	25 (20.3%)	24 (30.0%)	49 (24.1%)	
Remission maintenance	17 (13.8%)	14 (17.5%)	31 (15.3%)	
Admission				NS
None	59 (48.0%)	43 (53.8%)	102 (50.2%)	
Single	41 (33.3%)	24 (30.0%)	65 (32.0%)	
Several	23 (18.7%)	13 (16.3%)	36 (17.7%)	
History of steroid use	70 (56.9%)	51 (63.8%)	121 (60.0%)	NS

Table 7. Quality of Life and Concern about the Disease According to the Age at Onset

	Early onset (n=115)	Late onset (n=67)	Total (n=172)	p value
IBDQ (224)*				
At diagnosis	152.5 ± 35.9	157.3 ± 34.8	154.3 ± 35.4	NS
Most severe state	116.4 ± 40.4	133.8 ± 42.1	122.8 ± 41.7	0.006
RFIPC (2,500) *	$2,000.0 \pm 376.3$	$1,919.6 \pm 495.3$	$1,970.4 \pm 424.4$	NS

IBDQ, inflammatory bowel disease questionnaire; RFIPC, rating form of IBD patient concern.

^{*}Total score.

```
가
                                                                                       가
                                                                                                     가
                                                1,10,16
                                                               가
                                                                                                       . Gupta
                                가 가
                                                               60
                                                                                                            가
 , 15-25
                                                                                Hoare<sup>27</sup>
                                                                        , Jones
                                                                                 가
                             가
                                                                   가
                                                                                                            가
                           70
                  40
             1,4,9,10,16,17
                                                             가
                                                           가
                              40
가
                                                                                                            가
         41
                                가
                                                                     IBDQ
가
                             40
                                      70
                                                                         가
                                                                                                     SMI
                 1,18-22
                                                                   가
                40
                            41
                                                                40
                                                                IBDQ가 41
                                40
    41
                                                                                         41
                                                                                             SMI가 5.9
                                                           SMI가 5.1, 40
                                                                                                        40
                                                                                가
                                                           SMI가
                         10,19
가
                                                   가
41
                     40
                                                                               40
              가
                                        9,19,21
                                               10,23 40
                          가
                                         가
                               가
                    가
    , 19,21,24
                  가
                                          40
                                                                                              가
                                         가
        41
                  , SMI가
                                                 41
                                                                                    : 1998
                                                                                                    2000
                                                                                                            8
                     40
                                                                                                      203
가
                              가
                                          41
                                                                                     40
                                                                                                       123
                                                                                                              41
                                       가
                                                                          80
```

7 . 201

- Rogers BH, Clark LM, Kirsner JB. The epidemiologic and demographic characteristics of inflammatory bowel disease: an analysis of a computerized file of 1400 patients. J Chronic Dis 1971;24:743-773.
- 2. Mayberry JF. Some aspects of the epidemiology of ulcerative colitis. Gut 1985;26:968-974.
- Calkins BM, Mendeloff AI. Epidemiology of inflammatory bowel disease. Epidemiol Rev 1986;8:60-91.
- 4. Grimm IS, Friedman LS. Inflammatory bowel disease in the elderly. Gastroenterol Clin North Am 1990;19:361-389.
- Shivananda S, Mayberry JF. Epidemiology of inflammatory bowel disease. Curr Opin Gastroenterol 1993;9:560-565.
- 7. , , . . .

1994;26:907-918.

:

- Stonnington CM, Phillips SF, Melton LJ 3d, Zinsmeister AR. Chronic ulcerative colitis: incidence and prevalence in a community. Gut 1987;28:402-109.
- Langholz E, Munkholm P, Nielsen OH, Kreiner S, Binder V. Incidence and prevalence of ulcerative colitis in Copenhagen county from 1962 to 1987. Scand J Gastroenterol 199 1;26:1247-1256.
- 11. Powell-Tuck J, Day DW, Buck NA, Wadsworth J, Lennard-Jones JE. Correlation between defined sigmoidoscopic appearances and other measures of disease activity in

- ulcerative colitis. Dig Dis Sci 1982;27:533-537.
- 12. Kim WH, Cho YS, Yoo HM, Park IS, Park EC, Lim JG. Quality of life in Korean patients with inflammatory bowel disease: ulcerative colitis, Crohn's disease, and intestinal Behcet's disease. Int J Colorectal Dis 1999;14:52-57.
- 13. Guyatt G, Mitchell A, Irvine EJ et al. A new measure of health status for clinical trials in inflammatory bowel disease. Gastroenterology 1989;96:804-810.
- 14. Drossman DA, Leserman J, Mitchell CM, Li ZM, Zagami EA, Patrick DL. Health status and health care use in persons with inflammatory bowel disease: a national sample. Dig Dis Sci 1991;36:1746-1755.
- 15. , , .

1997;53(suppl

1):583.

- Evans JG, Acheson ED. An epidemiological study of ulcerative colitis and regional enteritis in the Oxford area. Gut 1965;6:311-324.
- Brandt LJ, Boley SJ, Mitsudo S. Clinical characteristics and natural history of colitis in the elderly. Am J Gastroenterol 1982;77:382-386.
- Rutegard J, Ahsgren L, Janunger KG. Ulcerative colitis: mortality and surgery in an unselected population. Acta Chir Scand 1988;154:215-219.
- Zimmerman J, Gavish D, Rachmilewitz D. Early and late onset ulcerative colitis: distinct clinical features. J Clin Gastroenterol 1985;7:492-498.
- Sinclair TS, Brunt PW, Mowat NA. Nonspecific proctocolitis in northeastern Scottland: a community study. Gastroenterology 1983;85:1-11.
- Softley A, Myren J, Clamp SE, Bouchier IA, Watkinson G, de Dombal FT. Inflammatory bowel disease in the elderly patient. Scand J Gastroenterol 1988;144(suppl):27-30.
- 22. Haug K, Schrumpf E, Barstad S, Fluge G, Halvorsen JF. Epidemiology of ulcerative colitis in western Norway. Scand J Gastroenterol 1988;23:517-522.
- Ekbom A, Helmick C, Zack M, Adami HO. Ulcerative colitis and colorectal cancer. A population based study. N Engl J Med 1990;323:1228-1233.
- 24. Moum B, Ekbom A, Vatn MH, et al. Clinical course during the 1st year after diagnosis in ulcerative colitis and Crohn"s disease: result of a large, prospective population-based study in southeastern Norway, 1990-93. Scand J Gastroenterol 1997;32:1005-1012.
- 25. Edwards FC, Truelove SC. The course and prognosis of ulcerative colitis. Gut 1963;4:299-315.
- 26. Gupta S, Saverymuttu SH, Keshavarzian A, Hodgson HJ. Is

- the pattern of inflammatory bowel disease different in the elderly? Age Ageing 1985;14:366-370.
- 27. Jones HW, Hoare AM. Does ulcerative colitis behave differently in the elderly? Age Ageing 1988;17:410-414.
- 28. Deyo RA, Diehr P, Patrick DL. Reproducibility and respon-
- siveness of health status measures. Control Clin Trials 1991; 12:142S-158S.
- Love JR, Irvine EJ, Fedorak RN. Quality of life in inflammatory bowel disease. J Clin Gastroenterol 1992; 14: 15-19.