

1)

가		가	
가	가	가	가
220	35 (15.9%)	349	가
129	2 (1.6%)	60	가
88.6%		71.4%	
76.2%		59.5%	
50-60			

24)

가		가	
가	가	가	가
가	가	가	가
80%		가	가
1)		가	가

1994 8 1997 7 3
 가 23.1%, 4.7% 가
 349
 (mean ± standard deviation)
 student T-test
 chi-square test P
 0.05
 349
 220 (63.0%),
 129 (37.0%)
 134 (60.9%) : 86 (39.1%)
 45 (34.9%) : 84 (65.1%)
 (P < 0.01).
 가 50.7 ± 16.5
 47.1 ± 12.4 (P < 0.05, Table 1).

Table 1. Clinical Characteristics of 349 Hematuria Patients

	Number	M : F	Mean age (years)
Gross hematuria	220(63.0%)	134 : 86 (60.9% : 39.1%)	50.7 ± 16.5
Microscopic hematuria	129(37.0%)	45 : 84 (34.9% : 65.1%)	47.1 ± 12.4

가 31 (88.9%)
 2
 61 62 (Table 2).
 10 20 19
 , 30
 49 4 (8.2%), 40 36
 5 (13.9%), 50 41 2 (4.9%), 60
 37 8 (21.6%), 70 36 16 (44.4%)
 가
 (Table 3).
 37
 가 37 22 (59.5%),
 가 21 15 (71.4%), 21
 16 (76.2%)
 37 2
 , 2
 35 (94.6%)

Table 2. Clinical Characteristics of 37 Bladder Cancer Patients

	Incidence	Mean age (years)	M : F
Gross Hematuria with Bladder Cancer	35/220 (15.9%)	63.0 ± 14.6	31 : 4 (88.6% : 11.4%)
Microscopic Hematuria with Bladder Cancer	2/129 (1.6%)	61 & 62 years of age	2 : 0 (100% : 0%)

Gossel 15.4% 18) Dershaw 11% 17), Murakami 95% 19) 34 가 8.2% 30

가 2cm 가 1.6% 60

13), 20% 17), 30.8% 18), 60% 20) Hattori 40% 3), Murakami 54% 18), Mayo clinic 67% 21), 71% 22) 가 71.4%, 76.2%, 가 59.5%

8.8% screening 94.6%

Turner 가

38 12) Ritchie 가

wasser 23), Spar- 가

24), 가

Murakami 1.3% 가 40 12), 20- 25%

, 40 18), Jones 40 13),

100 가 40 가 24 가

25) Bard 가 177 가 26)

15.9% Sutton 6) 가

= Abstract =

Cystoscopy in the Evaluation of Hematuria

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Hematuria is a common presentation of bladder cancer. As medical examinations for health screening are becoming more popular, increasing number of patients are found to have hematuria. When to refer these patients to urologists for cystoscopy is a common problem to nephrologists and a matter of debate as well. In fact, many authors differ in their opinions on this issue, especially in cases of microscopic hematuria. Given the fact that the incidence of bladder cancer varies between countries, it will be reasonable that the investigation strategy for Koreans should be determined according to the studies on Korean people.

In the present study, we retrospectively analyzed 349 patients who underwent cystoscopic examinations in our institution to investigate causes of microscopic or gross hematuria. Bladder cancer was detected on cystoscopy in 35(15.9%) of 220 patients with gross hematuria, in contrast to patients with microscopic hematuria in whom 2(1.6%) of 129 patients were found to have bladder cancer. Eighty nine percents of cancer patients were male. Bladder cancer was detected even in relatively young patients with gross hematuria, while no bladder cancer was found in patients with microscopic hematuria below 60 years of age. Urine cytology was revealing in 59.5% of cancer patients. Bladder cancer was detected in 71.4% and 76.2% of cancer cases by sonography and IVP, respectively. Urine protein by dipstick was unreliable in predicting the presence of cancer. In conclusion, decision on cystoscopy in patients with asymptomatic microscopic hematuria younger than 50-60 years of age should be made conser-

vatively, while more aggressive diagnostic work up is necessary in patients with gross hematuria regardless of their age.

Key Words : Hematuria, Cystoscopy, Bladder cancer

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