

0.5 %-

CT

1

:

. . . 3 . 12 . 12

가
CT 0.5 %-
CT가 27 30 15
A CT 0.5 %-
500ml , B
500ml CT
가 (3), (2), (1), (0)
: 0.5 %-
가 B (2.93 vs 1.80, $p<0.05$). A
87.5 ± 14.7mm, 103.3 ± 28.0mm , B
57.6 ± 20.1mm, 69.9 ± 35.0mm (p<0.05).
A 17.6 ± 2.9mm, B 10.7 ± 7.2mm
CT 0.5 %-
가

(Computed tomography, CT) (Methylcellulose) CT
가
(12).

(3) , , CT
가 27 , 3 2
가 가 15 0.5 %- 500ml ; A
가 500ml 15 CT
(3).
가 0.5 %- Table 1

가 500ml
(iodine 300mg/ml, Ultravist 300, Schering, Seoul, Korea) 100ml
3ml , 30
1
10mm 10mm (colli-
mations)
10mm
CT CT (Somatom Plus,
Siemens, Germany)
가 1) (3) :
, 2) (2) :
가 , 3) (1) :
가 , 4) (0) :
4
가 가 .
가 가

Table 1. Classification of Clinical Findings According to Patient Groups

	Group A(n= 15)	Group B(n= 15)
Age	28 - 69(mean= 57)	40 - 67(mean= 55)
Gender	M:F = 10:5	M:F = 12:3
Follow up	12 - 47months(mean= 24.9)	18 - 53months(mean= 32.2)
Surgical method	B-I* : 6 B-II†: 9	B-I* : 8 B-II†: 7

Group A : Oral methylcellulose spiral CT

Group B : Oral water spiral CT

* : Billroth I anastomosis

† : Billroth II anastomosis



Fig. 1. 0.5%-Methylcellulose spiral CT scan demonstrates markedly distended remnant stomach. Maximal AP(black arrows) and transverse(open arrows) diameters of remnant stomach were measured.

0.5 %-
(Fig 1).
가
(Fig 2).
Mann-Whitney test
Student's t-test , p 0.05
0.5 %-
A
14 (93.3%)
(Fig 2), 가 1 (6.7%)
가 가
B 가
3 (20.0%) , 7
(46.6%), 3 (20.0%), 1 (6.6%)
(Fig 3).
0.5 %-
A B
2.93 1.80
(Mann-Whitney
test, p<0.05)(Table 2).
A 가
17.6 ± 2.9mm , B 1
가 14
10.7 ± 7.2mm
(Table 3). A
87.5 ± 14.7mm, 103.3 ± 28.0mm
, B 57.6 ± 20.1mm, 69.9 ±
35.0mm



Fig. 2. 0.5%-Methylcellulose spiral CT scan shows excellent anatomic delineation of anastomotic site(arrows). Diameters of both inner margin of anastomotic site were measured.

(Table 3).

2 (A 1, B 1) (bezoar)
A, B

CT

가 가 (4,9,10).

CT

(3)

CT

CT

(1).

가

가

가

(4-7).

CT

(8)

가

가

Table 2. Grading of Anatomic Delineation of Anastomotic Site

	Group A(n= 15)	Group B(n= 15)
Excellent(3)	14	3
Good(2)	1	7
Fair(1)	0	3
Poor(0)	0	1
Average	2.93	1.8

Group A : Oral methylcellulose spiral CT

Group B : Oral water spiral CT

(Mann-whitney test; $p < 0.05$)

Table 3. Maximum Diameters of Remnant Stomach and Anastomotic Site.

	Group A Diameter(mean \pm SD)	Group B Diameter(mean \pm SD)
Remnant stomach		
AP	50.0-130.0mm(103.3 \pm 28.0)	33.0-110.0mm(69.9 \pm 35.0)
Transverse	45.5-105.0mm(87.5 \pm 14.7)	22.0- 90.0mm(57.6 \pm 20.1)
Anastomotic site	7.0- 25.0mm(17.6 \pm 2.9)	2.0- 20.0mm(10.7 \pm 7.2)

Group A : Oral methylcellulose spiral CT

Group B : Oral water spiral CT



A



B

Fig. 3. 46-years old man with subtotal gastrectomy for stomach cancer

A. Spiral CT scan graded as fair with oral diluted gastrografin shows fair anatomic delineation. The evaluation of anastomotic site is difficult(arrow).

B. Spiral CT scan with 0.5%-methylcellulose as oral contrast agent graded as excellent anatomic delineation and improved visualization of the anastomotic site(arrow).

[illegible]

The Usefulness of 0.5 %-Methylcellulous as Oral Contrast Agent : In Subtotal Gastrectomy Patients¹

Hyo-Sung Kwak, M.D., Jeong-Min Lee, M.D., Doo-Hyun Yang, M.D.³
In-Whan Kim, M.D. Chong-Soo Kim, M.D.^{1,2}, Ki-Chul Choi, M.D.^{1,2}

¹Department of Diagnostic Radiology, Chonbuk National University Medical School

²Department of Institute for Medical Science, Chonbuk National University Medical School

³Department of Surgery, Chonbuk National University Medical School

Purpose: To assess the usefulness of 0.5 %-methylcellulose as oral contrast agent in spiral CT examinations for the evaluation of anastomotic site and remnant stomach in patients who have undergone subtotal gastrectomy due to stomach cancer.

Materials and Methods: Twenty-seven patients who underwent subtotal gastrectomy for stomach cancer and were referred for the evaluation of anastomosis recurrence and lymph node metastasis were prospectively analyzed by spiral CT. They were divided into two groups: before scanning, group A patients drank 0.5 %-methylcellulous 500ml as oral contrast agent, while those in group B drank diluted gastrografin 500ml. Three patients were examined twice. Anatomic delineation of the anastomosis site was graded by two radiologists as excellent (3), good (2), fair (1), or poor (0). To evaluate the degree of distension, maximal transverse and anterior-posterior diameter of remnant stomach and anastomotic sites were measured.

Results: In Group A, anatomic delineation of the anastomotic site was very much better than in group B (mean score: 2.93 vs 1.80, $p < 0.05$). In addition, the maximum diameters of remnant stomach and anastomotic site were significantly larger in group A than in group B (transverse A-P remnant stomach and anastomosis site: $87.5 \pm 14.7\text{mm}$, $103.3 \pm 20.1\text{mm}$, $17.6 \pm 2.9\text{mm}$ vs $57.6 \pm 20.1\text{mm}$, $69.9 \pm 35.0\text{mm}$, $10.7 \pm 7.2\text{mm}$)

Conclusion: In patients who had undergone subtotal gastrectomy, the use of 0.5 %-methylcellulose as oral contrast agent for spiral CT showed excellent anatomic delineation of the anastomotic site and distension of remnant stomach.

Index words: Contrast media
Stomach, neoplasms
Stomach, CT
Computed tomography(CT), technology
Computed tomography(CT), contrast media

Address reprint requests to : Jeong-Min Lee, M.D., Department of Diagnostic Radiology, Chonbuk National University Medical School
#634-18 Keumam-Dong, Chonju-shi, Chon Buk, 561-712, Korea.
Tel. 82-652-250-1176 Fax. 82-652-72-0481