

## Billroth-II *H. pylori* \*

### ***H. pylori* Infection and Histologic Findings in Remnant Stomach after Subtotal Gastrectomy and Billroth-II Anastomosis**

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**Abstract :** Unconjugated bile acids inhibit the survival of *Helicobacter pylori* by modifying its ultrastructure. The prevalence of *H.pylori* infection after subtotal gastrectomy and Billroth-II anastomosis has been known to be lower than that of intact stomach due to frequent contact with bile acids. In the present study, differences between anastomosis site and fundus were studied in 48 patients who had been undergone subtotal gastrectomy with Billroth-II anastomosis, because of gastric cancer. Total 26 men and 22 women were involved, and average duration between operation and endoscopic examination was 46.3 months (median 32.5 months). Three pieces of tissue were taken at both anastomosis site and fundus, and one piece was used for rapid urease test and others for histological examination. The Sydney system was used to classify the extent of gastritis. The prevalence of *H.pylori* infection was lower and the grade of intestinal metaplasia was higher in anastomosis site, however there were no differences in the grades of inflammation, activity, and atrophy between the two sites. The prevalence of *H.pylori* infection in anastomosis site was higher in the group of shorter postoperative duration. The grades of inflammation and activity at both sites were higher in the *H.pylori*-positive group. In conclusion, it is suggested that bile acids inhibit the survival of *H.pylori* and aggravate intestinal metaplasia, and that *H.pylori* has positive correlation with the grade of gastritis in remnant stomach

**Key Words :** Bile acid, *Helicobacter pylori*, Reflux gastritis

가 *Helicobacter pylori* [1-4] 2. *H.pylori* [5]. (1) 15 가 2 mL 10 mL 15 mL 5 2 Billroth-II 가 [6-9]. Olympus ( ) GIF-XQ240 Olympus FB-24Q-1 2% glutaraldehyde(Wydex ) Billroth-II *H.pylori* (2) 2 cm 3~4 3~4 1 (rapid urease test, RUT) Billroth-II 2001 9 H&E . RUT Medical Instruments 2002 3 48 Pronto Dry 30 ~1 가 Sydney [12] (inflammation), (activity), (atrophy), *H.pylori* (intestinal metaplasia), 0 (none), 1

(mild), 2 (moderate), 3 (severe)

가 RUT  
*H.pylori*

32.5

2. *H.pylori* RUT

3.

48 38 (79.1%) RUT  
가 48

SPSS(version 10.0)

41 (85.4%) 가  
82.3%(79/96)

T-

*H.pylori*

3. *H.pylori*

McNemar

Wilcoxon

*H.pylori*

Fisher

RUT 가 27.1%(13  
) 47.9%(23 )

, *H.pylori*

(p 0.01) 13

Mann-Whitney

p 0.05

35 10

*H.pylori*

35.4%(17 )

45.8%(22 )

(Fig. 1).

1.

31 7

48 가 26 22

30 72

51.5 ± 11.16 (Table

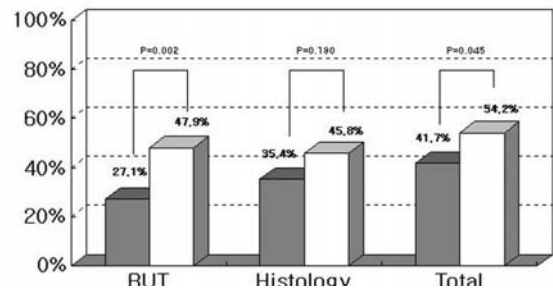
1). 가 50.2 ± 10.96 , 가 53.1 ± 11.44

6 ~ 252

46.3 ± 51.94 ,

**Table 1.** Age and gender distribution of population

Age (year)	Male	Female	Total
30-39	5	4	9
40-49	8	2	10
50-59	5	8	13
60-69	7	8	15
70-79	1	0	1
Total	26	22	48
Mean age	50.2±10.96	53.1±11.44	51.5±11.16



**Fig. 1.** Difference of positivities of *H.pylori* according to site. The positivity of *H.pylori* is lower at anastomosis site.

17 2

*H.pylori*

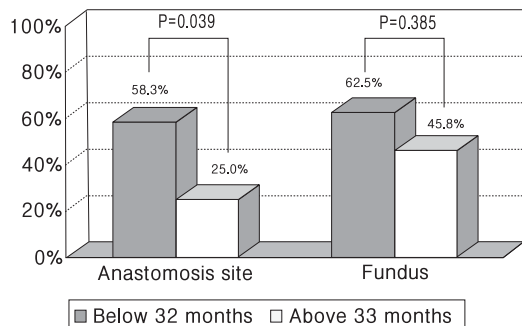
41.7%(20 ) , 54.2%(26 )  
(p 0.05).

28 7

20 1  
 4.  
 46 (95.8%)  
 가 , 2 (4.2%)  
 가 4.2%(2 ),  
 70.8%(34 ), 22.9%(11 ),  
 6.3%(3 ),  
 10.4%(5 ), 50.0%(24 ), 33.3%(16 ),  
 6.3%(3 ) . 5가  
 가  
 (p 0.05).

*H.pylori*

5. (Fig. 2)  
 가 32.5  
 . *H.pylori*  
 32  
 58.3%(14 ), 33 25.0%(6



**Fig. 2.** Difference of positivities of *H.pylori* according to duration and site. The positivity of *H.pylori* is lower at the group of shorter postoperative duration.

)  
 (p 0.05) 32  
 62.5%(15 ), 33 45.8%(11 )  
 가 . , ,

. 12  
 , 12-36 , 36  
 가 .

6. *H.pylori*

*H.pylori*가  
 (p<0.01) (*H.pylori*가 (p<0.001)  
 가  
 가 .

[13,14]  
 가 *H.pylori*  
*H.pylori*  
 가  
 [1-4].  
 Masaharu [5] deoxycholic acid(DCA), chenodeoxycholic acid(CDCA), ursodeoxycholic acid(UDCA) *H.pylori*

Billroth-II , 가 가  
 [6-9].

(foveolar hyperplasia), ,

[7,15,16]. Billroth-II 가 RUT 17 10  
 [6,7,9,17] RUT , *H.pylori*  
 , 7  
 가 가 Warthin-Starry  
 H&E

45%[10] 97%[11] 가 RUT  
 [19,20] 2  
 RUT

가 RUT

[15,17]. Billroth-II 가 *H.pylori* RUT  
 가 *H.pylori*

가 *H.pylori*

*H.pylori* 가  
*H.pylori* 가  
 48

96% 46

가 가 34  
 70.8%  
 25.0%(12 )  
*H.pylori* 가  
 가

90% , 70% ,  
 40-60% *H.pylori*가 33 [21,22]  
 32.5  
*H.pylori*

[15]. , RUT *H.pylori*

[15,17] 가  
 90% , 가  
 [18]. 82.3% 가

*H. pylori*가  
 가  
*H. pylori*  
  
*H. pylori*  
  
 Billroth-II  
  
*H. pylori*  
  
 Billroth-II  
 48  
 RUT  
 26 50.2 , 가 22  
 53.1 6-252  
 , 46.3 (median 32.5 )  
*H. pylori*  
 가  
*H. pylori*  
*H. pylori*가 가  
 가  
  
*H. pylori*

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