

**H. pylori**

-

**Cost-Effectiveness Analysis of  
H. pylori Chemical Therapy**

2001 2

**H. pylori**

-

**Cost-Effectiveness Analysis of  
H. pylori Chemical Therapy**

**2000 10**

**2000 12**

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H. pylori  
 가 FDA, EHPSG, H. pylori  
 OC (OMP+CLA), RC (RBC+CLA), OMC  
 (OMP+MTR+CLA), OAM (OMP+AMOX+MTR), OAC  
 (OMP+AMOX+CLA), RMT (RBC+MTR+TC) 6

- .(  
 .)

,

· , , , , ,

,

1

1

H. pylori

. H. pylori

MEDLINE

,

가

.

OMC

RMT

183,555

184,371

가

OMC

RMT

313

314

가

가 가

.

/

OMC

RMT

586

587

가

1

,

1

586

587

4  
가 - OMC RMT 1 2 가 - , OC  
가 가 4 OC  
가 . H. pylori  
OMC RMT  
가 가  
가 -  
; H. pylori,  
; 99902-536

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1.	가	.....	1
2.		가 .....	15
3.		.....	23
4.		.....	27
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•

1.

가

가

.

,  
.

,

가

가

.

GNP

가

,

,

가가

.

가(Economic Appoaisal)

-

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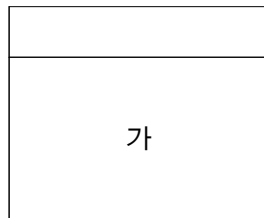
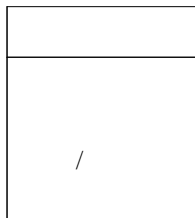
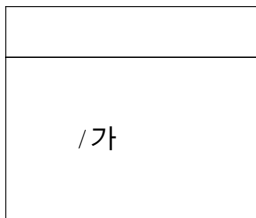
가

.

가

1

.



1.

가

가  
 가  
 가  
 가  
 가  
 가  
 가  
 가

(peptic ulcer) 가

5 pylori가 1983 가 1). H.

H2 receptor antagonist

Marshall 가 1983 Dr. Warren (Helicobacter, H. pylori)  
 , H.

---

1)	1998	‘	’	5	
		,	,	5	1998
	‘1992	’		55.46%	.
				1991	, 1994 , 1997
	7.8%, 7.6%, 6.6%		.		

pylori

H. pylori

H2 receptor antagonist

( )

H. pylori 가 1

가

(Efficacy)

(Effectiveness),

, H. pylori

pylori

가

100%

H.

(dual therapy),

(triple therapy),

(quadruple therapy)

가

가

가

## 2.

Helicobacter pylori

, proton pump inhibitor

fluoroquinolones, aminoglycosides, tetracyclins, macrolide

가

penicillins, cephalosporins, vancomycin, sulfametnoxazole,

trimethoprim, colistin, nalidixic acid

H. pylori

가

가

(dual therapy),

(triple therapy)

(quadruple therapy)

6가

가

. 1 , omeprazole(OMP)+  
clarythromycin(CLA), ranitidene bismuth citrate (RBC)+ clarythromycin,  
omeprazole+ metronidazole (MTR)+ clarythromycin,  
RBC+ metronidazole+ tetracycline(TC), clarythromycin+  
amoxacillin(AMOX)+ omeprazole, omeprazole+ amoxacillin+ metrnidazole

H. pylori

/ ,

/ ,

-

1. H. pylori

(peptic ulcer) (gastroduodenal mucosa) (gastric ulcer) (duodenal ulcer)

(mucus), (epithelium), 2)(PG, prostaglandin), (agressive factors) (parietal cell) (chief cell), H. pylori, NSAIDS, 3), , caffeine,

( ) 1980 H. pylori 1983 Dr. Warren Marshall H. pylori가 H. pylori가 H. pylori H. pylori H2-receptor antagonist

2) 3)

4)

( )

, H. pylori

가

H. pylori

H. pylori

H. pylori

가 1

## 2. H. pylori

### 2.1. H pylori

1983 Dr. Warren Marshall

Helicobacter pylori

가

H. pylori

(Gram (-) spiral bacteria)

H. pylori Urease

가

2가

가

가

5),

4) Unge & Ekstrom  
Vakil & Fennerty  
antagonist

(1995), O'Brien et al  
(1996) H. pylori

(1995),  
가 H Receptor

H. pylori 가 , H. pylori 가 , 가 , 가 , 40 50 , 40 50% , 0.5 1% 가 , 10 H. pylori 70% , 60% , 79% . H. pylori 60 70% , 1996 가 1 9 10.0% 60 76.1% 가 가 .<sup>6)</sup>

**2.2. H. pylori**

H. pylori 가 가 , 가 , 가 , H. pylori . 1) : H. pylori가 가 가 (ELISA),

---

5) (oral to oral transmission), - (fecal to oral transmission)

6) 1996 4 8 , 49.8% , 53.7% , 가 가 . 1999.

Immunoblotting

가 IgG, IgM, IgA 가 가  
가 IgG 가 . 72 100%,  
8.8 53% , 4 6  
가 . 가  
, 가

: 6 13C 14C-urea가 H. pylori  
urease  $2NH^{4+} + HCO^{3-}$   
2NH +H2O+CO 가 . urease  
가 . H. pylori가  
, 가

2)

:  
72 colony가 . 가  
:  
가 .  
가 , 2  
. Hematoxylin-Eosin (H- ), Giemsa  
, Genta , Warthin-starry , W-S  
가

(rapid urease test) : H.  
pylori가 가 urease가  
. 가 CLO test



가 pH6.0 phenol  
red가 , 24

3)

DNA probe 16S-RNA probe  
PCR H. pylori가 .

4)

phenol red  
0.5M urea phenol red  
H. pylori urease

H. pylori  
Warthin- Starry rapid urease test .

### 2.3.

H. pylori 가 7)  
가 H. pylori H.  
pylori 가  
Omeprazole, Bismuth , Amoxicillin, Tetracycline, Metronidazole,  
Clarithromycin . 2  
가 3가 H. pylori  
, , 가 .  
, , H. pylori 가  
14 ,  
가

---

7) Langeberg W et al(1988)

Metronidazole Clarithromycin 가

Bismuth : H. pylori cell wall H. pylori  
urease H. pylori 가 2

( :Metronidazole)

가

Bismuth  
RBC(ranitidine bismuth citrate) ranitine

bismuth citrate , H. pylori

CLA 가

Metronidazole : 8-12 pH

DNA 가

80%

가

Amoxicillin : pH 7 가  
가 20%

omeprazole 가

가

Clarithromycin : Macrolide

H. pylori 가

. pH 7.4

40-60%

. metronidazole 가 가  
가 가

Tetracycline :

pH

. Bismuth tetracycline  
H. pylori

가

H.

pylori

Proton pump inhibitor(PPI) : PPI가

H. pylori

가

. PPI가 clarithromycin

metronidazole

가

PPI clarithromycin

가 가

clarithromycin 가 가 . PPI

가 ,

가 . 가

PPI

H. pylori

H. pylori

1. 1996 FDA

( )

Omeprazole	40mg	1	2
	+20mg	1	+2
Clarithromycin	50mg	3	2
Ranitidine- bismyth- citrate	400mg	2	4
Clarithromycin	500mg	3	2
Bismuth subsalicylate	525mg	4	2
Metronidazole	250mg	4	2
Tetracycline	500mg	4	2
Ranitidine			4

2. 1997 EHPSG

( )

Proton Pump Inhibitor	*			
Metronidazole(Tinidazole)	400(500)mg	2	1	
Clarithromycin	250mg			
Proton Pump Inhibitor	*			
Amoxicillin	1000mg	2	1	Metronidazole
Clarithromycin	500mg			
Proton Pump Inhibitor	*			
Amoxicillin	500mg	3	1	Clarithromycin
Metronidazole	400mg			

\*Omeprazole 20mg, Lansoprazole 30mg, Pantoprazole 40mg

3. 1998

H. pylori

	Proton Pump Inhibitor Amoxicillin Clarithromycin	* 1000mg 500mg	2	1- 2
	Proton Pump Inhibitor Amoxicillin Metronidazole	* 1000mg 500mg	2	2
	Proton Pump Inhibitor Bismuth Metronidazole Tetracycline	DeNol 120mg 400- 500mg 500mg	2 4 3 4	2

\*Omeprazole 20mg, Lansoprazole 30mg, Pantoprazole 40mg

가

1. 가

1.1. 가

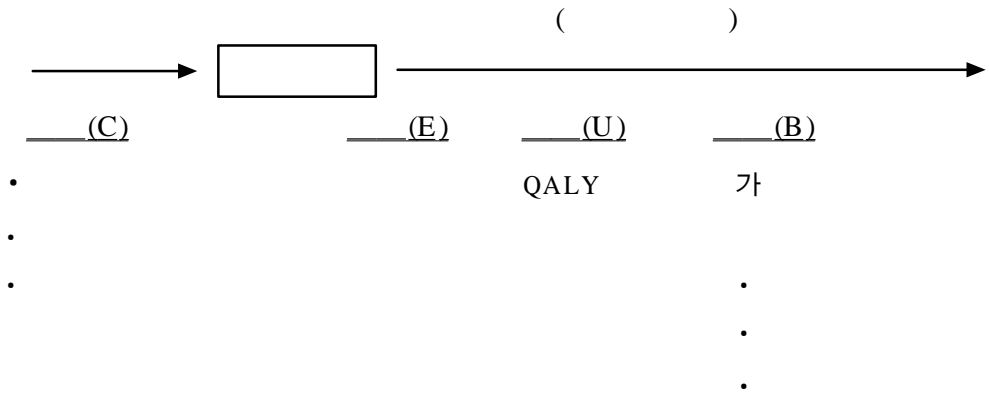
가(Economic evaluation) , 가

가 , 가

가 , ,

가 , ( . 1999)

가 가 , (Drummond et al . 1987)



2. 가

가 , - , - , -

, - 가 , -

QALY(quality adjusted life years, )

, 가

- .

.

4. 가

가	
-	( : , , )
-	,
-	,

1.2. -

- (Cost-effectiveness analysis)

CEI(Cost-effectiveness index)

가  
가 . ( .1999)

-

가 .

. 가

가

/

(prolongation of life)

(years of life saved),

(lives saved)

.

가

,

( )

, 가

,

,

.

(random

allocation)

가

,

가

.



1.3. -

- (cost-utility analysis)  
가 - (Healthy  
years equivalent : HYE), QALY, DALY

-  
QALY(Quality Adjusted Life Years)

가 (U)  
가 가

“1” , “0”  
(interval scale)

DALY(Disability Adjusted Life Years) QALY ,

(Years of Life Lost; YLL)

(Years Lived with Disability;

ULD) “1” “0”

QALY

DALY 가

DALY QALY

가

1.4. -

- (Cost-Benefit Analysis)

가

. (Human capital approach), (Revealed preference approach), (WTP: Willingness to pay approach) .

2. -

- (Petitti, 1994).

, (decision tree) . (event)

,

, - (cost -effectiveness ratio)

(Petitti, 1994). 가

## 2.1.

(Decision Analysis) 1950  
(Operation Research) (Game theory)  
가  
- .  
가  
(Quantitative approach)  
, (decision tree)  
, 가  
. , ,  
, 가  
.

## 2.2.

(Meta- Analysis)  
, .  
(Qualitative Analysis) (Quantitative  
Analysis)  
(eligibility criteria) , ,

, (follow - up) , ,  
 , (effect size)  
 가  
 , 가 가  
 ,  
 ,  
 ,  
 (fixed-effect mode)  
 Mantel-Haenszel peto , (random  
 -effect model) Dersimonion and Laird .  
 가  
 Publication bias 가

**3.**

가 (economic cost)  
 (opportunity cost)

, (tangible cost)  
 가 ,  
 , , , , ,  
 , , , , ,  
 , (intangible cost)  
 가 ,  
 , 가 ,  
 , , , , ,  
 , ( , , ),  
 가 ( , , 가  
 , 가 , , 가  
 ) .(Drummond. 1980)

2가 ( ) 4가 ( )  
 - (cost- effectiveness ratio)

1.

2가 4가  
 FDA 3가  
 EHPSG(European Helicobacter Pyiori Study Group) 3가  
 H. pylori EHPSG  
 6가 RMT  
 Bidmyth+ MTR+ TC+ Ranitidine Bismuth+  
 Ranitidine RBC RBC 가 Bismuth+  
 Ranitidine 가

(Kung N N et al )

OC : OMP+ CLA

RC : RBC+ CLA

RMT : RBC+ MTR+ TC

OMC : OMP+ MTR+ CLA

OAC : OMP+ AMOX+ CLA

OAM : OMP+ AOMX+ MTR

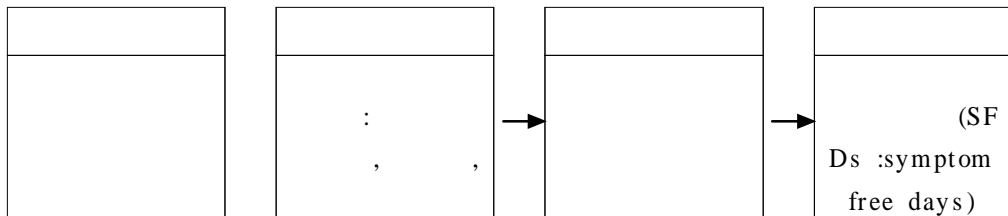
5.

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Omeprazole	(OMP)	20m g/ 40m g
Metronidazole		400MG
Tetracycline		250m g/ 500m g
Amox acillin		250m g/ 500m g
Clarythromycin		250m g/ 500m g
RBC		400m g

---

2.



3.

2.1.

2.1.1.

6.

1				
OC	OMP	40m g	1	2
	+CLA	500m g	3	2
RC	OMP	20m g	1	
	RBC	400m g	2	2
	+CLA	500m g	3	2
OMC	RBC	400m g	2	
	OMP	20m g		1
	+MTR	400m g	2	
OAM	+CLA	250m g		
	OMP	20m g		
	+AMOX	1g	2	2
OAC	+MTR	400m g		
	OMP	20m g		
	+AMOX	1g	2	2
RMT	+CLA	500m g		
	RBC	400m g	2	
	+MTR	400m g	4	2
	+TC	500m g	4	

, 가  
1 , 1  
, 2 가 가



### 2.1.2. H. pylori

H. pylori  
H. pylori  
가 ( ) , H.  
pylori 가 H.  
Warthin-Starry  
(rapid urease test)  
H. pylori 4  
Omeprazole H.  
pylori

### 2.1.3.

H. pylori  
2 4 ,  
4  
OAC OAM  
OBMT (OMP+  
Bismuth+ MTR+ TC) 4 ,  
(decision tree)

가

H. pylori

가

H. pylori

RC (RBC+ CLA), OC (OMP+ CLA), RMT (RBC+ MTR+ TC), OAM (OMP+ AMOX+ MTR), OAC (OMP+ AMOX+ CLA) 2, OAC (OMP+ AMOX+ CLA), OMC (OMP+ MTR+ CLA) 1, 4

H. pylori

H. pylori가

가

, H. pylori가

2

4

4

. 1

2

Gisbert(1999)

OA

BMT

, OC

OAM, OAC

O+BMT

, OAM

OAC

OMC

O+BMT

O+C+A+B

( 3 4 )

H. pylori가

가

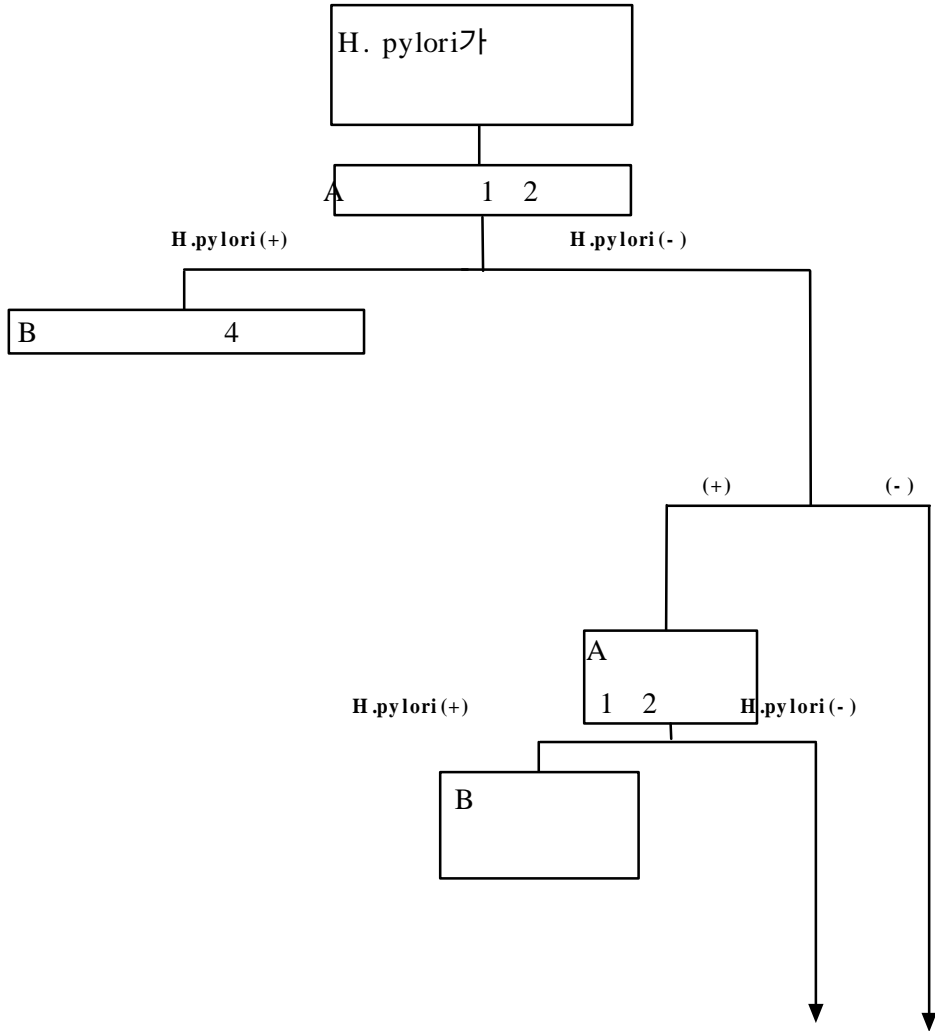
4

가

1

가

가



\*A

B

4

A :  
B : 2

4.

2.2.

12

가

MEDLINE

H. pylori

H.pylori

가

( )

(disability)

가

가

가

가

(Symptom free

days; SFDs)

가

### 3.

#### 3.1.

가

10%

10%

#### 3.2.

가

가

2000 가

7.

	가*	가
	1	*
		*
	1	*
		*
	1	*
		*
		*

\* , , ,

\* 1 1-2 , 1

1

\* 1 1-2 1

1

\* ( )

1.

1.1. H. pylori

MEDLINE

Eligibility criteria

(Bayesian analysis)

가

8.

				(%)
OAC	11	1		85.9
	13	1	2	86.0
OAM	5	1		83.1
	5	2		78.4
RMT	6	1	2	90.1
BMT	7	1	2	89.8

OAC                    1                                    1                    2  
85.9%    86.0%                                    가                    .  
OAM                    1                                    2  
83.1%    78.4%                                    1                    .  
RMT                    BMT                                    90.1%    89.8%                    가

OAM 1 가  
 2 Metronidazole  
 , OAC 2 , OAM 2 , RMT

9. H.pylori

				H. pylori (%)
OC	8	OMP40mg 1 +CLA 500mg 3 OMP 20mg 1	2 2	74.3
RC	9	RBC 400mg 2 +CLA 500mg 3 RBC 40mg 2	2 2	86.9
OMC	13	(OMP 20mg+MTR 400mg + CLA 250mg) *2	1	87.8
OAM	5	(OMP 20mg+ AMOX 1g +MTR 400mg) *2	2	78.4
OAC	11	(OMP 20mg+AMOX 1g +CLA 50mg) *2	2	86.0
RMT	6	RBC 400mg 2 +MTR 400mg 4 +TC 500mg 4	2	90.1

\* per protocol

OC  
 H. pylori intention-to-treat  
 80% per protocol 90%  
 8) 1997  
 가

8) P.Malfertheiner et al (1997) S.K.Lam et al (1997)



1.2.

H.pylori가

( )

. 6

1

Jennifer et al. (1997)

, RC

10.

	6 (%)		1 (%)	
OC	8.0	O'Morain&Logan	23.0	Jennifer et al
RC	6.0	Bardhan et al		
OMC	2.9	Chu et al	11.0	Jennifer et al
OAM	8.0	Cottrill et al	15.0	Jennifer et al
OAC	7.0	Schwartz et al	12.0	Jennifer et al
RMT	6.0	O'Brien et al	11.0	Jennifer et al

H. pylori가

5% (3 7%)

H. pylori가

55% (44 67%)

(J. G. penston. 1996)

가 .

6

, Jennifer et al

1

6

Cottrill et al(1997) (symptomatic relapse)

1, 6 1 50%

Jennifer et al 6

OC 11.5%, OMC 5.5%, OAM 7.5%, OAC 6.0%,

RMT 5.5%, RC 6.0%

1.3. -

1 ( )

11.

	(%)	(%)	( )
OC	74.3	8.0	244
RC	86.9	6.0	289
OMC	87.8	3.0	313
OAM	78.4	8.0	270
OAC	86.0	7.0	298
RMT	90.1	6.0	314

\* ( ) 365

300 ( ) OMC RMT  
, RC , OAC 280  
OC 216

OC 가 RTM OMC 가

#### 1.4.

H. pylori Jennifer et al  
6  
1.3.

12.

	(%)	(%)	( )
OC	74.3	11.5	241
RC	86.9	6.0	289
OMC	87.8	5.5	312
OAM	78.4	7.5	270
OAC	86.0	6.0	299
RMT	90.1	5.5	314

OMC RMT 312 314

가 가 OC 241 가 가 . 1.3.

2.

( )

2.1.

13. (1 )

	( )					
OC	28	4,700	8,390	83,675	8,340	105,105
RC	28	4,700	8,390	83,675	8,340	105,105
OMC	7	4,700	4,320	83,675	4,640	97,335
OAM	14	4,700	5,860	83,675	6,460	100,695
OAC	14	4,700	5,860	83,675	6,460	100,695
RMT	14	4,700	5,860	83,675	6,460	100,695

\* , , , .

\* H. pylori 가

\* ( ) .

H. pylori

Warthin - Starry

가

25% 가

14.

	( ) 25% 가	( )	( )
	28,430	35,537.5	
Warthin - Starry	6,660	8,325	
	31,850	39,812.5	83,675

\*2000

1

H. pylori

가

( )

10

12710

25% 가

, 15887

가

15. (1 )

		( )
OC	(OMP 40mg 1 +CLA 500mg 3 ) *2 OMP 20mg 1 *2	145,558
RC	RBC 400mg 2 +CLA 500mg 3 ) *2 RBC 400mg 2 *2	159,348
OMC	(OMP 20mg +MTR 400mg +CLA +250mg) *2 *1	40,488
OAM	(OCP 20mg +AMOX 1g +MTR 400mg) *2 *2	39,200
OAC	(OMP 20mg +AMOX 1g +CLA 500mg) *2 *2	106,316
RMT	(RBC 400mg 2 +MTR 400mg 4 +T C 500 4 ) *2	31,752

OMP 20mg 1,257 , OMP 40mg 1,886 , MTR( )

400mg 21 , TC( ) 250mg 22 , TC 500mg 30 ,  
 AMOX( ) 250mg 42 , AMOX 500mg 61 , CLA( )  
 250mg 1,617 , CLA 500mg 2,418 , RBC( ) 400mg 1,032 .

**2.2.**

H. pylori 2 1  
 . (H. pylori  
 .)  
 가 , ( )  
 4 ) 가 H. pylori

가 H. pylori

( + ) .

16. 1

2	1.29 × 2=2.58	1995
	0.66	1999 6
	0.12	1999 6
	0.42	1999 6
	0.36	
	4.14	

4.14 × 7,144 =29,576 .(2000 8 )

1995  
 1 4,550 , 2000 8 가  
 (1995 =100, 2000 8 =122.0) 5,551 1  
 2 11,102 .  
 17. 1

	( )	( )	( )	( )
4.14	7,144	29,576	11,102	40,678

### 2.3.

1

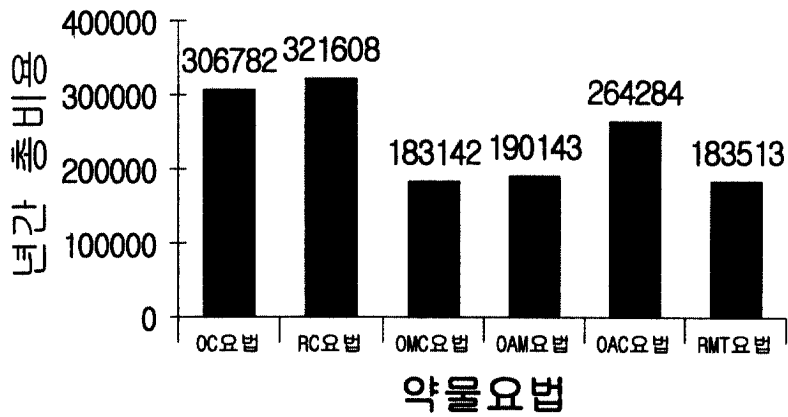
18. 1

OC	105,105	145,558	40,678	291,341
RC	105,105	159,348	40,678	305,131
OMC	97,335	40,488	40,678	178,501
OAM	100,695	39,200	40,678	180,573
OAC	100,695	106,316	40,678	247,689
RMT	100,695	31,752	40,678	173,125

1  
 가 ( \* )

19.

	1				
	( )	( )	( )	( )	( )
OC	291,341	1.053	306,782	937	307,719
RC	305,131	1.054	321,608	826	322,434
OMC	178,501	1.026	183,142	413	183,555
OAM	180,573	1.053	190,143	1000	191,143
OAC	247,689	1.067	264,284	953	265,237
RMT	173,125	1.060	183,513	858	184,371



‘ ’

5.



3. -

H. pylori

6가

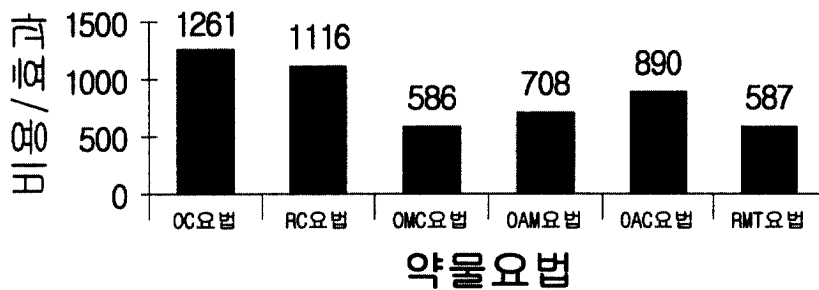
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	( )	/	/	(10 )
OC	307,719	244	1261	80
RC	322,434	289	1116	90
OMC	183,555	313	586	171
OAM	191,143	270	708	141
OAC	265,237	298	890	112
RMT	184,371	314	587	170



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/ OMC RMT 가  
586 , 587 1 ,  
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 70 80%, 90% H. pylori가 H.  
 pylori H. pylori  
 H. pylori 가 1 , H.  
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 FDA, EHPSG, H, pylori  
 6가 .  
 OC (OMP+CLA, 4 ), RC (RBC+CLA, 4 ), OMC  
 (OMP+MTR+CLA, 1 ), OAM (OMP+AMOX+MTR, 2 ),  
 OAC (OMP+AMOX+CLA, 2 ), RMT (RBC+MTR+TC, 2  
 ) 6가 가  
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RMT RC RC

OMC ( ) (7, 14, 24) 가 가

MEDLINE

가 RMT

OMC 가 , OC 가 . RMT /

RMT OMC 가 1 (1 ) 가 , / RMT

OMC 가 1 (10 ) ( )가 가 .

, - , OMC , RMT , OAC , OAM , RC , OC . OMC RMT 가 - , OC RC 가 - .

H. pylori 가  
 가? ( 2 , 3 , 4 ) 가? ( )  
 ) 가? ( ) 가  
 가 - H. pylori

, Jennifer et al RC 5가  
 OMC > BMT > OCA > OMA > OC  
 Houben et al OC 5가 OMC  
 > OAC > BMT = OAM = RC . Laheij et al  
 RC > OCM > OAC > OAM > BMT > OC

RMT (RBC+MTR+TC) BMT  
 (Bismuth+MTR+TC) , BMT RMT  
 (Kung N N et al)

가  
 가 . 가 , 가  
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MTR(Metronidazole) 가 10 56%

, 80 90%가 . MTR

OMT +MTR+AMOX MTR

. CLA 가 가

5% 가 15%

(MTR, CLA) H. pylori가

(sensitive) (resistant) 가

(

가 ).

가 가 가 , publication bias가

가

H. pylori

- H. pylori

GNP

32%가 (

)

가 5 가 ,

가 - .

가 6

6가 가

OC , RC , OMC , OAM , OAC , RMT

OMC RMT 183,555

184,371 가 , OAM , OAC 191,143

265,237 , OC RC 307,719

322,434 .

( ) RMT 317 , OMC

313 , OAC RC 298 289 , OAM 270 , OC

244 가 .

,

/ 가

가 .

- / OMC 586( 1

) 가 - , RMT 587 , OAM 708 ,

OAC 890 OC RC 1261 1116 가

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H. pylori OMC RMT

Metronidazole

OMC .

가

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\*OC

			% (n)	
Sonnenterg et al (1998)	194	4WK	67.5(131/ 194)	R=0.743
P.Pare' et al (1999)	230	4WK	66(151/ 230)	
O'Morain et al (1996)	162	4WK	78(126/ 162)	
Burette et al (1993)	18	4WK	56(10/ 18)	
Catalano et al (1995)	64	4WK	87.5(56/ 64)	
Hunt et al(1995)	57	4WK	72(41/57)	
Logan et al (1995)	69	4WK	83(57/69)	
Hopkins et al (1997)	53	4WK	74(39/53)	

\*RC

			% (n)	
Bardgan et al (1998)	216	4WK	94(202/ 216)	R=0.869
P.Pare' et al (1999)	210	4WK	90(188/ 210)	
P.Pozzato et al (1999)	50	4WK	84(42/ 50)	
Kolkman et al (1997)	49	4WK	90(44/ 49)	
Peterson et al (1996)	17	4WK	82(14/ 17)	
G.Dobrilla et al(1998)	119	4WK	87(104/ 119)	
Pounder et al (1997)	32	4WK	82(26/ 32)	
et al (1997)	57	4WK	70.2(40/57)	
Hopkins et al (1997)	19	4WK	84(16/ 19)	

\*OAC

			% (n)	
Behrens et al (1998)	53	2WK	83(44/ 53)	
Habu et al (1998)	105	2WK	87.6(92/ 105)	
L.Laine et al (1998)	230	10	84(193/ 230)	
Bhasin et al (1999)	20	2WK	70(14/ 20)	R=0.860
H.Wurzer et al (1997)	127	10	91(115/ 127)	
Dilchier et al (1996)	48	2WK	92(44/ 48)	
Burette et al (1995)	25	12	88(22/ 25)	
Moayyedi et al (1995)	33	10	88(29/ 33)	
et al (1998)	35	2WK	88.6(31/ 35)	
et al (1999)	64	2WK	81.3(52/ 64)	
Mera et al (1999)	143	2WK	79.7(114/ 143)	

			% (n)	
Gisbert et al (1999)	27	1WK	89(24/ 27)	
G.Cammarota et al (1999)	42	1WK	83(35/ 42)	1
V.savarivo et al (1999)	69	1WK	67(46/ 69)	
V.V.Zanten et al (1999)	50	1WK	87(43/ 50)	
M.A.Begard et al (1998)	61	1WK	70(42/ 61)	
Sung et al (1996)	44	1WK	95.4(42/ 44)	R=0.859
A. Tursi et al (1996)	49	1WK	82(40/ 49)	
Lind et al	110	1WK	96(106/ 110)	
H.C.Spinzi et al (2000)	84	1WK	79(66/ 84)	
et al (1998)	54	1WK	85.2(46/ 54)	
Labenz et al (1996)	60	1WK	88(53/ 60)	
Pieramico O et al (1997)	58	1WK	93(54/ 58)	
Houben et al (1997)	57	1WK	91(52/ 57)	



\*OAM

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			% (n)	
Cottrill et al (1997)	83	2WK	95(79/83)	R=0.784
T.Breuer et al (1997)	79	2WK	71(56/79)	
G.D.Bell et al (1996)	58	2WK	92(53/58)	
et al(1997)	69	2WK	71(49/69)	
et al (2000)	18	2WK	83.3(15/ 18)	

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			% (n)	
V.Savarine et al (1997)	70	1WK	89(62/70)	R=0.831
Pieramico et al (1997)	61	1WK	86(52/61)	
Bayerdorffer et al (1996)	127	1WK	76(97/ 127)	
Labenz et al(1997)	60	1WK	78(47/60)	
Logan et al (2000)	100	1WK	85(85/ 100)	

\*OMC

			% (n)	
Tursi et al (1998)	53	1WK	71.7(38/ 53)	
Chu et al (1998)	500	1WK	92(460/ 500)	R=0.878
V.V.Zanter et al (1998)	48	1WK	92(44/ 48)	
Lind et al (1999)	118	1WK	90(106/ 118)	
Lobenz et al (1997)	40	1WK	95(38/ 40)	
Logan et al (1996)	100	1WK	91(91/ 100)	
Grasso et al (1995)	38	1WK	84.2(32/ 38)	
Powell et al (1995)	123	1WK	86(106/ 123)	
Hurenkamp et al (1998)	25	1WK	92(23/ 25)	
Savarino et al (1999)	70	1WK	69(48/ 70)	
Chiba et al (1999)	48	1WK	85(41/ 48)	
Houben et al (1999)	55	1WK	84(46/ 55)	
Gisbert et al (1999)	27	1WK	93(25/ 27)	

\*RMT

			% (n)	
Mo"nkemu"ller et al (1999)	44	2WK	82(36/44)	R=0.901
Wyeth et al (1996)	9	2WK	92(8/9)	
Kung N N et al (1999)	41	1WK	98(40/41)	
L.Laine et al (1997)	42	2WK	88(37/42)	
de Boer WA et al (1998)	63	1WK	89(56/63)	
Gisbert et al (1999)	30	1WK	86(25/29)	

\*BMT

			% (n)	
Sung et al (1996)	43	1WK	84(36/43)	R=0.898
et al (1998)	39	2WK	92.3(36/39)	
V.V.Zanter et al (1999)	59	2WK	90(53/59)	
de Boer WA et al (1998)	53	10	94.4(50/53)	
Kung N N et al (1999)	44	1WK	84(37/44)	
Archimandritis et al (1995)	117	15	91(106/117)	
Hopkins et al (1997)	51	2WK	82(42/51)	

## 2.

\*Jennifer L. Taylor et al H. pylori

	( )	%	(1 )%
BMT	14	90	11
OCM	7	91	11
OAM	7	84	15
OAC	14	89	12
OC	14	72	23

\*M.H.M.G.Houben et al H. pylori

	( )	%	95%CI	
RC	2	28	76	75-78
OAC	2	59	85	84-86
OAM	2	71	80	79-81
OCM	1	119	86	85-87
BMT	2	94	80	78-81

# **Abstract**

## **Cost-effectiveness analysis of H. pylori chemical therapy**

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We ought to consider effect, cost, adverse events and compliance to choose chemical therapy, so economic evaluation was performed before the choice.

This study was the cost-effectiveness analysis of H. pylori eradication therapy associated peptic ulcer disease. H. pylori eradication therapies were OC therapy (OMP+ CLA), RC therapy(RBC+CLA), OMC therapy (OMP+MTR+CLA), OAM therapy(OMP+AMOX+MTR), OAC therapy (OMP+AMOX+CLA), RMT therapy(RBC+MTR+TC).

These 2 dual therapies and 4 Triple therapies were very common therapies.

Cost approach and effect approach were needed for the cost-effective analysis, economic evaluation. Cost was the sum of the direct cost and the indirect cost. The direct cost included medical cost and the indirect cost included time cost and travel cost.

The final effect size was symptom-free days which were measured from eradication rate and recurrence rate. And eradication rate was calculated by meta-analysis.

The result was that RMT therapy and OMC therapy were cost-effective and OC therapy and RC therapy were not cost-effective. Cost-effect ratio(CER) was 587 for RMT therapy, 586 for OMC therapy and 1261 for OC therapy, 1116 for RC therapy. The less CER meant more cost effective because CER was the cost needed for the effect.

Key words: cost-effectiveness analysis, H. pylori, peptic ulcer, dual therapy, triple therapy,