

Web appendix 1: Included study selection and characteristics

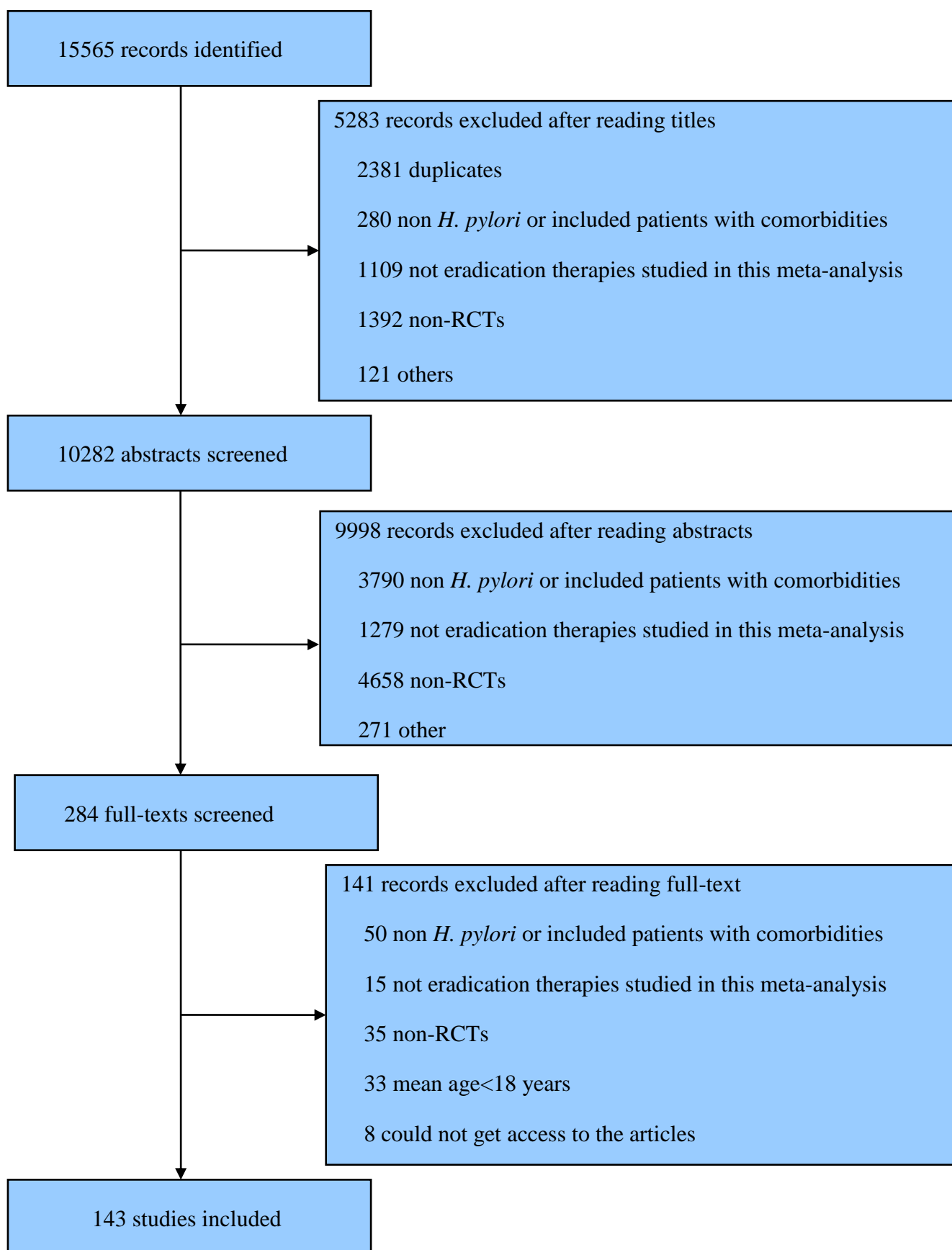


Fig S1.1 Flow diagram of study selection

Table S1.1 Characteristics of studies included in systematic review and meta-analysis

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment		
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Alkim H 2011 (1)	Turkey	3	RCT, single-center	14d	63	36.2 \pm 10.4	37/26	6-8 weeks	histological examination, rapid urease test	¹³ C-UBT	ranitidine	400 mg bid	14d
				14d triple	64	39.6 \pm 12.6	35/29	6-8 weeks			omeprazole	20 mg bid	14d
				14d triple	61	38.9 \pm 11.6	35/26	6-8 weeks	histological examination, rapid urease test	¹³ C-UBT	amoxicillin	1000 mg bid	14d
				14d triple	64	35.3 \pm 7.7	37/27	6-8 weeks	clarithromycin		500 mg bid	14d	
				14d triple	64	37.6 \pm 10.2	33/31	6-8 weeks	histological examination, rapid urease test	¹³ C-UBT	esomeprazole	40 mg bid	14d
				14d triple	63	36.4 \pm 8.4	37/26	6-8 weeks	amoxicillin		1000 mg bid	14d	
				14d triple	64	37.6 \pm 10.2	33/31	6-8 weeks	histological examination, rapid urease test	¹³ C-UBT	clarithromycin	500 mg bid	14d
				14d triple	63	36.4 \pm 8.4	37/26	6-8 weeks	esomeprazole		40 mg bid	14d	
Aminian K 2010 (2)	Iran	3	RCT	10d triple	107	45.3 \pm 13.1	42/65	8 weeks	rapid urease test	stool antigen test	omeprazole	20 mg bid	10d
				10d triple	107	45.3 \pm 13.1	42/65	8 weeks	rapid urease test	stool antigen test	amoxicillin	1000 mg bid	10d
				10d triple	107	45.3 \pm 13.1	42/65	8 weeks	rapid urease test	stool antigen test	clarithromycin	500 mg bid	10d
				10d sequential	107	43.7 \pm 11.9	45/62	8 weeks	rapid urease test	stool antigen test	omeprazole	20 mg bid	1-5d
10d sequential	107	43.7 \pm 11.9	45/62	8 weeks	rapid urease test	stool antigen test	amoxicillin	1000 mg bid	1-5d				

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration	
Assem M 2010 (3)	Egypt and Saudi Arabia	3	RCT, multi-center	14d bismuth	107	46.7 \pm 14.2	51/56	8 weeks	rapid urease test	stool antigen test	omeprazole	20 mg bid	6-10d	
											metronidazole	500 mg bid	6-10d	
											clarithromycin	500 mg bid	6-10d	
					7d triple	150	33.3 (20-75)	89/61	6 weeks	¹³ C-UBT	¹³ C-UBT	omeprazole	20 mg bid	14d
												amoxicillin	1000 mg bid	14d
												metronidazole	500 mg bid	14d
					7d levofloxacin	150	32.3 (20-64)	96/54	6 weeks	¹³ C-UBT	¹³ C-UBT	bismuth	240 mg bid	14d
												clarithromycin	500 mg bid	7d
												esomeprazole	20 mg bid	7d
					7d levofloxacin	150	33.6 (20-60)	102/48	6 weeks	¹³ C-UBT	¹³ C-UBT	levofloxacin	500 mg qd	7d
		clarithromycin	500 mg bid	7d										
		esomeprazole	20 mg bid	7d										
Avşar E 2013 (4)	Turkey	3	RCT, multi-center	14d ranitidine bismuth	149	40.9 (18-62)	68/81	6 weeks	histopathological examination, rapid urease test	¹³ C-UBT	ranitidine	400 mg bid	14d	
												bismuth citrate		
					14d triple	130	42.6 (19-64)	55/75	6 weeks	histopathological examination, rapid urease test	¹³ C-UBT	amoxicillin	1000 mg bid	14d
												clarithromycin	500 mg bid	14d
												lansoprazole	30 mg bid	14d
Aydin A 2007 (5)	Turkey	2	RCT	7d triple	36	43.8 \pm 14.2	15/19	1 month	rapid urease test, histopathologic	rapid urease test,	pantoprazole	40 mg bid	7d	
												amoxicillin	1000 mg bid	7d

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment							
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration					
									examination	histopathologic examination	clarithromycin	500 mg bid	7d					
									14d triple	37	44.7±6.4	16/18	1 month	rapid urease test, histopathologic examination	rapid urease test, histopathologic examination	pantoprazole	40 mg bid	14d
																amoxicillin	1000 mg bid	14d
																clarithromycin	500 mg bid	14d
Basu PP 2011 (6)	US	3	open-label, RCT	7d concomitant	90	37 (26-58)	52/38	4 weeks	endoscopy, monoclonal stool antigen testing	stool antigen testing	levofloxacin	250 mg qd	7d					
											omeprazole	40 mg qd	7d					
											nitazoxanide	500 mg bid	7d					
											doxycycline	100 mg qd	7d					
									10d concomitant	90	36 (22-48)	51/39	4 weeks	endoscopy, monoclonal stool antigen testing	stool antigen testing	levofloxacin	250 mg qd	10d
																omeprazole	40 mg qd	10d
								nitazoxanide	500 mg bid	10d								
									doxycycline	100 mg qd	10d							
				10d triple	90	37 (28-52)	53/37	4 weeks	endoscopy, monoclonal stool antigen testing	stool antigen testing	lansoprazole	30 mg bid	10d					
											clarithromycin	500 mg bid	10d					
											amoxicillin	1000 mg bid	10d					
Bekar O 2010 (7)	Turkey	3	RCT, double-blind, single-center	14d probiotic	46	46±12	26/20	31 days	¹⁴ C-UBT	¹⁴ C-UBT	lansoprazole	30 mg bid	14d					
											amoxicillin	1000 mg bid	14d					
											clarithromycin	500 mg bid	14d					
											kefir	250 ml bid	14d					
				14d triple	36	43±12	20/16	31 days	¹⁴ C-UBT	¹⁴ C-UBT	lansoprazole	30 mg bid	14d					
											amoxicillin	1000 mg bid	14d					
											clarithromycin	500 mg bid	14d					
Bhasin DK	India	2	RCT	7d triple	22	45±15	12/10	1 month	rapid urease test,	rapid urease	lansoprazole	30 mg qd	7d					

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration											
2000 (8)											histopathological examination	test,	clarithromycin	250 mg bid	7d									
											14d triple	24	36 \pm 12	18/6	1 month	rapid urease test, histopathological examination	rapid urease test, histopathological examination	lansoprazole	30 mg qd	14d				
																			amoxicillin	500 mg tid	14d			
Bujanda L 2001 (9)	Spain and Portugal	4	multi-center, double-blind, RCT	7d triple	49	43.1 \pm 13.6	28/21	4 weeks	rapid urease test, ¹³ C-UBT	¹³ C-UBT	omeprazole	20 mg bid	7d											
											7d ranitidine bismuth	53	42.5 \pm 13.2	21/32	4 weeks	rapid urease test, ¹³ C-UBT	¹³ C-UBT	clarithromycin	500 mg bid	7d				
																			amoxicillin	1000 mg bid	7d			
Bujanda L 2001 (10)	Spain	2	RCT	7d triple	100	50	45/55	1 month	histological examination, rapid urease test, ¹³ C-UBT, ¹⁴ C-UBT	¹³ C-UBT, ¹⁴ C-UBT	omeprazole	20 mg bid	7d											
											7d ranitidine bismuth	100	46	43/57	1 month	histological examination, rapid urease test, ¹³ C-UBT, ¹⁴ C-UBT	¹³ C-UBT, ¹⁴ C-UBT	clarithromycin	500 mg bid	7d				
																			amoxicillin	1000 mg bid	7d			
Calvet X 2005 (11)	Spain	3	RCT, multi-center	7d triple	237	51.3 \pm 15	148/89	2 months	histological examination, rapid	¹³ C-UBT, or histological	ranitidine	400 mg bid	7d											
											clarithromycin	500 mg bid	7d											

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				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Calvet X 2002 (12)	Spain	2	RCT	7d bismuth	168	52.6±17.4	120/48	2 months	urease test, or ¹³ C-UBT	examination	amoxicillin	1000 mg bid	7d
									histological examination, rapid urease test, or ¹³ C-UBT	¹³ C-UBT, or histological examination	rabeprazole	20 mg bid	10d
				10d triple	221	51.4±16	145/76	2 months	¹³ C-UBT, gastric histological examination, or urease test	¹³ C-UBT, biopsy of the antrum	clarithromycin	500 mg bid	10d
											amoxicillin	1000 mg bid	10d
Canducci F 2000 (13)	Italy	2	RCT, open, single-center	7d triple	60	51.5±15.9	117/54	2 months	¹³ C-UBT, gastric histological examination, or urease test	¹³ C-UBT, biopsy of the antrum	omeprazole	20 mg bid	7d
											clarithromycin	500 mg bid	7d
				7d probiotic	60	38±11	64/56	6 weeks	histological examination, ¹³ C-UBT	¹³ C-UBT, endoscopy, histological examination	amoxicillin	1000 mg bid	7d
											rabeprazole	20 mg bid	7d
							amoxicillin	500 mg tds	7d				
								clarithromycin	250 mg tds	7d			
								rabeprazole	20 mg bid	7d			
								amoxicillin	500 mg tds	7d			
								clarithromycin	250 mg tds	7d			
								Lactéol Fort	tds	10d			

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				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Catalano F 2000 (14)	Italy	3	RCT	10d triple	55	45.14±12.9	29/26	4 weeks	rapid urease test, histological examination	rapid urease test, histological examination	omeprazole	40 mg om	10d
				10d ranitidine bismuth	54	43.18±16.20	28/26	4 weeks	rapid urease test, histological examination	rapid urease test, histological examination	amoxicillin	1000 mg bid	10d
					clarithromycin	500 mg bid	10d	ranitidine	400 mg bid	10d			
								bismuth citrate	amoxicillin	1000 mg bid	10d		
Catalano F 1998 (15)	Italy	2	single-blind, RCT	7d triple	39	51.7±11.9	14/25	4 weeks	culture/ histological examination, rapid urease test	culture/ histological examination, rapid urease test	omeprazole	20 mg bid	14d
				7d ranitidine bismuth	42	53.7±17	14/28	4 weeks	culture/ histological examination, rapid urease test	culture/ histological examination, rapid urease test	amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
											ranitidine	400 mg bid	14d
Chen LW 2010 (16)	Taiwan	3	RCT, open-label	7d levofloxacin	90	49.7±15.3	51/38	14 weeks	histological examination, rapid urease test, ¹⁴ C-UBT	¹⁴ C-UBT	levofloxacin	500 mg qd	7d
				7d triple	99	49.5±16.1	57/41	14 weeks	histological examination, rapid urease test, ¹⁴ C-UBT	¹⁴ C-UBT	esomeprazole	40 mg qd	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
Cheng H 2010 (17)	China	2	RCT, parallel, multi-center	7d levofloxacin	150	48±13	76/74	4 weeks	¹³ C-UBT, or rapid urease test	¹³ C-UBT	lansoprazole	30 mg bid	7d
				7d triple	150	48±15	71/79	4 weeks	¹³ C-UBT, or rapid urease test	¹³ C-UBT	amoxicillin	1000 mg bid	7d
											levofloxacin	500 mg qd	7d
				7d triple	150	48±15	71/79	4 weeks	¹³ C-UBT, or rapid urease test	¹³ C-UBT	lansoprazole	30 mg bid	7d

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Ching SS 2008 (18)	UK	3	RCT	7d triple	50	55.2 \pm 10.9	26/24	2 months	urease test, culture, or ¹³ C-UBT	¹³ C-UBT	amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
				7d bismuth	44	53.7 \pm 11.4	27/17	2 months	histological examination, urease test, culture, or ¹³ C-UBT	¹³ C-UBT	lansoprazole	30 mg bid	7d
											metronidazole	400 mg tds	7d
							bismuth subcitrate	240 mg bid	7d				
										tetracycline chloride	500 mg qds	7d	
Choi HS 2012 (19)	South Korea	2	RCT	7d triple	115		60/55	4 weeks	UBT, rapid urease test, or histopathological examination	UBT, histopathological examination	rabeprazole	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
				10d sequential	115	46.8	59/56	4 weeks	UBT, rapid urease test, or histopathological examination	UBT, histopathological examination	amoxicillin	1000 mg bid	1-5d
											rabeprazole	20 mg bid	1-5d
											rabeprazole	20 mg bid	6-10d
							clarithromycin	500 mg bid	6-10d				
										tinidazole	500 mg bid	6-10d	
				10d triple	115		58/57	4 weeks	UBT, rapid urease test, or histopathological examination	UBT, histopathological examination	rabeprazole	20 mg bid	10d
			amoxicillin								1000 mg bid	10d	
				14d triple	115		62/53	4 weeks	UBT, rapid urease test, or histopathological examination	UBT, histopathological examination	clarithromycin	500 mg bid	10d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment			
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Choi KH 2011 (20)	South Korea	4	double-blind, RCT	7d triple	99	55.6 \pm 16.2	54/45	6 weeks	test, or histopathological examination	¹³ C-UBT	amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
				7d levofloxacin	98	55.5 \pm 11.1	58/40	6 weeks	rapid urease test, or histological examination	¹³ C-UBT	omeprazole	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
Choi WH 2008 (21)	South Korea	2	RCT	10d sequential	77	48.7 \pm 11.1	34/43	8 weeks	biopsy	¹³ C-UBT, biopsy	omeprazole	20 mg bid	1-5d
											amoxicillin	1000 mg bid	1-5d
				7d triple	81	50.9 \pm 11.6	42/39	8 weeks	biopsy	¹³ C-UBT, biopsy	omeprazole	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
Chung JW 2012 (22)	South Korea	3	open-label, RCT	10d triple	80	50.2 \pm 12.1	51/29	4 weeks	rapid urease test, giemsa staining, culture	¹³ C-UBT	lansoprazole	30 mg bid	10d
											clarithromycin	500 mg bid	10d
				10d sequential	79	49.0 \pm 11.4	52/27	4 weeks	rapid urease test, giemsa staining, culture	¹³ C-UBT	amoxicillin	1000 mg bid	10d
											lansoprazole	30 mg bid	1-5d
											amoxicillin	1000 mg bid	1-5d
											lansoprazole	30 mg bid	6-10d
											metronidazole	500 mg bid	6-10d
											clarithromycin	500 mg bid	6-10d

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				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration				
Cindoruk M 2007 (23)	Turkey	5	RCT	14d probiotic	62	45.82±13.35	36/26	6 weeks	endoscopy, biopsy	¹³ C-UBT	clarithromycin	500 mg bid	14d				
											amoxicillin	1000 mg bid	14d				
											lansoprazole	30 mg bid	14d				
								14d triple	62	47.56±13.53	18/44	6 weeks	endoscopy, biopsy	¹³ C-UBT	clarithromycin	500 mg bid	14d
															amoxicillin	1000 mg bid	14d
											lansoprazole	30 mg bid	14d				
Cuadrado-Lavín A 2012 (24)	Spain	3	single-blind, RCT	10d triple	128	42 (19-73)	66/62	4 weeks	rapid urease test, histological examination	¹³ C-UBT	clarithromycin	500 mg bid	10d				
											omeprazole	20 mg bid	10d				
								10d levofloxacin	122	44 (18-75)	54/68	4 weeks	rapid urease test, histological examination	¹³ C-UBT	levofloxacin	500 mg bid	10d
															amoxicillin	1000 mg bid	10d
											omeprazole	20 mg bid	10d				
Daghaghzadeh H 2007 (25)	Iran	2	RCT	7d bismuth	78	40.23	36/42	4 weeks	histological examination or rapid urease test	¹⁴ C-UBT	omeprazole	20 mg bid	7d				
											amoxicillin	1000 mg bid	7d				
											bismuth	240 mg bid	7d				
															furazolidone	200 mg bid	7d
								14d bismuth	78	44.84	41/37	4 weeks	histological examination or rapid urease test	¹⁴ C-UBT	omeprazole	20 mg bid	14d
															amoxicillin	1000 mg bid	14d
											bismuth	240 mg bid	14d				
											furazolidone	200 mg bid	14d				
Dal Bo' N 1998 (26)	Italy	2	RCT	14d triple	33	53.6 (27-74)	23/10	2 months	histological examination, rapid urease test, serum <i>H. pylori</i>	serum anti- <i>H. pylori</i> antibodies	omeprazole	20 mg bid	14d				
											clarithromycin	250 mg bid	14d				
											metronidazole	250 mg qid	14d				

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				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration	
Dammann HG 2000 (27)	Germany	4	double-blind, RCT, multi-center	7d triple	66	54.4 (28-76)	42/24	2 months	antibodies	histological examination, rapid urease test, serum <i>H. pylori</i> antibodies	serum anti- <i>H. pylori</i> antibodies	omeprazole	20 mg bid	7d
									clarithromycin	250 mg bid	7d			
									metronidazole	250 mg qid	7d			
				14d triple	106	49.7±15.1	67/39	6 weeks	histological examination, ¹³ C-UBT, culture, rapid urease test	histological examination, ¹³ C-UBT, culture, rapid urease test	pantoprazole	40 mg bid	7d	
									clarithromycin	500 mg bid	7d			
									metronidazole	500 mg bid	7d			
De Francesco V 2004 (28)	Italy	3	RCT	7d triple	115	47±13.5	65/50	6–8 weeks	rapid urease test, histological examination, ¹³ C-UBT	rapid urease test, histological examination, ¹³ C-UBT	rabeprazole	20 mg bid	7d	
									clarithromycin	500 mg bid	7d			
									amoxicillin	1000 mg bid	7d			
				10d sequential	116	46±12.3	54/62	6–8 weeks	rapid urease test, histological examination, ¹³ C-UBT	rapid urease test, histological examination, ¹³ C-UBT	rabeprazole	20 mg bid	1-5d	
									amoxicillin	1000 mg bid	1-5d			
									rabeprazole	20 mg bid	6-10d			
clarithromycin	500 mg bid	6-10d												
tinidazole	500 mg bid	6-10d												
10d triple	116	49±13.8	57/59	6–8 weeks	rapid urease test, histological examination, ¹³ C-UBT	rapid urease test, histological examination, ¹³ C-UBT	rabeprazole	20 mg bid	10d					

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De Francesco V 2004 (29)	Italy	3	RCT	10d sequential	45	44.2±16.2	20/25	6–8 weeks	histological examination, ¹³ C-UBT	test, histological examination, ¹³ C-UBT	clarithromycin	500 mg bid	10d
									histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	amoxicillin	1000 mg bid	10d
									histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	rabeprazole	20 mg bid	1-5d
				10d triple	52	46.0±15.3	21/31	6–8 weeks	histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	amoxicillin	1000 mg bid	1-5d
									histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	rabeprazole	20 mg bid	6-10d
									histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	tinidazole	500 mg bid	6-10d
Deguchi R 2012 (30)	Japan	3	RCT	7d probiotic	115	55.9	76/39	8 weeks	culture, histological examination, rapid urease test	¹³ C-UBT, stool antigen test	clarithromycin	500 mg bid	6-10d
									culture, histological examination, rapid urease test	¹³ C-UBT, stool antigen test	amoxicillin	750 mg bid	10d
									culture, histological examination, rapid urease test	¹³ C-UBT, stool antigen test	clarithromycin	200 mg bid	10d
				7d triple	114	57.8	66/48	8 weeks	culture, histological examination, rapid urease test	¹³ C-UBT, stool antigen test	yogurt containing Lactobacillus gasseri OLL2716	112 ×10 ³ mg bid	4 weeks
									culture, histological examination, rapid urease test	¹³ C-UBT, stool antigen test	rabeprazole	10 mg bid	7d
									culture, histological examination, rapid urease test	¹³ C-UBT, stool antigen test	amoxicillin	750 mg bid	7d
Du YQ 2012 (31)	China	3	RCT	7d probiotic	76	44.9±13.8	32/44	4 weeks	¹³ C-UBT, ¹⁴ C-UBT, rapid urease test, or pathologic examination	¹³ C-UBT, or ¹⁴ C-UBT	clarithromycin	200 mg bid	7d
									¹³ C-UBT, ¹⁴ C-UBT, rapid urease test, or pathologic examination	¹³ C-UBT, or ¹⁴ C-UBT	probiotic containing 3×10 ⁷ Lactobacillus acidophilus	qd	1-14d

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Fakheri H 2012 (32)	Iran	3	RCT	7d triple	78	48.0 \pm 13.3	33/45	4 weeks	¹³ C-UBT, ¹⁴ C-UBT, rapid urease test, or pathologic examination	¹³ C-UBT, or ¹⁴ C-UBT	omeprazole	20 mg bid	15-21d
											clarithromycin	500 mg bid	15-21d
											amoxicillin	1000 mg bid	15-21d
											omeprazole	20 mg bid	7d
											clarithromycin	500 mg bid	7d
				7d probiotic	74	48.2 \pm 12.2	26/48	4 weeks	¹³ C-UBT, ¹⁴ C-UBT, rapid urease test, or pathologic examination	¹³ C-UBT, or ¹⁴ C-UBT	omeprazole	20 mg bid	1-7d
											clarithromycin	500 mg bid	1-7d
											amoxicillin	1000 mg bid	1-7d
											probiotic containing 3 \times 10 ⁷ Lactobacillus acidophilus	qd	8-21d
											antiprimary	40 mg bid	1-5d
10d sequential	148	39.8 \pm 12.88	79/69	8 weeks	antral biopsy, rapid urease test	¹⁴ C-UBT	amoxicillin	1000 mg bid	1-5d				
							pantoprazole	40 mg bid	6-10d				
							clarithromycin	500 mg bid	6-10d				
							tinidazole	500 mg bid	6-10d				
							antiprimary	40 mg bid	14d				
14d bismuth	148	38.0 \pm 11.24	82/66	8 weeks	antral biopsy, rapid urease test	¹⁴ C-UBT	amoxicillin	1000 mg bid	14d				
							bismuth subcitrate	240 mg bid	14d				
							furazolidone	200 mg bid	1-7d				

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment		
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Fakheri HT 2011 (33)	Iran	2	RCT	14d concomitant	80	37.48±11.6	53/27	12 weeks	rapid urease test, biopsy	¹⁴ C-UBT	omeprazole	20 mg bid	14d
											amoxicillin	1000 mg bid	14d
											metronidazole	500 mg bid	14d
				14d bismuth	80	35.34±10.5	52/28	12 weeks	rapid urease test, biopsy	¹⁴ C-UBT	omeprazole	20 mg bid	14d
											amoxicillin	1000 mg bid	14d
											bismuth subcitrate	240 mg bid	14d
furazolidone	200 mg bid	1-7d											
Fallone CA 2013 (34)	Canada	1	RCT	7d triple	148	60±14	53/95	4 weeks	histological examination, UBT	histological examination, UBT	amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
				14d triple	166	61±13	79/87	4 weeks	histological examination, UBT	histological examination, UBT	amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
lansoprazole	30 mg bid	14d											
Farup PG 2002 (35)	Norway	3	RCT	7d triple	137	59±14	82/55	7-14 weeks	UBT	UBT	omeprazole	20 mg bid	7d
											clarithromycin	250 mg bid	7d
											metronidazole	500 mg bid	7d
				7d ranitidine bismuth	146	58±14	76/70	7-14 weeks	UBT	UBT	ranitidine	400 mg bid	7d
											bismuth citrate		
											clarithromycin	250 mg bid	7d
metronidazole	500 mg bid	7d											
Filipec Kanizaj T 2009 (36)	Croatia	3	RCT	7d triple	120	52.6±12.8	56/64	4-6 weeks	histological examination, microbiology, rapid urease test	histological examination, microbiology, rapid urease test	pantoprazole	40 mg bid	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment					
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration		
Francavilla R 2013 (37)	Italy	5	double-blind, RCT	10d triple	118	51.3±13.0	70/48	4-6 weeks	histological examination, microbiology, rapid urease test	histological examination, microbiology, rapid urease test	pantoprazole	40 mg bid	10d		
											amoxicillin	1000 mg bid	10d		
												clarithromycin	500 mg bid	10d	
				14d triple	57	48.8±13.3	29/28	4-6 weeks	histological examination, microbiology, rapid urease test	histological examination, microbiology, rapid urease test	pantoprazole	40 mg bid	14d		
												amoxicillin	1000 mg bid	14d	
												clarithromycin	500 mg bid	14d	
Francavilla R 2013 (37)	Italy	5	double-blind, RCT	7d probiotic	50	49 (22-65)	18/32	8 weeks	¹³ C-UBT, rapid urease test, histological examination	¹³ C-UBT	Gastrus Lactobacillus reuteri combination (2*10 ⁸ Colony Forming Units)	qd	pre-treatment		
											PPI	NA	7d		
												clarithromycin	NA	7d	
												amoxicillin	NA	7d	
Francavilla R 2013 (37)	Italy	5	double-blind, RCT	7d triple	50	44 (18-61)	21/29	8 weeks	¹³ C-UBT, rapid urease test, histological examination	¹³ C-UBT	PPI	NA	7d		
												clarithromycin	NA	7d	
													amoxicillin	NA	7d
Gao XZ 2010 (38)	China	3	parallel, open-label, RCT	10d	72	47±13	35/37	4-6 weeks	histological examination, rapid urease test	¹³ C-UBT	omeprazole	20 mg bid	1-5d		
												amoxicillin	1000 mg bid	1-5d	
													omeprazole	20 mg bid	6-10d
													tinidazole	500 mg bid	6-10d
													clarithromycin	500 mg bid	6-10d
Gao XZ 2010 (38)	China	3	parallel, open-label, RCT	7d triple	71	43±15	34/37	4-6 weeks	histological	¹³ C-UBT	omeprazole	20 mg bid	7d		

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Garza González E 2007 (39)	Mexico	1	RCT	10d bismuth	72	45 \pm 10	31/41	4-6 weeks	examination, rapid urease test	¹³ C-UBT	amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
											rabeprazole	20 mg bid	10d
				7d triple	30	4 weeks	culture, rapid urease test, histological examination	stool antigen	amoxicillin	1000 mg bid	10d		
									bismuth pectin	100 mg qid	10d		
									levofloxacin	500 mg qd	10d		
14d triple	29	4 weeks	culture, rapid urease test, histological examination	stool antigen	rabeprazole	20 mg qd	14d						
					clarithromycin	500 mg bid	14d						
					amoxicillin	1000 mg bid	14d						
Georgopoulos S 2013 (40)	Greece	3	open-label, RCT	10d concomitant	127	44.8 \pm 16.9	69/58	46-56 days	rapid urease test, histological examination, ¹³ C-UBT	¹³ C-UBT	esomeprazole	40 mg bid	10d
											metronidazole	500 mg bid	10d
											clarithromycin	500 mg bid	10d
				10d triple	130	46-56 days	rapid urease test, histological examination, ¹³ C-UBT	¹³ C-UBT	amoxicillin	1000 mg bid	10d		
									esomeprazole	40 mg bid	10d		
									clarithromycin	500 mg bid	10d		
7d triple	75	4 weeks	histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	pantoprazole	40 mg bid	7d						
					amoxicillin	1000 mg bid	7d						
					clarithromycin	500 mg bid	7d						

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration						
Gisbert JP 2005 (42)	Spain	3	open, multi-center, RCT	7d	75	45 \pm 11	43/32	4 weeks	histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	ranitidine	400 mg bid	7d						
				ranitidine bismuth							bismuth citrate								
				7d triple							150	51.5 \pm 10	74/76	8 weeks	histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	esomeprazole	40 mg bid	7d
				10d triple							150	49.6 \pm 12	67/83	8 weeks	histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	clarithromycin	500 mg bid	7d
Gisbert JP 2001 (43)	Spain	1	RCT	7d triple	297	NA	NA	4 weeks	histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	PPI(omeprazole 20 mg bid , lansoprazole 30 mg bid, or pantoprazole 40 mg bid)								
											clarithromycin	500 mg bid	7d						
											amoxicillin/ metronidazole	1000 mg bid/500 mg bid	7d						
				7d							79			4 weeks	histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	ranitidine	400 mg bid	7d
Gopal R	India	3	RCT	10d triple	39	38 \pm 11.99	37/2	3 months	urease test,	urease test,	clarithromycin	500 mg bid	7d						
											amoxicillin	1000 mg bid	7d						

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment								
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration					
2013 (44)									histological examination	histological examination	clarithromycin	500 mg bid	10d					
															omeprazole	20 mg bid	10d	
									10d	35	43± 12.25	34/1	3 months	urease test,	urease test,	amoxicillin	1000 mg bid	10d
									levofloxacin					histological examination	histological examination	levofloxacin	500 mg bid	10d
Greenberg ER 2011 (45)	South America	3	RCT	14d triple	488		201/287	6-8 weeks	¹³ C-UBT	¹³ C-UBT	lansoprazole	30 mg bid	14d					
											amoxicillin	1000 mg bid	14d					
											clarithromycin	500 mg bid	14d					
									10d	486	21-65	200/286	6-8 weeks	¹³ C-UBT	¹³ C-UBT	lansoprazole	30 mg bid	1-5d
									sequential							amoxicillin	1000 mg bid	1-5d
																lansoprazole	30 mg bid	6-10d
		clarithromycin	500 mg bid	6-10d														
Gumurdulu Y 2004 (46)	Turkey	1	RCT	7d triple	53	49±12	23/30	45- 60 days	endoscopy,	endoscopy,	omeprazole	20 mg bid	7d					
									histological examination	histological examination	clarithromycin	500 mg bid	7d					
											amoxicillin	1000 mg bid	7d					
									14d triple	59	48±11	24/35	45- 60 days	endoscopy,	endoscopy,	omeprazole	20 mg bid	14d
									histological examination	histological examination	clarithromycin	500 mg bid	14d					
											amoxicillin	1000 mg bid	14d					
				10d bismuth	52	45±12	21/31	45-60 days	endoscopy,	endoscopy,	omeprazole	20 mg bid	10d					
									histological examination	histological examination	bismute	300 mg qid	10d					
							tetracycline	500 mg qid	10d									
							metronidazole	500 mg qid	10d									
Hu FL 2012	China	2	multi-center,	7d triple	100	44±13	68/32	28 days	rapid urease test,	¹³ C-UBT	lansoprazole	30 mg bid	7d					

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
(47)			RCT						UBT, gastroscop		amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
				7d bismuth	101	42 \pm 13	71/40	28 days	rapid urease test, UBT, gastroscop	¹³ C-UBT	lansoprazole	30 mg bid	21d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
											bismuth	220 mg bid	21d
											potassium citrate		
Hu SQ 2009 (48)	China	3	RCT	10d sequential	39	46.72 \pm 6.23	22/17	4 weeks	histological examination, rapid urease test	¹³ C-UBT	esomeprazole	20 mg bid	1-5d
											amoxicillin	1000 mg bid	1-5d
											esomeprazole	20 mg bid	6-10d
											clarithromycin	500 mg bid	6-10d
											tinidazole	500 mg bid	6-10d
				7d triple	40	46.81 \pm 7.13	21/19	4 weeks	histological examination, rapid urease test	¹³ C-UBT	esomeprazole	20 mg bid	7d
											clarithromycin	500 mg bid	7d
											amoxicillin	1000 mg bid	7d
Huang YK 2012 (49)	Taiwan	3	RCT	10d sequential	85	51.31 \pm 15.02	48/37	12 weeks	culture, histological examination, rapid urease test	endoscopy, ¹³ C-UBT	lansoprazole	30 mg bid	10d
											amoxicillin	1000 mg bid	1-5d
											clarithromycin	500 mg bid	6-10d
											metronidazole	500 mg bid	6-10d
				10d concomitant	84	53.82 \pm 15.20	48/36	12 weeks	culture, histological examination, rapid urease test	endoscopy, ¹³ C-UBT	lansoprazole	30 mg bid	10d
											amoxicillin	1000 mg bid	10d
											clarithromycin	500 mg bid	10d
											metronidazole	500 mg bid	10d

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment			
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration	
Hung IF 2009 (50)	China	2	open-label, RCT	7d levofloxacin	150	53.6±15.5	65/ 85	6 weeks	rapid urease test, histological examination	¹³ C-UBT	esomeprazole	20 mg bid	7d	
											amoxicillin	1000 mg bid	7d	
												levofloxacin	500 mg qd	7d
				7d triple	150	52.4±14.0	54/ 96	6 weeks	rapid urease test, histological examination	¹³ C-UBT	esomeprazole	20 mg bid	7d	
									amoxicillin	1000 mg bid	7d			
										clarithromycin	500 mg bid	7d		
Hurenkamp GJ 2000 (51)	The Netherlands	3	double-blind, RCT	7d triple	25	51 (21-81)	18/7	4-6 weeks	histological examination, culture	¹³ C-UBT, histological examination, culture	metronidazole	400 mg bid	7d	
											clarithromycin	250 mg bid	7d	
												omeprazole	20 mg bid	7d
				10d triple	24	52 (28-77)	14/10	4-6 weeks	histological examination, culture	¹³ C-UBT, histological examination, culture	metronidazole	400 mg bid	10d	
									clarithromycin	250 mg bid	10d			
										omeprazole	20 mg bid	10d		
Iacopini F 2005 (52)	Italy	3	RCT, open-label	7d levofloxacin	83	53±15	21/61	8 weeks	histopathological examination, ¹³ C-UBT	¹³ C-UBT, H pylori stool antigens	esomeprazole	20 mg qd	7d	
											levofloxacin	500mg qd	7d	
												azithromycin	500 mg qd	7d
				7d triple	81	56±15	21/60	8 weeks	histopathological examination, ¹³ C-UBT	¹³ C-UBT, H pylori stool antigens	esomeprazole	20 mg bid	7d	
									clarithromycin	500 mg bid	7d			
									amoxicillin	1000 mg bid	7d			
Jang HJ 2005 (53)	South Korea	2	RCT	7d triple	75	49.6±12.4	52/23	4-6 weeks	histological examination, culture, rapid urease testing, ¹³ C-UBT	¹³ C-UBT	PPI	bid	7d	
											amoxicillin	1000 mg bid	7d	
												clarithromycin	500 mg bid	7d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment				
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration	
Javid G 2013 (54)	India	3	single-center, RCT, open-label	7d bismuth	74	50.0 \pm 13.4	46/28	4-6 weeks	histological examination, culture, rapid urease testing, ¹³ C-UBT	¹³ C-UBT	PPI	bid	7d	
											bismuth	300 mg qid	7d	
												metronidazole	500 mg tid	7d
												tetracycline	500 mg qid	7d
				10d triple	134	37.80 \pm 12.30	80/54	4 weeks	rapid urease test, histological examination	rapid urease test, histological examination	pantoprazole	40 mg bid	10d	
				10d sequential	138	38.40 \pm 12.60	87/51	4 weeks	rapid urease test, histological examination	rapid urease test, histological examination	clarithromycin	500 mg bid	10d	
Jiang YA 2013 (55)	China	1	RCT	7d	40	44.4	28/12	4 weeks	rapid urease test, histological examination	¹³ C-UBT	lansoprazole	30 mg bid	7d	
				levofloxacin							amoxicillin	1000 mg bid	7d	
											levofloxacin	500 mg qd	7d	
				7d bismuth	40	42.8	34/6	4 weeks	rapid urease test, histological examination	¹³ C-UBT	lansoprazole	30 mg bid	7d	
											amoxicillin	1000 mg bid	7d	
											levofloxacin	500 mg qd	7d	
Karatapanis S 2011 (56)	Greece	3	open-label, RCT, multi-center	7d triple	102	47 (20-72)	55/47	4-6 weeks	rapid urease testing, histological examination	rapid urease testing, histological examination	rabeprazole	20 mg bid	7d	
											clarithromycin	500 mg bid	7d	
											amoxicillin	1000 mg bid	7d	
				10d triple	103	48 (22-77)	60/43	4-6 weeks	rapid urease	rapid urease	rabeprazole	20 mg bid	10d	

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Katelaris PH 2002 (57)	Australia and New Zealand	3	multi-center, RCT	14d triple	102	47 (24-73)	58/44	4-6 weeks	testing, histological examination	testing, histological examination	clarithromycin	500 mg bid	10d
									rapid urease testing, histological examination	rapid urease testing, histological examination	amoxicillin	1000 mg bid	10d
									rapid urease testing, histological examination	rapid urease testing, histological examination	rabeprazole	20 mg bid	14d
				7d bismuth	134	50 \pm 14	69/65	8 weeks	urease test, histological examination, ¹³ C-UBT	¹³ C-UBT	pantoprazole	40 mg bid	7d
									urease test, histological examination, ¹³ C-UBT	¹³ C-UBT	bismuth subcitrate	108 mg qid	7d
									urease test, histological examination, ¹³ C-UBT	¹³ C-UBT	tetracycline	500 mg qid	7d
7d triple	134	51 \pm 14	58/76	8 weeks	urease test, histological examination, ¹³ C-UBT	¹³ C-UBT	metronidazole	200 mg tid daytime + 400 mg at night	7d				
					urease test, histological examination, ¹³ C-UBT	¹³ C-UBT	pantoprazole	40 mg bid	7d				
					urease test, histological examination, ¹³ C-UBT	¹³ C-UBT	amoxicillin	1000 mg bid	7d				
Keum B 2005 (58)	South Korea	1	quasi-RCT	7d triple	42			4 weeks	endoscopy, UBT	rapid urease test, UBT	omeprazole	20 mg bid	7d
									endoscopy, UBT	rapid urease test, UBT	amoxicillin	1000 mg bid	7d
				14d triple	52	47.7 \pm 11.8	55/39	4 weeks	endoscopy, UBT	rapid urease test, UBT	clarithromycin	500 mg bid	7d
									endoscopy, UBT	rapid urease test, UBT	omeprazole	20 mg bid	14d
				7d triple	45	41.9 \pm 11.3	49/28	4 weeks	endoscopy, UBT	rapid urease	amoxicillin	1000 mg bid	14d
					endoscopy, UBT	rapid urease	clarithromycin	500 mg bid	14d				
								endoscopy, UBT	rapid urease	rabeprazole	10 mg bid	7d	

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
				14d triple	32	45.7 \pm 12.2	63/35	4 weeks	endoscopy, UBT	rapid urease test, UBT	amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
											esomeprazole	10 mg bid	14d
											amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
											clarithromycin	500 mg bid	14d
				7d triple	14	4 weeks	endoscopy, UBT	rapid urease test, UBT	esomeprazole	20 mg bid	7d		
									amoxicillin	1000 mg bid	7d		
									clarithromycin	500 mg bid	7d		
				14d triple	84	4 weeks	endoscopy, UBT	rapid urease test, UBT	esomeprazole	20 mg bid	14d		
									amoxicillin	1000 mg bid	14d		
									clarithromycin	500 mg bid	14d		
7d triple	40	4 weeks	endoscopy, UBT	rapid urease test, UBT	esomeprazole	30 mg bid	7d						
					amoxicillin	1000 mg bid	7d						
					clarithromycin	500 mg bid	7d						
14d triple	43	4 weeks	endoscopy, UBT	rapid urease test, UBT	esomeprazole	30 mg bid	14d						
					amoxicillin	1000 mg bid	14d						
					clarithromycin	500 mg bid	14d						
Kiliç ZM 2008 (59)	Turkey	1	RCT, single-center	14d	30	NA	19/11	8 weeks	histological examination, rapid urease test	¹³ C-UBT	ranitidine	400 mg bid	14d
											bismuth citrate		
											amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
				14d triple	30		15/15	8 weeks	histological	¹³ C-UBT	esomeprazole	40 mg bid	14d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment			
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Kim BG 2007 (60)	South Korea	2	RCT, open-labeled	7d triple	337	49.3(18-78)	206/131	5 weeks	examination, rapid urease test, rapid urease test, ¹³ C-UBT, histological examination	¹³ C-UBT	amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
				14d triple	261	48.4(18-84)	179/82	5 weeks	rapid urease test, ¹³ C-UBT, histological examination	¹³ C-UBT	omeprazole/equi valent dose of other PPIs	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
								clarithromycin	500 mg bid	7d			
Kim MN 2008 (61)	South Korea	1	RCT, open-labeled	7d probiotic	168	48.1±12.4	71/97	4 weeks	histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	PPI	bid	7d
											clarithromycin	500 mg bid	7d
											amoxicillin	1000 mg bid	7d
											Will yogurt (Lactobacillus acidophilus HY 2177 (> 10 ⁵ colony-forming units /mL), Lactobacillus casei HY 2743(> 10 ⁵ colony-forming units /mL),	150 ml qd	3 weeks

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				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
												Bifidobacterium longum HY8001 (> 10 ⁶ colony-forming units /mL), and Streptococcus thermophilus B-1 (> 10 ⁸ colony-forming units /mL)).	
				7d triple	179	53.7±12.0	89/88	4 weeks	histological examination, the rapid urease test, ¹³ C-UBT	¹³ C-UBT	PPI clarithromycin amoxicillin	bid 500 mg bid 1000 mg bid	7d 7d 7d
Kim N 2008 (62)	South Korea	5	double-blind, RCT	7d triple	117	47.3±11.8	89/28	6 weeks	¹³ C-UBT, modified giemsa staining, rapid urease test	¹³ C-UBT	lansoprazole clarithromycin amoxicillin	30 mg bid 500 mg bid 1000 mg bid	7d 7d 7d
				14d triple	112	48.0±10.7	77/35	6 weeks	¹³ C-UBT, modified giemsa staining, rapid urease test	¹³ C-UBT	lansoprazole clarithromycin amoxicillin	30 mg bid 500 mg bid 1000 mg bid	14d 14d 14d
Kim YS 2011 (63)	South Korea	3	RCT, single-blind	10d sequential	205	51.8±12.5	112/93	4 weeks	histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	pantoprazole amoxicillin pantoprazole	40 mg bid 1000 mg bid 40 mg bid	1-5d 1-5d 6-10d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment					
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration		
				14d triple	204	50.6 \pm 13.7	100/104	4 weeks	histological examination, rapid urease test, ¹³ C-UBT	¹³ C-UBT	clarithromycin	500 mg bid	6-10d		
											metronidazole	500 mg bid	6-10d		
											pantoprazole	40 mg bid	14d		
											amoxicillin	1000 mg bid	14d		
				14d triple	69	47.0(17-67)	56/13	6 weeks	histological examination, culture	histological examination, culture, ¹³ C-UBT	clarithromycin	500 mg bid	14d		
											omeprazole	20 mg bid	14d		
											amoxicillin	1000 mg bid	14d		
											clarithromycin	400 mg bid	14d		
Kiyota K 1999 (64)	Japan	2	RCT, single-blind	7d triple	78	48.2(17-70)	60/18	6 weeks	histological examination, culture	histological examination, culture, ¹³ C-UBT	omeprazole	20 mg bid	7d		
												amoxicillin	1000 mg bid	7d	
													clarithromycin	400 mg bid	7d
				14d triple	69	47.0(17-67)	56/13	6 weeks	histological examination, culture	histological examination, culture, ¹³ C-UBT	omeprazole	20 mg bid	14d		
Lahbabi M 2013 (65)	Morocco	3	RCT, single-blind	7d triple	115	48.5 \pm 14.8	52/63	3 months	histological examination, polymerase chain reaction	¹³ C-UBT	PPI	20 mg bid	7d		
												amoxicillin	1000 mg bid	7d	
													clarithromycin	500 mg bid	7d
				10d sequential	104	47.5 \pm 15	57/47	3 months	histological examination, polymerase chain reaction	¹³ C-UBT	PPI	20 mg bid	1-5d		
													amoxicillin	1000 mg bid	1-5d
													PPI	20 mg bid	6-10d
											metronidazole	500 mg bid	6-10d		
											clarithromycin	500 mg bid	6-10d		
											amoxicillin	1000 mg bid	7d		
Laine L	United States	3	RCT	7d triple	50	43 \pm 2	17/33	4 weeks	¹³ C-UBT, breath	¹³ C-UBT	amoxicillin	1000 mg bid	7d		

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment											
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration								
1996 (66)												clarithromycin	500 mg bid	7d							
												10d triple	50	40 \pm 2	23/27	4 weeks	¹³ C-UBT, breath test, histological examination, serum <i>H. pylori</i> antibodies	¹³ C-UBT	omeprazole	20 mg bid	7d
																			amoxicillin	1000 mg bid	10d
												14d triple	50	43 \pm 2	24/26	4 weeks	¹³ C-UBT, breath test, histological examination, serum <i>H. pylori</i> antibodies	¹³ C-UBT	clarithromycin	500 mg bid	10d
																			omeprazole	20 mg bid	10d
																			amoxicillin	1000 mg bid	14d
Laine L 2003 (67)	North America	2	RCT, multi-center	10d bismuth	138	47 \pm 13	86/52	29-57 days	histological examination, ¹³ C-UBT, culture	¹³ C-UBT		bismuth	140 mg qid	10d							
												biskalcitrate									
												metronidazole	125 mg qid	10d							
												tetracycline	125 mg qid	10d							
												omeprazole	20 mg bid	10d							
												10d triple	137	47 \pm 15	80/57	29-57 days	histological examination, ¹³ C-UBT, culture	¹³ C-UBT	omeprazole	20 mg bid	10d
amoxicillin	1000 mg bid	10d																			
Liang Z 2010 (68)	China	2	RCT	10d sequential	56	39.5 (18-75)	56/50	4 weeks	rapid urease test, ¹⁴ C-UBT	rapid urease test, ¹⁴ C-UBT		rabeprazole	20 mg bid	1-5d							
												amoxicillin	1000 mg bid	1-5d							
												rabeprazole	20 mg bid	6-10d							
												clarithromycin	500 mg bid	6-10d							

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment			
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
				10d triple	50			4 weeks	rapid urease test, ¹⁴ C-UBT	rapid urease test, ¹⁴ C-UBT	ornidazole	500 mg bid	6-10d
											rabeprazole	20 mg bid	10d
											amoxicillin	1000 mg bid	10d
											clarithromycin	500 mg bid	10d
Liao J 2013 (69)	China	3	RCT, open-label	14d levofloxacin	81	48.9 (23-75)	46/35	6 weeks	rapid urease test, histological examination, culture	¹³ C-UBT	lansoprazole	30 mg bid	14d
											amoxicillin	1000 mg bid	14d
				14d bismuth	80	46.7 (23-78)	43/37	6 weeks	rapid urease test, histological examination, culture	¹³ C-UBT	lansoprazole	30 mg bid	14d
											bismuth	220 mg bid	14d
											potassium citrate		
											amoxicillin	1000 mg bid	14d
											levofloxacin	500 mg qd	14d
Lim JH 2013 (70)	South Korea	3	RCT, open-label, double-arm	14d sequential	86	57.5 \pm 11.8	43/43	4 weeks	histological examination, rapid urease test	¹³ C-UBT	rabeprazole	20 mg bid	1-7d
											amoxicillin	1000 mg bid	1-7d
				14d concomitant	78	56.0 \pm 12.1	45/33	4 weeks	histological examination, rapid urease test	¹³ C-UBT	rabeprazole	20 mg bid	8-14d
											clarithromycin	500 mg bid	8-14d
											metronidazole	500 mg bid	8-14d
											rabeprazole	20 mg bid	14d
											amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
											metronidazole	500 mg bid	14d
Liou JM 2013 (71)	Taiwan	3	multi-center, RCT, open-label	10d sequential	300	52.8 \pm 13.8	159/141	6 weeks	rapid urease test, histological examination,	¹³ C-UBT	lansoprazole	30 mg bid	1-5d
											amoxicillin	1000 mg bid	1-5d
											lansoprazole	30 mg bid	6-10d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment										
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration							
									culture, serology, ¹³ C-UBT		clarithromycin	500 mg bid	6-10d							
											14d sequential	300	53.7±12.5	165/135	6 weeks	rapid urease test, histological examination, culture, serology, ¹³ C-UBT	¹³ C-UBT	metronidazole	500 mg bid	6-10d
																		lansoprazole	30 mg bid	1-7d
											14d triple	300	53.3±14.1	167/133	6 weeks	rapid urease test, histological examination, culture, serology, ¹³ C-UBT	¹³ C-UBT	amoxicillin	1000 mg bid	1-7d
																		lansoprazole	30 mg bid	8-14d
																		clarithromycin	500 mg bid	8-14d
metronidazole	500 mg bid	8-14d																		
7d	217	49.5±13.2	94/123	6 weeks	rapid urease test, histological examination, culture	¹³ C-UBT	lansoprazole	30 mg bid	14d											
							amoxicillin	1000 mg bid	14d											
							clarithromycin	500 mg bid	14d											
							levofloxacin													
7d triple	215	51.4±24	91/124	6 weeks	rapid urease test, histological examination, culture	¹³ C-UBT	clarithromycin	500 mg bid	7d											
							amoxicillin	1000 mg bid	7d											
							lansoprazole	30 mg bid	7d											
10d sequential	179	56.4±13.7	75/104	8 weeks	rapid urease test, histological examination	¹³ C-UBT	esomeprazole	20 mg bid	1-5d											
							amoxicillin	1000 mg bid	1-5d											
							esomeprazole	20 mg bid	6-10d											
							clarithromycin	500 mg bid	6-10d											

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment			
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
											metronidazole	400 mg bid	6-10d
				10d bismuth	178	56.4 \pm 13.9	80/98	8 weeks	rapid urease test, histological examination	¹³ C-UBT	esomeprazole	20 mg bid	10d
											bismuth subcitrate	120 mg qid	10d
											tetracycline	500 mg qid	10d
											metronidazole	400 mg qid	10d
Louw JA 1998 (74)	South Africa	3	single-blind, multi-center, parallel group, RCT	7d triple	33			4 weeks	urease reaction, histological examination, culture, body biopsies	urease reaction, histological examination, culture, body biopsies	pantoprazole	40 mg bid	7d
				14d triple	34	42 (20-71)	54/23	4 weeks	urease reaction, histological examination, culture, body biopsies	urease reaction, histological examination, culture, body biopsies	amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
											pantoprazole	40 mg bid	14d
											amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
Louw JA 1998 (75)	South Africa	2	single-blind, RCT	7d triple	32	43 \pm 14	19/13	28 days	urease reaction, histological assessment	urease reaction, histological assessment	lansoprazole	30 mg om	7d
				14d triple	30	41 \pm 12	21/9	28 days	urease reaction, histological assessment	urease reaction, histological assessment	amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
											lansoprazole	30 mg om	14d
											amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
Ma CX 2008 (76)	China	3	RCT	10d sequential	67	35.6 \pm 3.4	25/42	4 weeks	rapid urease test, ¹⁴ C-UBT	rapid urease test, ¹⁴ C-UBT	omeprazole	20 mg bid	1-5d
											amoxicillin	1000 mg bid	1-5d
											omeprazole	20 mg bid	6-10d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment						
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration			
Maconi G 2001 (77)	Italy	2	RCT, open-label, single-center									clarithromycin	500 mg bid	6-10d		
														tinidazole	400 mg bid	6-10d
				7d triple	63	36.1±4.5	22/41	4 weeks	rapid urease test, ¹⁴ C-UBT	rapid urease test, ¹⁴ C-UBT	omeprazole	20 mg bid	7d			
														clarithromycin	500 mg bid	7d
														amoxicillin	1000 mg bid	7d
				7d triple	65	47.05±11.09	37/28	1 month	¹³ C-UBT, histological examination	¹³ C-UBT	lansoprazole	30 mg bid	7d			
Malfertheiner P 2011 (78)	France, Germany, Ireland, Italy, Poland, Spain, and the UK	3	open-label, RCT	14d triple	64	48.50±11.24	33/31	1 month	¹³ C-UBT, histological examination	¹³ C-UBT	amoxycillin	1000 mg bid	7d			
													lansoprazole	30 mg bid	14d	
														clarithromycin	500 mg bid	14d
				10d bismuth	216	48.53±14.64	113/103	28 and 56 days	histological examination, rapid urease test, culture, ¹³ C-UBT	¹³ C-UBT	amoxycillin	1000 mg bid	14d			
														bismuth subcitrate potassium	140 mg qid	10d
														metronidazole	125 mg qid	10d
Mantzaris GJ 2002	Greece	2	single-center, RCT									tetracycline hydrochloride	125 mg qid	10d		
														omeprazole	20 mg qid	10d
				7d triple	222	47.95±14.52	122/100	28 and 56 days	histological examination, rapid urease test, culture, ¹³ C-UBT	¹³ C-UBT	clarithromycin	500 mg bid	7d			
														amoxicillin	1000 mg bid	7d
										omeprazole	20 mg bid	7d				
											omeprazole	20 mg bid	10d			
											amoxicillin	1000 mg bid	10d			

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment			
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
(79)									examination, immunohistochemistry	examination, immunohistochemistry	clarithromycin	500 mg bid	10d
				10d bismuth	71	40.5 (17-70)	35/36	10-12 weeks	rapid urease test, histological examination, immunohistochemistry	rapid urease test, histological examination, immunohistochemistry	omeprazole bismuth subcitrate	20 mg bid 120 mg qid	10d 10d
											metronidazole tetracycline hydrochloride	500 mg tid 500 mg qid	10d 10d
Mao HV 2000 (80)	Vietnam	2	RCT	10d triple	57			4 weeks	rapid urease test, histological examination	rapid urease test, histological examination	omeprazole clarithromycin amoxicillin	20 mg bid 500 mg bid 1000 mg bid	10d 10d 10d
				10d ranitidine bismuth	47	45 (17-75)	NA	4 weeks	rapid urease test, histological examination	rapid urease test, histological examination	ranitidine bismuth citrate clarithromycin	400 mg bid 500 mg bid	10d 10d
											amoxicillin	1000 mg bid	10d
McNicholl AG 2013 (81)	Spain	3	multi-center, RCT	10d sequential	170	47.5±14.7	70/100	4 weeks	¹³ C-UBT, histological examination, rapid urease test, bacterial culture	¹³ C-UBT, histological examination	omeprazole amoxicillin omeprazole clarithromycin metronidazole	20 mg/12h 1000 mg/12h 20 mg/12h 500 mg/12h 500 mg/12h	1-5d 1-5d 6-10d 6-10d 6-10d
				10d concomitant	168	47.3±15.6	63/105	4 weeks	¹³ C-UBT, histological examination, rapid urease test,	¹³ C-UBT, histological examination	omeprazole amoxicillin clarithromycin	20 mg/12h 1000 mg/12h 500 mg/12h	10d 10d 10d

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment		
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Mirbagheri SA 2006 (82)	Iran	2	RCT	7d triple	110	41 (28-79)	57/53	6 weeks	bacterial culture rapid urease test	¹⁴ C-UBT	metronidazole	500 mg/12h	10d
											omeprazole	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
				10d bismuth	113	39 (24-47)	60/53	6 weeks	rapid urease test	¹⁴ C-UBT	clarithromycin	500 mg bid	7d
											omeprazole	20 mg bid	10d
											amoxicillin	1000 mg bid	10d
colloidal bismuth subcitrate	240 mg bid	10d											
Moayyedi P 1996 (83)	UK	2	RCT, single-center	7d triple	33	50.3±12.5	21/12	4-6 weeks	histological examination, rapid urease test, ¹³ C-UBT, microbiological assessment	¹³ C-UBT	metronidazole	500 mg bid	10d
											lansoprazole	30 mg bid	7d
											amoxicillin	1000 mg bid	7d
				14d triple	37	49.0±12.2	13/24	4-6 weeks	histological examination, rapid urease test, ¹³ C-UBT, microbiological assessment	¹³ C-UBT	clarithromycin	500 mg bid	7d
											lansoprazole	30 mg bid	14d
											amoxicillin	1000 mg bid	14d
clarithromycin	500 mg bid	14d											
Molina-Infante J 2012 (84)	Spain	3	prospective, RCT, open-label	10d sequential (1)	9	49(27-67)	7/2	8 weeks	culture	histological examination	PPI	standard dose bid	1-5d
											amoxicillin	1000 mg bid	1-5d
											clarithromycin	500 mg bid	6-10d
											metronidazole	500 mg bid	6-10d

Authors	Country	Jadad score	Study design	Patients' characteristic					Treatment				
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Molina-Infante J 2010 (85)	Spain	3	RCT, open-label, single-center	10d concomitant (1)	9	52(21-76)	4/5	8 weeks	culture	histological examination	PPI	standard dose bid	6-10d
											PPI	standard dose bid	10d
											amoxicillin	1000 mg bid	10d
											clarithromycin	500 mg bid	10d
											metronidazole	500 mg bid	10d
				10d concomitant (2)	36	50(20-77)	14/22	8 weeks	culture	histological examination	PPI	standard dose bid	10d
											amoxicillin	1000 mg bid	10d
											clarithromycin	500 mg bid	10d
											metronidazole	500 mg bid	10d
10d triple (2)	33	54(29-83)	17/16	8 weeks	culture	histological examination	PPI	standard dose bid	10d				
							amoxicillin	1000 mg bid	10d				
							clarithromycin	500 mg bid	10d				
10d triple	115	44 (19-78)	54/61	8 weeks	UBT, rapid urease test, histological examination	¹³ C-UBT	omeprazole	20 mg bid	10d				
							clarithromycin	500 mg bid	10d				
							amoxicillin	1000 mg bid	10d				
10d sequential	115	49(18-80)	54/61	8 weeks	UBT, rapid urease test, histological examination	¹³ C-UBT	omeprazole	20 mg bid	1-5d				
							amoxicillin	1000 mg bid	1-5d				
							omeprazole	20 mg bid	6-10d				
							clarithromycin	500 mg bid	6-10d				
							metronidazole	500 mg bid	6-10d				
10d	115	51 (18-84)	61/54	8 weeks	UBT, rapid urease	¹³ C-UBT	omeprazole	20 mg bid	10d				

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment			
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration	
Molina-Infante J 2013 (86)	Italy and Spain	3	RCT	levofloxacin	171	48 (18-85)	81/90	8 weeks	test, histological examination	¹³ C-UBT, rapid urease test, culture, histological examination	¹³ C-UBT	omeprazole	500 mg bid	10d
				14d hybrid								amoxicillin	1000 mg bid	10d
				14d concomitant								omeprazole	40 mg bid	1-14d
												amoxicillin	1000 mg bid	1-14d
												clarithromycin	500 mg bid	8-14d
												nitroimidazole	500 mg bid	8-14d
14d concomitant	omeprazole	40mg bid	14d											
amoxicillin	1000 mg bid	14d												
clarithromycin	500 mg bid	14d												
nitroimidazole	500 mg bid	14d												
Morse AL 2013 (87)	Canada	3	RCT	10d triple	53	42(38-47)	26/27	10 weeks	¹³ C-UBT, biopsies	¹³ C-UBT	¹³ C-UBT	rabeprazole	20 mg bid	10d
				10d sequential								amoxicillin	1000 mg bid	10d
												clarithromycin	500 mg bid	10d
												rabeprazole	20 mg bid	1-5d
												amoxicillin	1000 mg bid	1-5d
				metronidazole								500 mg bid	6-10d	
clarithromycin	500 mg bid	6-10d												
Multiple Center Study Group in Beijing Area 2004	China	2	RCT	7d triple	37	18-65	197/61	4 weeks	rapid urease test, histological examination	rapid urease test, histological examination	¹³ C-UBT	omeprazole	20 mg bid	7d
				14d triple								amoxicillin	1000 mg bid	7d
												clarithromycin	500 mg bid	7d
												omeprazole	20 mg bid	14d
												amoxicillin	1000 mg bid	14d
				clarithromycin								500 mg bid	14d	

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment		
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
(88)				7d triple	45			4 weeks	rapid urease test, histological examination	rapid urease test, histological examination	omeprazole	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	250 mg bid	7d
				14d triple	41			4 weeks	rapid urease test, histological examination	rapid urease test, histological examination	omeprazole	20 mg bid	14d
											amoxicillin	1000 mg bid	14d
											clarithromycin	250 mg bid	14d
Myllyluoma E 2005 (89)	Finland	5	double-blind, RCT	7d probiotic	23	57.3	10/13	4 weeks	¹³ C-UBT, in-house enzyme immunoassay serology	¹³ C-UBT	65 mL milk-based fruit drink containing 1*10 ⁹ colony-forming units /mL Lactobacillus GG, L. rhamnosus LC705, Bifidobacterium breve Bb99 and Propionibacterium freudenreichii ssp. shermanii JS,	bid during the eradication treatment, qd for the following 3 weeks	4 weeks
											lansoprazole	30 mg bid	7d
											clarithromycin	500 mg bid	7d
											amoxicillin	1000 mg bid	7d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment					
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration		
Nasa M 2013 (90)	India	3	open-labeled, RCT	7d triple	24	53.8	8/16	4 weeks	¹³ C-UBT, in-house enzyme immunoassay serology	¹³ C-UBT	lansoprazole	30 mg bid	7d		
											clarithromycin	500 mg bid	7d		
											amoxicillin	1000 mg bid	7d		
				14d triple	120	39.2 \pm 1.53	63/57	4 weeks			rapid urease test, histological examination	rapid urease test	pantoprazole	40 mg bid	14d
													clarithromycin	500 mg bid	14d
				10d sequential	111	37.8 \pm 1.49	68/43	4 weeks	rapid urease test, histological examination	rapid urease test	pantoprazole	40 mg bid	1-5d		
											amoxicillin	1000 mg bid	1-5d		
											pantoprazole	40 mg bid	6-10d		
											clarithromycin	500 mg bid	6-10d		
											tinidazole	500 mg bid	6-10d		
Nista EC 2004 (91)	Italy	4	RCT, double-blind	7d probiotic	60	46.2 \pm 12.83	33/27	6 weeks	¹³ C-UBT	¹³ C-UBT	clarithromycin	500 mg bid	7d		
											amoxicillin	1000 mg bid	7d		
											rabeprazole	20 mg bid	7d		
											vial(2 \times 10 ⁹ spores of <i>Bacillus clausii</i>)	tds	14d		
				7d triple	60	43.1 \pm 13.36	25/35	6 weeks	¹³ C-UBT	¹³ C-UBT	clarithromycin	500 mg bid	7d		
											amoxicillin	1000 mg bid	7d		
											rabeprazole	20 mg bid	7d		
Nista EC 2006 (92)	Italy	3	RCT	7d triple	100	50 \pm 9.2	46/54	6 weeks	histological examination,	¹³ C-UBT	clarithromycin	500 mg bid	7d		
											metronidazole	500 mg bid	7d		

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment		
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Oh HS 2012 (93)	South Korea	3	open-label, RCT	7d	100	49±10.3	42/58	6 weeks	histological examination, ¹³ C-UBT	¹³ C-UBT	esomeprazole	20 mg bid	7d
											clarithromycin	500 mg bid	7d
											levofloxacin	500 mg od	7d
											esomeprazole	20 mg bid	7d
				7d triple	100	48±9.5	44/56	6 weeks	histological examination, ¹³ C-UBT	¹³ C-UBT	clarithromycin	500 mg bid	7d
											amoxicillin	1000 mg bid	7d
											esomeprazole	20 mg bid	7d
10d sequential	116	58.26±11.68	54/62	4 weeks	histological examination, rapid urease test	¹³ C-UBT	rabeprazole	20 mg bid	1-5d				
							amoxicillin	1000 mg bid	1-5d				
							rabeprazole	20 mg bid	6-10d				
							clarithromycin	500 mg bid	6-10d				
7d triple	130	56.78±11.57	53/77	4 weeks	histological examination, rapid urease test	¹³ C-UBT	amoxicillin	1000 mg bid	7d				
							clarithromycin	500 mg bid	7d				
							rabeprazole	20 mg bid	7d				
Özdil K 2011 (94)	Turkey	2	single-center, RCT	14d probiotic	98	41.3±12.8	29/69	5 weeks	giemsa staining	stool antigen test	lansoprazole	30 mg bid	14d
											clarithromycin	500 mg bid	14d
											amoxicillin	1000 mg bid	14d
											250 mg capsules containing saccharomyces boulardii	qd	14d

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment		
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Pai CG 2003 (95)	India	2	RCT	14d levofloxacin	95	41.7 \pm 10.7	27/68	5 weeks	giemsa staining	stool antigen test	amoxicillin	1000 mg bid	14d
											esomeprazole	40 mg bid	14d
											levofloxacin	500 mg qd	14d
				10d triple	35	41.7(19-69)	32/3	30 days	histological examination	endoscopy, biopsies	lansoprazole	30 mg bid	10d
											amoxicillin	500 mg qid	10d
											clarithromycin	500 mg bid	10d
Palmas F 2002 (96)	Italy	2	RCT	10d bismuth	33	37.5(18-64)	32/1	30 days	histological examination	endoscopy, biopsies	tri-potassium di-citrato bismuthate	120 mg qid	10d
											metronidazole	400 mg tid	10d
											tetracycline	500 mg qid	10d
											lansoprazole	30 mg bid	10d
				7d triple	66	54(31-78)	36/30	4 weeks	histological examination, ¹³ C-UBT	histological examination, ¹³ C-UBT	PPI	standard dose	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
				10d triple	42	57(39-69)	21/21	4 weeks	histological examination, ¹³ C-UBT	histological examination, ¹³ C-UBT	PPI	standard dose	10d
							amoxicillin	1000 mg bid	10d				
							clarithromycin	500 mg bid	10d				
									PPI	standard dose	14d		
									amoxicillin	1000 mg bid	14d		
									clarithromycin	500 mg bid	14d		

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment			
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration	
Paoluzi OA 2010 (97)	Italy	3	open-label, RCT, single-center	10d sequential	90	50 \pm 13	38/52	2 months	UBT, stool antigen assay, rapid urease test, histological examination	UBT, stool antigen assay, urease rapid test, histological examination	esomeprazole	20 mg bid	1-10d	
											amoxicillin	1000 mg bid	1-5d	
												clarithromycin	500 mg bid	6-10d
												tinidazole	500 mg bid	6-10d
Paoluzi P 2006 (98)	Italy	3	RCT	7d triple	117	51 \pm 15	49/68	2 months	UBT, stool antigen assay, rapid urease test, histological examination	UBT, stool antigen assay, urease rapid test, histological examination	esomeprazole	20 mg bid	7d	
											amoxicillin	1000 mg bid	7d	
												clarithromycin	500 mg bid	7d
				14d triple	126	52 \pm 13	54/72	2 months	histopathologic examination, biopsies, ¹³ C-UBT	histopathologic examination, ¹³ C-UBT	omeprazole	20 mg bid	14d	
									amoxicillin	1000 mg bid	14d			
									clarithromycin	500 mg bid	14d			
Park HG 2012 (99)	South Korea	3	open-label, RCT	10d sequential	162	52.4 \pm 10.6	93/69	4 weeks	rapid urease test, ¹³ C-UBT, histological examination	¹³ C-UBT	rabeprazole	20 mg bid	1-5d	
											amoxicillin	1000 mg bid	1-5d	
												rabeprazole	20 mg bid	6-10d
												clarithromycin	500mg bid	6-10d
									metronidazole	500 mg bid	6-10d			
				7d triple	164	53.1 \pm 14.3	81/83	4 weeks	rapid urease test, ¹³ C-UBT, histological examination	¹³ C-UBT	rabeprazole	20 mg bid	7d	
										amoxicillin	1000 mg bid	7d		
										clarithromycin	500 mg bid	7d		
Park SK	South Korea	2	RCT	7d probiotic	176	45.2 \pm 19.8	96/80	4 weeks	histological	UBT	omeprazole	20 mg bid	7d	

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment										
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration							
2007 (100)									examination		amoxicillin	1000 mg bid	7d							
											clarithromycin	500 mg bid	7d							
											bacillus subtilis 2.5*10 ⁹	2 capsules tid	8weeks							
											colony-forming units /g, streptococcus faecium 22.5*10 ⁹									
											colony-forming units /g									
											7d triple	176	47.6 \pm 18.5	95/81	4 weeks	histological examination	UBT	omeprazole	20 mg bid	7d
Qian J 2012 (101)	China	3	RCT	7d levofloxacin	114	45.58 \pm 12.81	56/58	4 weeks	rapid urease test, ¹³ C-UBT	¹³ C-UBT	esomeprazole	20 mg bid	7d							
											amoxicillin	1000 mg bid	7d							
											levofloxacin	500 mg qd	7d							
											10d sequential	115	44.22 \pm 11.99	61/54	4 weeks	rapid urease test, ¹³ C-UBT	¹³ C-UBT	esomeprazole	20 mg bid	1-5d
											amoxicillin	1000 mg bid	1-5d							
											esomeprazole	20 mg bid	6-10d							
Riquelme A 2007 (102)	Chile	1	quasi-RCT, open-labeled	7d triple	69	47.5 \pm 16	27/42	6 weeks	upper gastro-intestinal endoscopy, rapid urease test	upper gastro-intestinal endoscopy, rapid urease test	esomeprazole	500 mg bid	6-10d							
											omeprazole	20 mg bid	7d							
											amoxicillin	1000 mg bid	7d							
											clarithromycin	500 mg bid	7d							
											tinidazole	500 mg bid	6-10d							
											omeprazole	20 mg bid	7d							

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment				
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration		
				14d triple	62	45 \pm 15	18/44	6 weeks	upper gastro-intestinal endoscopy, rapid urease test	upper gastro-intestinal endoscopy, rapid urease test	omeprazole	20 mg bid	14d		
												amoxicillin	1000 mg bid	14d	
												clarithromycin	500 mg bid	14d	
Robles-Jara C 2008 (103)	Ecuador	2	RCT, open-label	7d triple	68	42 \pm 11	23/45	8 weeks	histological examination, rapid urease tests	histological examination	omeprazole	20 mg bid	7d		
												clarithromycin	500 mg bid	7d	
													amoxicillin	1000 mg bid	7d
				10d triple	68	44 \pm 12	27/41	8 weeks	histological examination, rapid urease tests	histological examination	omeprazole	20 mg bid	10d		
										clarithromycin	500 mg bid	10d			
										amoxicillin	1000 mg bid	10d			
Sardarian H 2013 (104)	Iran	3	RCT	14d hybrid	210	43.43 \pm 12.87	106/104	8 weeks	antral biopsy, rapid urease test	UBT	pantoprazole	40 mg bid	1-14d		
												amoxicillin	1000 mg bid	1-14d	
													tinidazole	500 mg bid	8-14d
													clarithromycin	500 mg bid	8-14d
				10d sequential	210	41.93 \pm 13.44	97/113	8 weeks	antral biopsy, rapid urease test	UBT	pantoprazole	40 mg bid	1-5d		
										amoxicillin	1000 mg bid	1-5d			
										pantoprazole	40 mg bid	6-10d			
										tinidazole	500 mg bid	6-10d			
										clarithromycin	500 mg bid	6-10d			
Savarino V 1999 (105)	Italy	3	RCT, controlled, parallel-group	7d	55	55 \pm 13	25/30	4 weeks	rapid urease test, histological examination	¹³ C-UBT	ranitidine	400 mg bid	7d		
				ranitidine								bismuth citrate			
				bismuth								metronidazole	500 mg bid	7d	
												clarithromycin	250 mg bid	7d	

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment		
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
				10d	55	54 \pm 13	28/27	4 weeks	rapid urease test, histological examination	¹³ C-UBT	ranitidine	400 mg bid	10d
				ranitidine							bismuth citrate		
				bismuth							metronidazole	500 mg bid	10d
											clarithromycin	250 mg bid	10d
Savarino V 2000 (106)	Italy	3	RCT	7d	70	50 \pm 13	36/34	4 weeks	rapid urease testing, histological examination	rapid urease testing, histological examination	ranitidine	400 mg bid	7d
				ranitidine							bismuth citrate		
				bismuth							clarithromycin	250 mg bid	7d
											metronidazole	500 mg bid	7d
				7d triple	70	53 \pm 11	41/29	4 weeks	rapid urease testing, histological examination	rapid urease testing test, histological examination	omeprazole	20 mg od	7d
											clarithromycin	250 mg bid	7d
											metronidazole	500 mg bid	7d
Scaccianoce G 2006 (107)	Italy	3	parallel, open-label, two-center, RCT	7d triple	70	54 \pm 12	34/36	4-6 weeks	histological examination, rapid urease test	¹³ C-UBT	esomeprazole	20 mg bid	7d
											clarithromycin	1000 mg bid	7d
											amoxicillin	500 mg bid	7d
											esomeprazole	20 mg bid	1-5d
				10d sequential	72	55 \pm 14	32/40	4-6 weeks	histological examination, rapid urease test	¹³ C-UBT	amoxicillin	1000 mg bid	1-5d
											esomeprazole	20 mg bid	6-10d
											clarithromycin	500 mg bid	6-10d
											tinidazole	500 mg bid	6-10d
				10d triple	71	53 \pm 16	33/38	4-6 weeks	histological	¹³ C-UBT	esomeprazole	20 mg bid	10d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment			
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Scaccianoce G 2008 (108)	Italy	1	RCT, open-label	7d triple	16	48	6/10	4-6 weeks	histological examination, rapid urease test	¹³ C-UBT	clarithromycin	1000 mg bid	10d
											amoxicillin	500 mg bid	10d
											lansoprazole	30 mg bid	7d
											clarithromycin	500 mg bid	7d
											amoxicillin	1000 mg bid	7d
				7d probiotic	17	51	8/9	4-6 weeks	histological examination	¹³ C-UBT	lansoprazole	30 mg bid	7d
											clarithromycin	500 mg bid	7d
											amoxicillin	1000 mg bid	7d
											Lactobacillus reuteri	1 tablet bid	7d
											14d probiotic	17	52
clarithromycin	500 mg bid	14d											
amoxicillin	1000 mg bid	14d											
probiotic mixture	5000 mg/dose bid	14d											
7d probiotic	15	50	7/8	4-6 weeks	histological examination	¹³ C-UBT	lansoprazole	30 mg bid	7d				
							clarithromycin	500 mg bid	7d				
							amoxicillin	1000 mg bid	7d				
							probiotic mixture	5000 mg/dose bid	7d				
Seddik H 2013 (109)	Morocco	3	open-label, single-center, RCT	10d sequential	140	43.1±12.8	81/59	4-6 weeks	histological examination	¹³ C-UBT	omeprazole	20 mg bid	1-5d
											amoxicillin	1000 mg bid	1-5d
											omeprazole	20 mg bid	6-10d
											tinidazole	500 mg bid	6-10d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment			
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
											clarithromycin	500 mg bid	6-10d
				7d triple	141	42.9 \pm 13.1	82/59	4-6 weeks	histological examination	¹³ C-UBT	omeprazole	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
Sheu BS 2002 (110)	Taiwan	2	RCT	7d probiotic	80	47.8	40/40	4 weeks	¹³ C-UBT, histological examination, rapid urease test	¹³ C-UBT, histological examination, rapid urease test	lansoprazole	30 mg bid	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
											Lactobacillus- and Bifidobacterium-containing yogurt	200 ml bid	5 weeks
				7d triple	80	45.9	38/42	8 weeks	¹³ C-UBT, histological examination, rapid urease test	¹³ C-UBT, histological examination, rapid urease test	lansoprazole	30 mg bid	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
Sokwala A 2012 (111)	Kenya	3	RCT	7d triple	60	34 \pm 10	25/35	6 weeks	stool antigen tests	stool antigen tests	esomeprazole	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
				14d triple	60	36 \pm 11	24/36	6 weeks	stool antigen tests	stool antigen tests	esomeprazole	20 mg bid	14d
											amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
Song MJ 2010 (112)	South Korea	3	RCT	7d triple	331	49.84 \pm 11.4	219/112	4 weeks	rapid urease test, histological examination	¹³ C-UBT	omeprazole	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment				
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration	
				7d probiotic	330	49.76 \pm 11.7	185/145	4 weeks	rapid urease test, histological examination	¹³ C-UBT	omeprazole amoxicillin clarithromycin	20 mg bid 1000 mg bid 500 mg bid	7d 7d 7d	
												Saccharomyces boulardii 3 \times 10 ¹⁰ colony-forming units/g	tid	4 weeks
				14d triple	104	46.22(19-83)	36/68	6 weeks	UBT, histological examination	UBT	lansoprazole amoxicillin clarithromycin	30 mg bid 1000 mg bid 500 mg bid	14d 14d 14d	
				10d bismuth	102	41.88(17-72)	39/63	6 weeks	UBT, histological examination	UBT	bismuth subcitrate lansoprazole tetracycline metronidazole	300 mg qid 30 mg bid 500 mg qid 500 mg bid	10d 10d 10d 10d	
Spinzi GC 2000 (114)	Italy	3	multi-center, RCT, single-blind	7d	97	47.0(21-80)	61/36	4-6 weeks	rapid urease test, histological examination	rapid urease test, histological examination	ranitidine bismuth citrate amoxycillin clarithromycin	400 mg bid	7d 7d 7d 7d	
				7d triple	95	47.2(18-80)	63/32	4-6 weeks	rapid urease test, histological examination	rapid urease test, histological examination	omeprazole amoxycillin clarithromycin	20 mg bid 1000 mg bid 500 mg bid	7d 7d 7d	
Sun QJ 2010 (115)	China	2	RCT, open-label	7d bismuth	80	42.2 (20-74)	45/35	6 weeks	histological examination, rapid	¹³ C-UBT	omeprazole amoxicillin	20 mg bid 1000 mg bid	7d 7d	

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				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
									urease test, culture		clarithromycin	500 mg bid	7d
											bismuth	220 mg bid	7d
											potassium citrate		
				14d bismuth	80	44.8 (18-75)	42/38	6 weeks	histological examination, rapid urease test, culture	¹³ C-UBT	omeprazole	20 mg bid	14d
											amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
											bismuth	220 mg bid	14d
											potassium citrate		
Sung JJ 1998 (116)	China	2	single-blind, RCT	7d ranitidine bismuth	50	45(18-67)	32/18	4 weeks	rapid urease test, histological examination, ¹³ C-UBT	rapid urease test, histological examination, ¹³ C-UBT	ranitidine bismuth citrate	400 mg bid	7d
				7d triple	48	44(20-69)	39/9	4 weeks	rapid urease test, histological examination, ¹³ C-UBT	rapid urease test, histological examination, ¹³ C-UBT	omeprazole	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
Taghavi SA 2009 (117)	Iran	2	RCT, double-blind	14d bismuth	69			4 weeks	histological examination, rapid urease test	¹³ C-UBT	amoxicillin	1000 mg bid	14d
						NA	NA				omeprazole	20 mg bid	14d
											furazolidone	100 mg bid	14d
											bismuth	240 mg bid	14d
				14d triple	53			4 weeks	histological examination, rapid urease test	¹³ C-UBT	amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
											omeprazole	20 mg bid	14d
Telaku S 2013 (118)	Kosovo	1	RCT	7d levofloxacin	58	43.33±15.54	29/29	4 weeks	histological, rapid urease test, H	histological, rapid urease	omeprazole	20 mg bid	7d
											levofloxacin	500 mg oid	7d

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment			
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Ungan M 2001 (119)	Turkey	2	open-label, RCT	10d levofloxacin	47	37.72±13.45	17/30	4 weeks	pylori stool antigen	test, <i>H. pylori</i> stool antigen	amoxicillin	1000 mg bid	7d
									histological, rapid urease test, <i>H. pylori</i> stool antigen	histological, rapid urease test, <i>H. pylori</i> stool antigen	omeprazole	20 mg bid	10d
				7d concomitant	25			6 weeks	rapid urease test, histological examination	rapid urease test, histological examination	lansoprazole	30 mg qd	1-28d
									amoxicillin	1000 mg bid	1-7d		
				10d triple	30			6 weeks	rapid urease test, histological examination	rapid urease test, histological examination	clarithromycin	500 mg bid	1-7d
									omeprazole	250 mg bid	1-7d		
				10d triple	30	37±13	NA	6 weeks	rapid urease test, histological examination	rapid urease test, histological examination	omeprazole	20 mg bid	1-7d
									omeprazole	20 mg qd	8-28d		
				7d ranitidine bismuth	30			6 weeks	rapid urease test, histological examination	rapid urease test, histological examination	amoxicillin	1000 mg bid	1-10d
									clarithromycin	500 mg bid	1-10d		
14d bismuth	100	41.5 (18-68)	59/41	6 weeks	UBT, histological examination	¹⁴ C-UBT	lansoprazole	30 mg qd	1-28d				
					bismuth citrate	amoxicillin	1000 mg bid	1-7d					
Uygun A 2012 (120)	Turkey	3	open-label, single-center, RCT	14d concomitant	100	40.9 (19-72)	53/47	6 weeks	UBT, histological examination	¹⁴ C-UBT	esomeprazole	40 mg bid	14d
											tetracycline	500 mg qid	14d
				14d bismuth	100	41.5 (18-68)	59/41	6 weeks	UBT, histological examination	¹⁴ C-UBT	amoxicillin	1000 mg bid	14d
											metronidazole	500 mg tid	14d
				14d bismuth	100	41.5 (18-68)	59/41	6 weeks	UBT, histological examination	¹⁴ C-UBT	bismuth	300 mg qid	14d

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Uygun A 2007 (121)	Turkey	3	single-blind, RCT, parallel arm	14d bismuth	120	41.1 (19-70)	69/51	6 weeks	¹⁴ C-UBT, histological examination	¹⁴ C-UBT	esomeprazole	40 mg bid	14d
											tetracycline	500 mg qid	14d
											amoxicillin	1000 mg bid	14d
											bismuth subsalicylate	300 mg qid	14d
				14d triple	120	40.7 (19-70)	73/47	6 weeks	¹⁴ C-UBT, histological examination	¹⁴ C-UBT	lansoprazole	30 mg bid	14d
											amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
											metronidazole	500 mg tid	14d
Vaira D 2007 (122)	Italy	5	RCT, double-blind	10d sequential	150	48.6 \pm 14	59/91	4-8 weeks	¹³ C-UBT, rapid urease test, histological examination, culture	¹³ C-UBT	pantoprazole	40 mg bid	1-5d
											amoxicillin	1000 mg bid	1-5d
											pantoprazole	40 mg bid	6-10d
				10d triple	150	49.2 \pm 15	51/99	4-8 weeks	¹³ C-UBT, rapid urease test, histological examination, culture	¹³ C-UBT	clarithromycin	500 mg bid	6-10d
											tinidazole	500 mg bid	6-10d
											pantoprazole	40 mg bid	10d
Vakil N 2004 (123)	United States	5	multi-center, double-blind, parallel, RCT	7d triple	200	46.9 \pm 0.95	94/106	6-10 weeks	¹³ C-UBT, serological testing, rapid urease test, culture	¹³ C-UBT	rabeprazole	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment			
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration	
Valooran GJ 2011 (124)	India	3	RCT	10d triple	202	48.2 \pm 0.92	96/106	6-10 weeks	¹³ C-UBT, serological testing, rapid urease test, culture	¹³ C-UBT	rabeprazole	20 mg bid	10d	
								amoxicillin			1000 mg bid	10d		
								clarithromycin			500 mg bid	10d		
Wang PW 2008 (125)	China	2	RCT	10d triple	36	42 \pm 13.8	34/2	2 months	urease testing, histological examination	endoscopy	omeprazole	20 mg bid	10d	
								clarithromycin			500 mg bid	10d		
								amoxicillin			1000 mg bid	10d		
				10d sequential	37	45 \pm 12.7	35/2	2 months			urease test, histological examination	endoscopy	omeprazole	20 mg bid
				amoxicillin	1000 mg bid	1-5d	omeprazole	20 mg bid	6-10d	clarithromycin	500 mg bid	6-10d		
				amoxicillin	1000 mg bid	6-10d								
Wong BC 2001 (126)	China	3	RCT	7d	20	48.6 \pm 10.2	11/9	35 days	rapid urease test, histological examination, ¹³ C-UBT	¹³ C-UBT	ranitidine	200 mg bid	7d	
								bismuth citrate						
								clarithromycin			500 mg bid	7d		
								amoxicillin			1000 mg bid	7d		
				7d triple	20	50.5 \pm 9.3	10/10	35 days	rapid urease test, histological examination, ¹³ C-UBT	¹³ C-UBT	esomeprazole	20 mg bid	7d	
										clarithromycin	500 mg bid	7d		
										amoxicillin	1000 mg bid	7d		
Wong BC 2001 (126)	China	3	RCT	7d	90	49.8 \pm 14.5	29/61	6 weeks	culture, rapid urease test, histological examination, ¹³ C-UBT	culture, rapid urease testing, histological examination, ¹³ C-UBT	ranitidine	400 mg bid	7d	
								bismuth citrate						
								clarithromycin			250 mg bid	7d		
								metronidazole			400 mg bid	7d		
				7d triple	90	45.9 \pm 14.4	38/52	6 weeks	culture, rapid	culture, rapid	omeprazole	20 mg bid	7d	

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment		
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Wu DC 2010 (127)	Taiwan	3	RCT	10d sequential	117	51.7 \pm 12	61/56	8 weeks	urease test, histological examination, ¹³ C-UBT	urease testing, histological examination, ¹³ C-UBT	clarithromycin	250 mg bid	7d
											metronidazole	400 mg bid	7d
											esomeprazole	40 mg bid	1-5d
				10d concomitant	115	51.8 \pm 11	60/55	8 weeks	culture, rapid urease test, histological examination	culture, rapid urease test, ¹³ C-UBT, histological examination	amoxicillin	1000 mg bid	1-5d
											clarithromycin	500 mg bid	6-10d
											metronidazole	500 mg bid	6-10d
esomeprazole	40 mg bid	6-10d											
Wu GL 2011 (128)	China	3	RCT	10d sequential	52	49.85 \pm 17.15	20/32	4 weeks	histological examination, rapid urease test, ¹³ C-UBT	histological examination, rapid urease test, ¹³ C-UBT	esomeprazole	20 mg bid	1-5d
											amoxicillin	1000 mg bid	1-5d
											esomeprazole	20 mg bid	6-10d
				14d triple	51	48.53 \pm 15.55	24/27	4 weeks	histological examination, rapid urease test, ¹³ C-UBT	histological examination, rapid urease test, ¹³ C-UBT	clarithromycin	500 mg bid	6-10d
											tinidazole	500 mg bid	6-10d
											esomeprazole	20 mg bid	14d
clarithromycin	500 mg bid	14d											
amoxicillin	1000 mg bid	14d											
Xu MH	China	2	RCT	7d bismuth	67	43.2 \pm 10.7	37/30	4 weeks	¹³ C-UBT,	¹⁴ C-UBT	esomeprazole	20 mg bid	7d

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration								
2011 (129)												clarithromycin	500 mg bid	7d							
												7d triple	69	43.3 \pm 11.7	39/30	4 weeks	¹⁴ C-UBT, <i>H. pylori</i> SA test, serum <i>H. pylori</i> antibodies, culture, rapid urease test, histological examination	¹⁴ C-UBT	esomeprazole	20 mg bid	7d
																			clarithromycin	500 mg bid	7d
																			amoxicillin	1000 mg bid	7d
																			bismuth	220 mg bid	7d
																			potassium citrate		
Yanai A 2012 (130)	Japan	2	RCT	7d concomitant	59	63 \pm 8.7	48/11	3 months	rapid urease test, culture, histological examination	¹³ C-UBT	esomeprazole	30 mg bid	7d								
											amoxicillin	750 mg bid	7d								
											clarithromycin	200 mg bid	7d								
											metronidazole	250 mg bid	7d								
Yaşar B 2010 (131)	Turkey	2	RCT	14d probiotic	38	38.32 \pm 10.66	11/27	4 weeks	histopathological examination	¹³ C-UBT	pantoprazole	40 mg bid	14d								
											amoxicillin	1000 mg bid	14d								
											clarithromycin	500 mg bid	14d								

Authors	Country	Jadad score	Study design	Patients' characteristic						Treatment			
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
											probiotic-containing yogurt (Bifidobacterium DN-173 010-10 ¹⁰ colony forming units/g)	125 ml qd	14d
				14d triple	38	36.95 \pm 8.62	14/24	4 weeks	histopathological examination	¹³ C-UBT	pantoprazole	40 mg bid	14d
											amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
Zagari RM 2007 (132)	Italy	5	double-blind, parallel-group, RCT	7d triple	301	45.5 \pm 11.8	206/95	4 weeks	rapid urease test, ¹³ C-UBT, histological examination	¹³ C-UBT, histological examination	omeprazole	20 mg bid	7d
											amoxicillin	1000 mg bid	7d
											clarithromycin	500 mg bid	7d
				14d triple	302	46.7 \pm 11.6	216/86	4 weeks	rapid urease test, ¹³ C-UBT, histological examination	¹³ C-UBT, histological examination	omeprazole	20 mg bid	14d
											amoxicillin	1000 mg bid	14d
											clarithromycin	500 mg bid	14d
Zhang XM 2010 (133)	China	2	RCT	7d levofloxacin	58			4 weeks	rapid urease test, ¹³ C-UBT, histological examination	¹³ C-UBT	levofloxacin	200 mg bid	7d
											clarithromycin	500 mg bid	7d
											rabeprazole	10 mg bid	7d
				7d bismuth	46	NA	NA	4 weeks	rapid urease test, ¹³ C-UBT, histological examination	¹³ C-UBT	levofloxacin	200 mg bid	7d
											clarithromycin	500 mg bid	7d
											rabeprazole	10 mg bid	7d
											colloidal bismuth	200 mg bid	7d
				7d bismuth	41			4 weeks	rapid urease test, ¹³ C-UBT,	¹³ C-UBT	rabeprazole	10 mg bid	7d
											clarithromycin	500 mg bid	7d

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment		
				Treatment	No. of patients	Age(range) or ± (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
Zhao QX 2009 (134)	China	2	RCT	10d sequential	62	35(18-69)	35/27	4 weeks	histological examination	¹³ C-UBT	tinidazole	400 mg bid	7d
											colloidal bismuth	200 mg bid	7d
											pantoprazole	40 mg bid	1-5d
				7d triple	58	37(19-68)	33/25	4 weeks	histological examination	¹³ C-UBT	amoxicillin	1000 mg bid	1-5d
											pantoprazole	40 mg bid	6-10d
											clarithromycin	500 mg bid	6-10d
Zheng Q 2010 (135)	China	2	single-center, open, parallel controlled, RCT	7d triple	85	43.03±13.46	30/55	4 weeks	¹³ C-UBT, histological examination	¹³ C-UBT	tinidazole	500 mg bid	6-10d
											pantoprazole	40 mg bid	7d
											clarithromycin	500 mg bid	7d
				10d bismuth	85	41.23±12.96	46/39	4 weeks	¹³ C-UBT, histological examination	¹³ C-UBT	amoxicillin	1000mg bid	7d
											pantoprazole	40 mg bid	7d
											colloidal bismuth subcitrate	220 mg bid	10d
Zheng Q 2009 (136)	China	2	RCT, single-center, open, parallel controlled	7d triple	45	18-75	74/59	4 weeks	rapid urease test, histological examination	¹³ C-UBT	metronidazole	400 mg tid	10d
											pantoprazole	40 mg bid	7d
											amoxicillin	1000 mg bid	7d
				10d bismuth	45			4 weeks	rapid urease test,	¹³ C-UBT	clarithromycin	500 mg bid	7d
											pantoprazole	40 mg bid	10d

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration	
Ziemniak W 2006 (139)	Poland	1	RCT	10d triple	192	43.7 \pm 10.3	78/114	6 weeks	endoscopy, UBT	¹³ C-UBT	<i>pylori</i> antibody, histological examination	amoxicillin	1000 mg bid	10d
											PPI	standard dose bid	10d	
											clarithromycin	500 mg bid	10d	
				10d bismuth	241	45.1 \pm 12.3	102/139	6 weeks	endoscopy, UBT	¹³ C-UBT	amoxicillin	1000 mg bid	10d	
											PPI	standard dose bid	10d	
											tetracycline	500 mg qid	10d	
10d probiotic	53	44.4 \pm 13.3	14/39	6 weeks	endoscopy, UBT	¹³ C-UBT	tinidazole	500 mg bid	10d					
							bismuth salt	120 mg qid	10d					
							Lacidofil containing Lactobacillus acidophilus and Lactobacillus rhamnosus	2 capsules bid	10d					
Zojaji H 2013 (140)	Iran	2	RCT	14d probiotic	80	47.1 \pm 11.4	66/94	8 weeks	biopsy	¹³ C-UBT	PPI	standard dose bid	10d	
											clarithromycin	500 mg bid	10d	
											amoxicillin	1000 mg bid	10d	
											amoxicillin	1000 mg bid	14d	
											clarithromycin	500 mg bid	14d	
											omeprazole	20 mg bid	14d	

Authors	Country	Jadad score	Study design	Patients' characteristic							Treatment			
				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration	
												saccharomyces boulardii	250 mg bid	14d
				14d triple	80			8 weeks	biopsy	¹³ C-UBT		amoxicillin	1000 mg bid	14d
												clarithromycin	500 mg bid	14d
												omeprazole	20 mg bid	14d
Zullo A 2005 (141)	Italy	3	open-label, three-center, RCT	10d sequential	89	69 (65-83)	50/39	4-6 weeks	histological examination, rapid urease test	histological examination, rapid urease test		rabeprazole	20 mg bid	1-5d
												amoxicillin	1000 mg bid	1-5d
												rabeprazole	20 mg bid	6-10d
												clarithromycin	500 mg bid	6-10d
												tinidazole	500 mg bid	6-10d
				7d triple	90	70 (65-78)	56/34	4-6 weeks	histological examination, rapid urease test	histological examination, rapid urease test		rabeprazole	20 mg bid	7d
												clarithromycin	500 mg bid	7d
												amoxicillin	1000 mg bid	7d
Zullo A 2013 (142)	Italy	3	multi-center, open-label, RCT	10d sequential	90	49.4 \pm 14.3	35/55	6 weeks	histological examination, rapid urease test	¹³ C-UBT		omeprazole	20 mg bid	1-5d
												amoxicillin	1000 mg bid	1-5d
												omeprazole	20 mg bid	6-10d
												clarithromycin	500 mg bid	6-10d
												tinidazole	500 mg bid	6-10d
				14d hybrid	90	49.9 \pm 13.8	38/52	6 weeks	histological examination, rapid urease test	¹³ C-UBT		omeprazole	20 mg bid	1-14d
												amoxicillin	1000 mg bid	1-14d
												clarithromycin	500 mg bid	8-14d
												tinidazole	500 mg bid	8-14d
Zullo A 2003 (143)	Italy	3	open-label, RCT	10d sequential	522	52 \pm 13	258/264	6 weeks	rapid urease test, histological	rapid urease test, histological		rabeprazole	40 mg qd	1-5d
												amoxicillin	1000 mg bid	1-5d

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				Treatment	No. of patients	Age(range) or \pm (SD) year	Man/Women (n1/n2)	Follow-up	Confirmation of <i>H. pylori</i> infection	Confirmation of Eradication	Intervention	Dosage	Duration
									examination, ¹³ C-UBT	examination, ¹³ C-UBT	rabeprazole clarithromycin tinidazole	20 mg bid 500 mg bid 500 mg bid	6-10d 6-10d 6-10d
				7d triple	527	53 \pm 13.3	287/240	6 weeks	rapid urease test, histological examination, ¹³ C-UBT	rapid urease test, histological examination, ¹³ C-UBT	rabeprazole clarithromycin amoxicillin	20 mg bid 500mg bid 1000 mg bid	7d 7d 7d

RCT=randomized controlled trials; UBT=urea breath test; PPI=proton pump inhibitor; NA=Not applicable. See Table 1 for key of intervention regimen names and descriptions;