

Ulcera peptica: eradicare l'HP ?

Alessandro Giordano

✓ **Cenni epidemiologici**

✓ **Eradicare l'HP?**

Prognosi dell'ulcera

Cancro gastrico

Uso di NSAID

Reflusso G.E

Controversie

✓ **Terapia**

Helicobacter Pylori

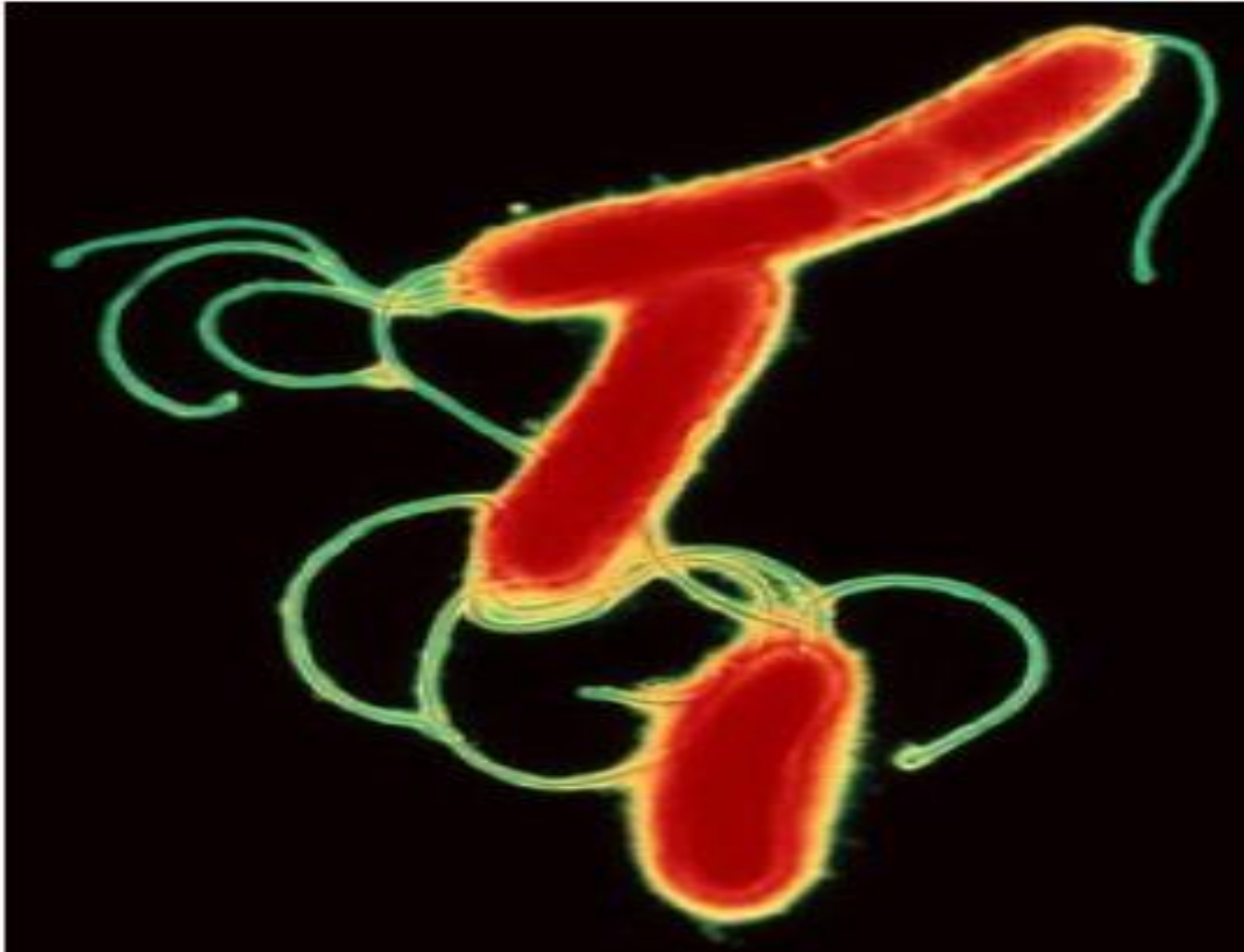


Table 2. Diagnostic Testing for *Helicobacter pylori*

Endoscopic Testing	Advantages	Disadvantages
*1. Histology	Excellent sensitivity and specificity	Expensive and requires infrastructure and trained personnel
*2. Rapid urease testing	Inexpensive and provides rapid results. Excellent specificity and very good sensitivity in properly selected patients	Sensitivity significantly reduced in the posttreatment setting
*3. Culture	Excellent specificity. Allows determination of antibiotic sensitivities	Expensive, difficult to perform, and not widely available. Only marginal sensitivity
*4. Polymerase chain reaction	Excellent sensitivity and specificity. Allows determination of antibiotic sensitivities	Methodology not standardized across laboratories and not widely available
Nonendoscopic Testing	Advantages	Disadvantages
1. Antibody testing (quantitative and qualitative)	Inexpensive, widely available, very good NPV	PPV dependent upon background <i>H. pylori</i> prevalence. Not recommended after <i>H. pylori</i> therapy
*2. Urea breath tests (¹³ C and ¹⁴ C)	Identifies active <i>H. pylori</i> infection. Excellent PPV and NPV regardless of <i>H. pylori</i> prevalence. Useful before and after <i>H. pylori</i> therapy	Reimbursement and availability remain inconsistent
*3. Fecal antigen test	Identifies active <i>H. pylori</i> infection. Excellent positive and negative predictive values regardless of <i>H. pylori</i> prevalence. Useful before and after <i>H. pylori</i> therapy	Polyclonal test less well validated than the UBT in the posttreatment setting. Monoclonal test appears reliable before and after antibiotic therapy. Unpleasantness associated with collecting stool

*The sensitivity of all endoscopic and nonendoscopic tests that identify active *H. pylori* infection is reduced by the recent use of PPIs, bismuth, or antibiotics
PPI = proton pump inhibitor; PPV = positive predictive value; NPV = negative predictive value; UBT = urea breath test.

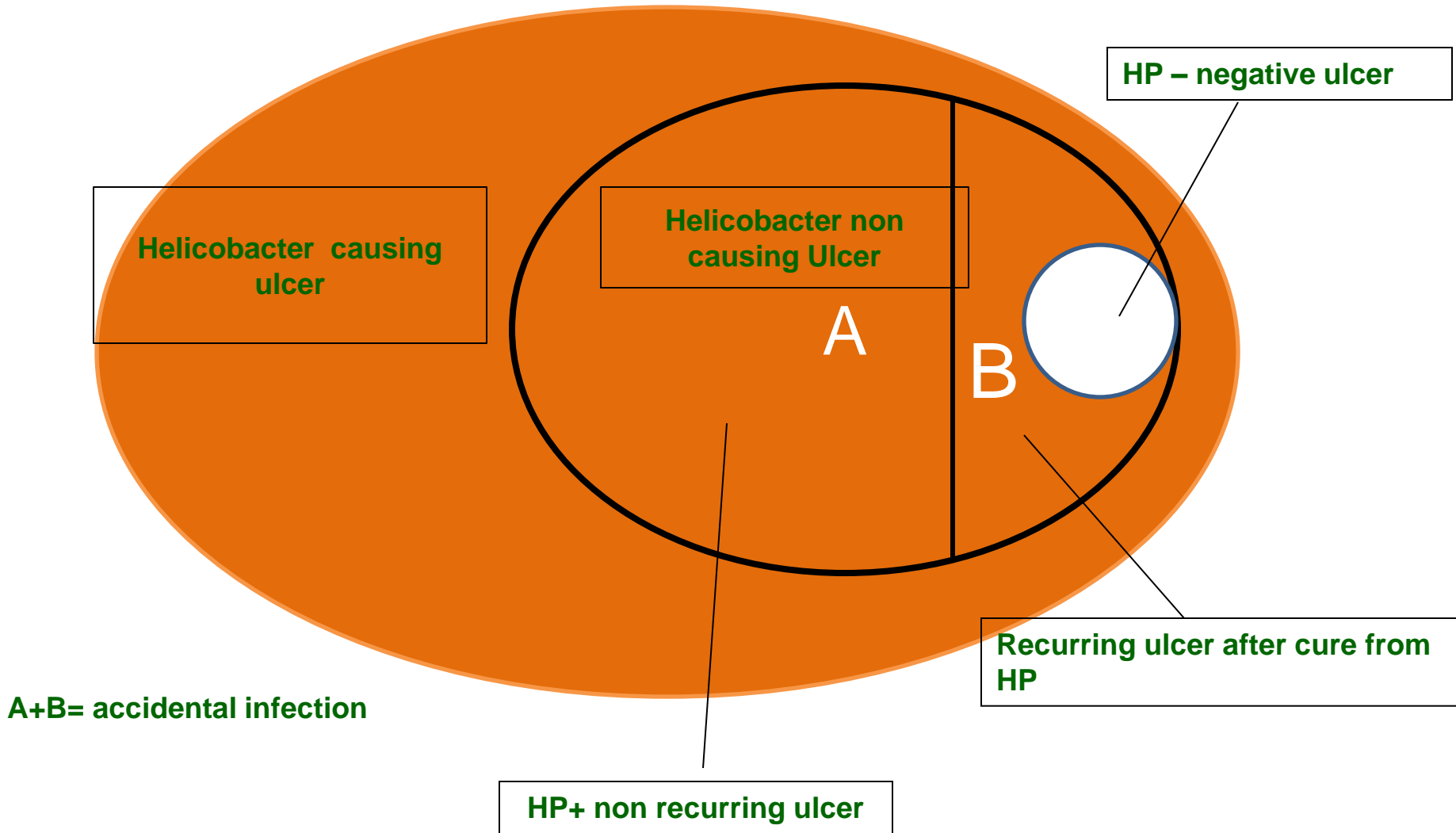
Epidemiologia

- La prevalenza dell'infezione nella popolazione generale è in diminuzione, specialmente tra la popolazione giovane.
- Il contagio avviene prevalentemente durante l'infanzia.
- Nei paesi in via di sviluppo la maggior parte dei bambini (<10 aa) è infetta e il picco raggiunge circa l'80% a 50 anni.
- Nei paesi sviluppati l'evidenza sierologica di infezione raggiunge il 50% negli ultrasessantenni.
- In America l'incidenza di ulcera in pazienti infetti da HP è di circa 1% all'anno; una percentuale dalle 6 alle 10 volte maggiore rispetto a soggetti non infetti.

Epidemiologia

- La prevalenza di infezione da HP è alta nella popolazione anziana: dal 53% al 73% degli anziani con ulcera sono infetti da HP. Tale percentuale raggiunge l'85% tra i pazienti istituzionalizzati (Best practice & Research Clinical Gastroenterology 2004)
- Nei molto anziani la prevalenza scende al 50% (Age Aging 1996)
- La prevalenza di ulcere gastriche e duodenali è maggiore in aree a bassa prevalenza di infezione da HP (BMJ 2009)
- Esistono significative variazioni regionali sui dati di prevalenza di ulcere duodenali all'interno di aree ad ampia diffusione di HP (BMJ 2009)

Dissociation of H.Pylori positive and negative ulcer with H. Pylori causing and non causing ulcera.



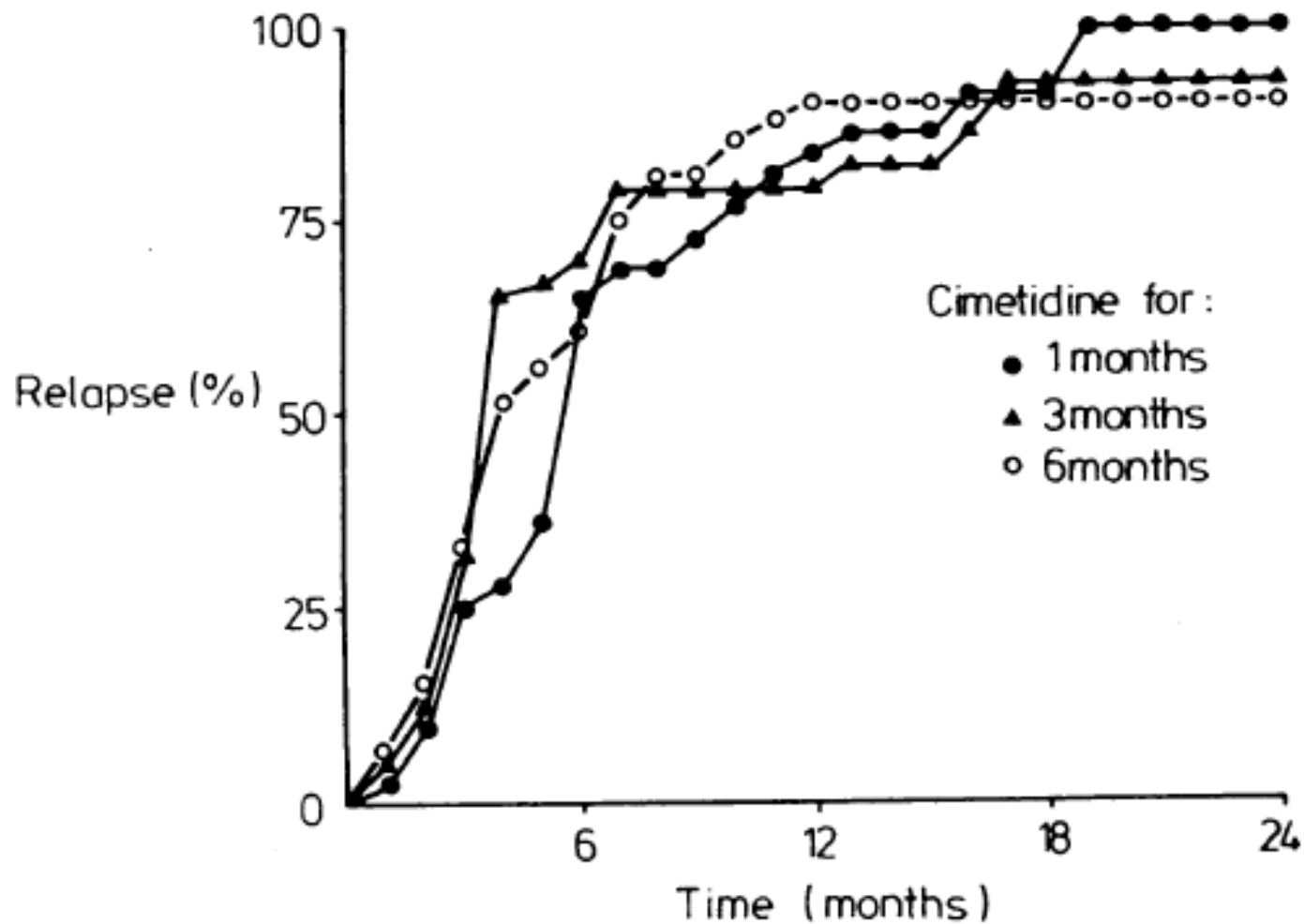


FIG 2—Estimated probability of symptomatic plus silent relapse during placebo treatment.

Size of the peptic ulcer in Helicobacter Pylori-positive patients: association with the clinical and histological characteristics

At the 8 weeks' control, healing of peptic ulcers was found in 74,7% (70.0-80.0) (95% CI) of the patients whose H. Pylori eradication was successful and in 30.4% (13.2-52.9) of the patients who remained H. Pylori-positive ($p < 0.01$). We also analyzed the influence of the duration of PPI medications on healing the peptic ulcers. Healing occurred in 91.7% of the patients receiving 4 weeks of PPI treatment and in 94.6% in patients receiving 2 weeks of PPI treatment. *In patients who remained H. Pylori-infected, the duration of PPI treatment did not influence healing of the peptic ulcer (81.8% versus 83.3%)*

A meta-analysis comparing eradication, healing and relapse rates in patients with Helicobacter pylori-associated gastric or duodenal ulcer

A. LEODOLTER*, M. KULIG†, H. BRASCH‡, W. MEYER-SABELLEK‡, S. N. WILLICH†
& P. MALFERTHEINER*

**Department of Gastroenterology, Hepatology and Infectious Diseases, University of Magdeburg, Magdeburg;*

†Institute of Social Medicine and Epidemiology, Charité University of Berlin, Berlin; and ‡AstraZeneca, Wedel, Germany

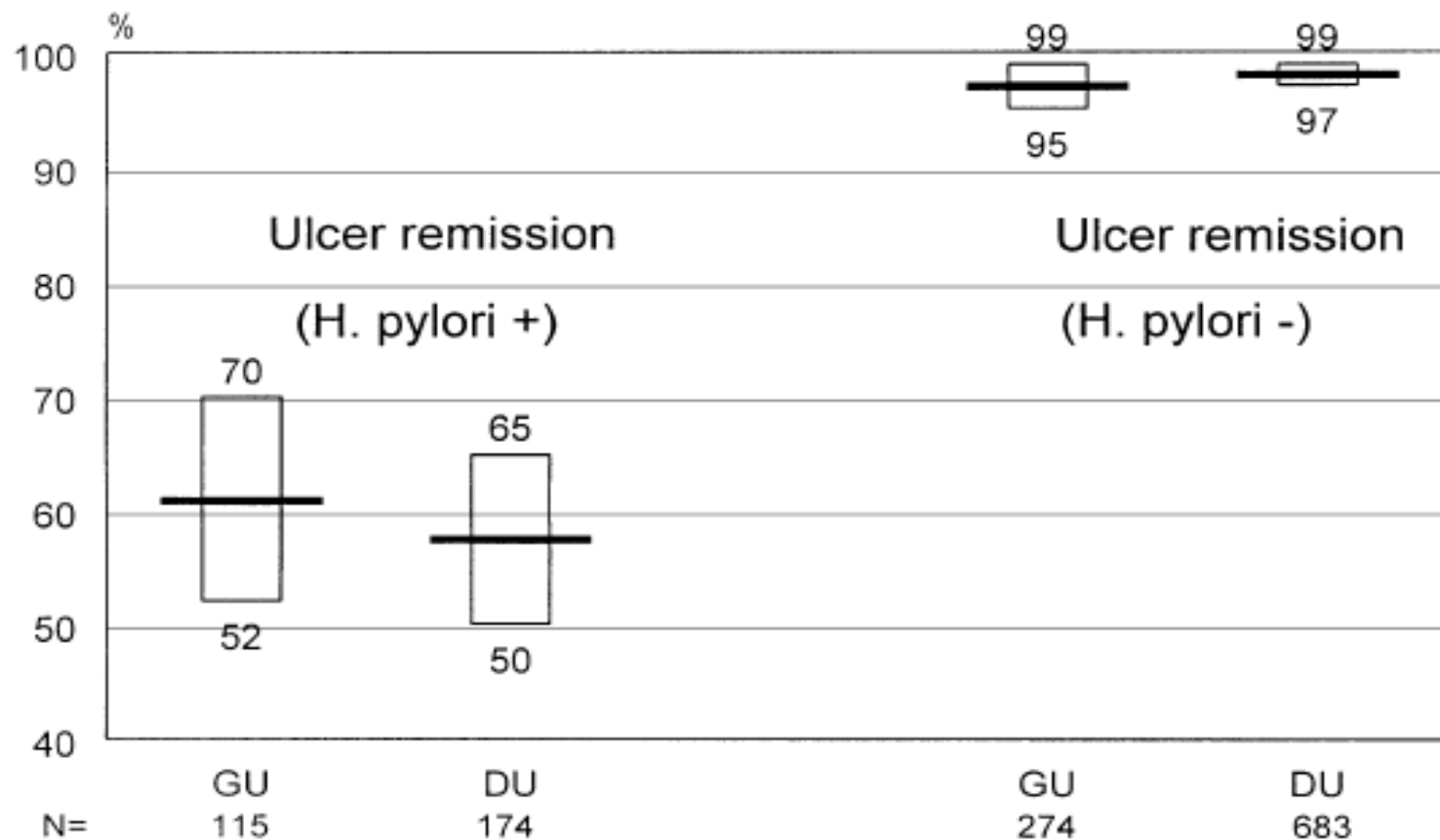


Figure 2. Comparison of no ulcer relapse rates in *H. pylori*-positive and *H. pylori*-negative patients with gastric (GU) or duodenal (DU) ulcer 12 months after treatment.

Ulcere recidivanti: come prevenirle?

Oltre a rivalutare reinfezione da HP e consumo di NSAID è fondamentale identificare i soggetti ad alto rischio:

- 1) Storia passata di ulcere complicate (sanguinamento o perforazione) predice la ricorrenza
- 2) Storia clinica di ulcere ricorrenti o refrattarie alla terapia iniziale
- 2) Ulcere voluminose

In questi pazienti impostare terapia di mantenimento con PPI indipendentemente dalla positività ai test per HP

Meta-analysis: Helicobacter pylori eradication therapy vs. antisecretory non-eradication therapy for the prevention of recurrent bleeding from peptic ulcer

SUMMARY

Aim: To perform a meta-analysis comparing the efficacy of *Helicobacter pylori* eradication therapy vs. antisecretory non-eradication therapy for the prevention of recurrent bleeding from peptic ulcer.

Methods: A search was made of the Cochrane Controlled Trials Register, MEDLINE, EMBASE, CINAHL and several congresses for controlled clinical trials comparing the efficacy of *H. pylori* eradication therapy vs. antisecretory non-eradication therapy for the prevention of peptic ulcer re-bleeding. Studies with all patients taking non-steroidal anti-inflammatory drugs were excluded. Extraction and quality assessment of the studies were performed by two reviewers.

Results: In the first meta-analysis, the mean percentage of re-bleeding in the *H. pylori* eradication therapy group was 4.5%, compared with 23.7% in the non-eradication

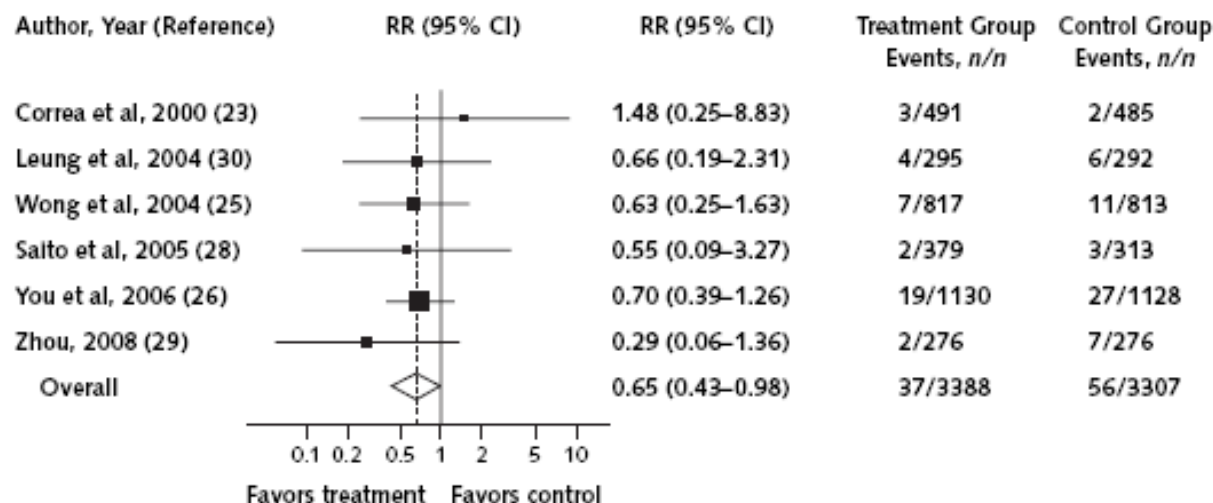
therapy group without long-term antisecretory therapy [odds ratio, 0.18; 95% confidence interval (CI), 0.09–0.37; 'number needed to treat' (NNT), 5; 95% CI, 4–8]. In the second meta-analysis, the re-bleeding rate in the *H. pylori* eradication therapy group was 1.6%, compared with 5.6% in the non-eradication therapy group with maintenance antisecretory therapy (odds ratio, 0.25; 95% CI, 0.08–0.76; NNT, 20; 95% CI, 12–100). When only patients with successful *H. pylori* eradication were included, the re-bleeding rate was 1%.

Conclusions: The treatment of *H. pylori* infection is more effective than antisecretory non-eradication therapy (with or without long-term maintenance antisecretory treatment) in the prevention of recurrent bleeding from peptic ulcer. Consequently, all patients with peptic ulcer bleeding should be tested for *H. pylori*, and eradication therapy should be prescribed to infected patients.

Meta-analysis: Can *Helicobacter pylori* Eradication Treatment Reduce the Risk for Gastric Cancer?

Lorenzo Fuccio, MD; Rocco Maurizio Zagari, MD; Leonardo Henry Eusebi, MD; Liborla Laterza, MD; Vincenzo Cennamo, MD; Liza Ceroni, MD; Diego Grilli, PhD; and Franco Bazzoli, MD

Figure 2. Forest plot of 6 studies reporting gastric cancer in treated and nontreated groups.



The area of the boxes corresponds to the weight of each study. RR = relative risk.

The influence of the eradication of *Helicobacter pylori* on gastric ghrelin, appetite, and body mass index in patients with peptic ulcer disease

Eun Jeong Jang,* Sang Woon Park,* Ju Sang Park,* Sang Jong Park,* Ki-Baik Hahm,* So Ya Paik,[†] Mi Kyung Sin,[†] Eon Sook Lee,[‡] Sang Woo Oh,[§] Cheol Young Park[¶] and Hyun Wook Baik*

Table 2 Ghrelin, TNF- α , BMI, and histologic changes according to eradication status of *Helicobacter pylori* (*H. pylori*)

Parameter	Successful <i>H. pylori</i> eradication			Failed <i>H. pylori</i> eradication		
	Before	End	<i>P</i> -values	Before	End	<i>P</i> -values
Plasma ghrelin (pg/mL)	30.12 \pm 10.23	40.75 \pm 41.93	0.35	27.42 \pm 6.76	41.70 \pm 29.06	0.325
Ghrelin mRNA						
Fundus (pg/mL)	2.70 \pm 0.78	3.78 \pm 0.38	0.00	2.81 \pm 0.60	3.42 \pm 0.43	0.067
Antrum (pg/mL)	2.72 \pm 10.5	2.06 \pm 0.29	0.014	2.97 \pm 1.32	2.13 \pm 0.34	0.126
TNF- α mRNA						
Fundus (pg/mL)	7.25 \pm 1.82	5.13 \pm 0.94	0.000	6.41 \pm 1.12	6.08 \pm 1.62	0.706
Antrum (pg/mL)	6.70 \pm 1.06	4.96 \pm 1.43	0.000	6.66 \pm 0.70	5.34 \pm 1.23	0.083
VAS (mm)						
Hunger	41.81 \pm 27.41	61.5 \pm 13.54	0.017	27.83 \pm 21.75	65.67 \pm 31.05	0.075
Prospective food consumption	44.38 \pm 27.71	71.06 \pm 19.80	0.002	47.33 \pm 11.43	60.0 \pm 28.62	0.279
BMI (kg/m ²)	23.11 \pm 3.03	23.62 \pm 3.63	0.152	23.8 \pm 4.51	24.7 \pm 3.77	0.075

Indications for diagnosis and treatment of *H. Pylori*

Established

- Active peptic ulcer disease (gastric or duodenal ulcer)
- Confirmed history of peptic ulcer disease (not previously treated for *H. pylori*)
- Gastric MALT lymphoma (low grade)
- After endoscopic resection of early gastric cancer
- Uninvestigated dyspepsia (depending upon *H. pylori* prevalence)

Controversial

- Nonulcer dyspepsia
 - Gastroesophageal reflux disease
 - Persons using nonsteroidal antiinflammatory drugs
 - Unexplained iron deficiency anemia
 - Populations at higher risk for gastric cancer
-

Effect of *H. pylori* eradication on the outcome of reflux esophagitis and chronic gastritis in elderly

Symptoms	Baseline		Eight weeks		Eight months	
	group 1 (n= 30)	group 2 (n=31)	group 1 (n= 26)	group 2 (n= 26)	group 1 (n= 26)	group 2 (n= 26)
Heartburn	29 (96.6)	27 (87.0)	3 (11.5)	4 (15.4)	2 (7.6)	3 (11.5)
Acid regurgitation	28 (93.3)	28 (90.3)	5 (19.2)	4 (15.4)	2 (7.6)	4 (15.4)
Retrosternal pain	11 (36.6)	15 (48.4)	0 (-)	2 (7.6)	1 (3.8)	1 (3.8)
Epigastric pain	9 (30)	15 (48.4)	4 (15.4)	6 (23.0)	1 (3.8)	1 (3.8)
Dysphagia	11 (36.6)	5 (16.1)	1 (3.8)	4 (15.4)	0 (-)	1 (3.8)
Nausea	9 (30)	9 (29.0)	3 (11.5)	3 (11.5)	0 (-)	0 (-)
Vomiting	6 (20)	7 (22.5)	0 (-)	1 (3.8)	1 (3.8)	0 (-)
Total a. b. c.	30 (100)	31(100)	9 (34.6)	13 (50)	6 (23)	6 (23)
		p= n.s.		p= n.s.		p= n.s.

Results are given as number (%)

ap= 0.0001 baseline vs.8 weeks; bp= 0.004 baseline vs. 8 months; cp= 0.0021 8 weeks vs. months.

Group 1 (PPI only) = Pantoprazole 40 mg daily for 2 months followed by pantoprazole 20 mg daily for 6 months.

Group 2 (PPI + eradication) = Pantoprazole treatment as group 1 plus a 1-week course of amoxicillin 1 g and clarithromycin 250 mg twice daily at baseline.

Variable, score	Group 1 (n= 20) (PPI alone)		Group 2 (n= 21) (PPI + eradication)		p value*
	Baseline	8 Months	Baseline	8 Months	
Antrum Inflammation					
None					
Mild	1	0	2	5	p = 0.04
Moderate/severe	6	13	8	15	
	13 (65)	7 (35)	11 (52.4)	1 (4.7)	
		p = n.s.		p = 0.002	
Activity					
None					
Mild	1	0	3	15	p = 0.008
Moderate/severe	6	11	10	5	
	13 (65)	9 (45)	8 (38)	1 (4.7)	
		p = n.s.		p = 0.02	

* p value = Group 1 vs. group 2 at 8 months

Role of Helicobacter Pylori infection and non-steroidal anti-inflammatory drugs in peptic ulcer disease: a meta-analysis

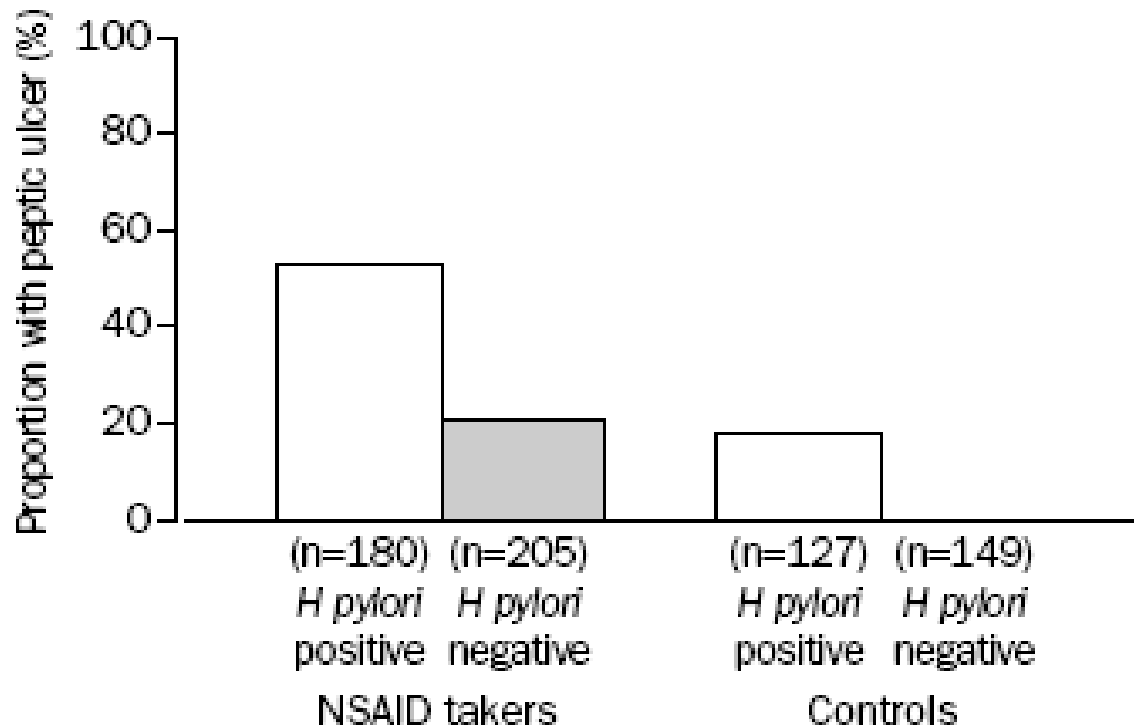


Figure 1: Prevalence of peptic-ulcer disease among NSAID takers and controls by *H. pylori* status

Study ref	PUD In NSAID takers			PUD In non-NSAID takers		
	Number of cases/total		Odds ratio (95% CI)	Number of cases/total		Odds ratio (95% CI)
	<i>H pylori</i> positive	<i>H pylori</i> negative		<i>H pylori</i> positive	<i>H pylori</i> negative	
14	3/26	4/59	1.79 (0.37–8.66)	11/59	0/41	38.5 (0.72–2071)
18	17/30	10/40	3.92 (1.42–10.9)	2/13	0/4	3.40 (0.05–246)
12	9/24	2/14	3.60 (0.65–19.9)	0/8	0/5	0.64 (0.002–181)
13	49/65	11/31	5.57 (2.20–14.1)	4/13	0/37	68.5 (1.14–4124)
11	17/35	16/61	2.66 (1.11–6.37)	6/34	0/62	55.1 (0.99–3078)
Summary			3.53 (2.16–5.75)			18.1 (2.64–124)

PUD=peptic-ulcer disease. Breslow-Day test for homogeneity gave $p=0.72$ for PUD in NSAID takers, and $p=0.32$ for that in non-NSAID takers.

Table 3: Analysis of studies with controls matched for age and sex by *H pylori* status

The Quality of Care for Medicare Patients With Peptic Ulcer Disease

Joshua J. Ofman, M.D., M.S.H.S., Jeff Etchason, M.D., William Alexander, M.D., M.P.H., Beth R. Stevens, M.S., Jeph Herrin, Ph.D., Charles Cangialose, Ph.D., David J. Ballard, M.D., Ph.D., Dale Bratzler, D.O., M.P.H., Kurtis S. Elward, M.D., M.P.H., Dawn FitzGerald, M.S., Joan Culpepper-Morgan, M.D., and Barry Marshall, M.D.

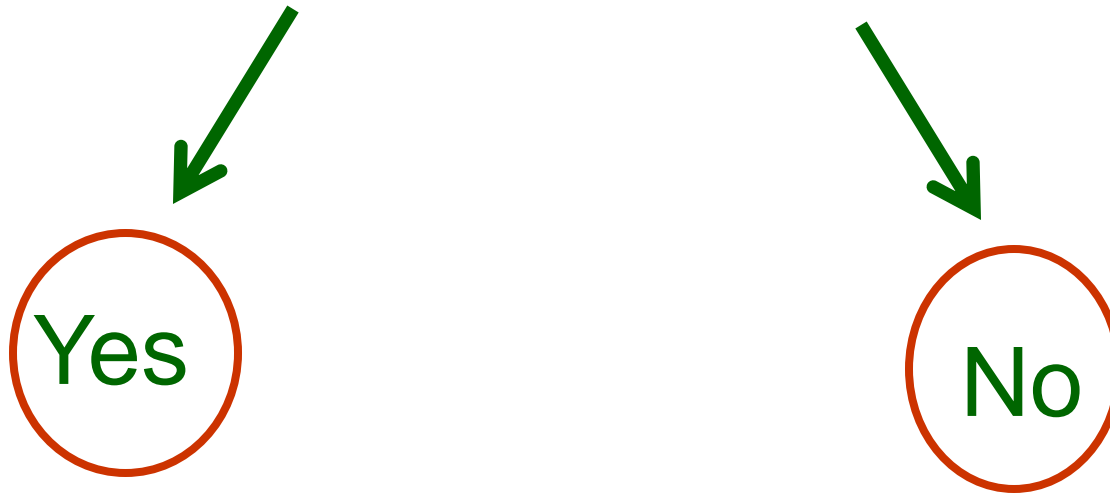
Table 2. Performance on Quality Indicators for Management of Peptic Ulcer Disease in Hospitalized Medicare Patients, 1994–1995

Quality Indicator	Multistate* (Mean Rate)	Multistate (Range)
Percentage of patients tested for <i>H. pylori</i>	57%	50–67%
Percentage of patients with a biopsy performed who received a tissue test	84%	79–86%
Percentage of patients testing positive for <i>H. pylori</i> treated with anti- <i>H. pylori</i> therapy	73%	69–77%
Percentage of patients tested for preadmission NSAID use	74%	63–82%
Percentage of patients counseled about NSAID use	24%	16–30%
Percentage of patients counseled about the ulcer risks associated with NSAID use	2%	1–4%
Percentage of patients tested as outpatients in 12 months before hospitalization	2%†	N/A†

* Colorado, Connecticut, Georgia, Oklahoma, and Virginia.

† n = 529; review of Virginia cases only.

Does Helicobacter Pylori really cause duodenal ulcers?



There is no doubt that treatment of H. Pylori infection does lead to quicker and more stable healing of duodenal ulcer

YES

- **Pre-existing infection with HP is significantly associated with subsequent development of duodenal ulcer**
- **Eradication of HP in people with duodenal ulcers confers significant benefits in terms of both facilitation of ulcer healing and prevention of relapse, compared with therapy with PPI alone**

NO

- **H. Pylori infection doesn't cause duodenal ulcers but prevents healing of an ulcer produced by hyper secretion of gastric acid.**
- **Acid diminishing treatment reduces the principal barrier against gastric HP infection and so the patient becomes infected**

Terapia di eradicazione dell'*H. pylori*

Table 4. First-Line Regimens for *Helicobacter pylori* Eradication

Regimen	Duration	Eradication Rates	Comments
Standard dose PPI b.i.d. (esomeprazole is q.d.), clarithromycin 500 mg b.i.d., amoxicillin 1,000 mg b.i.d.	10–14	70–85%	Consider in nonpenicillin allergic patients who have not previously received a macrolide
Standard dose PPI b.i.d., clarithromycin 500 mg b.i.d., metronidazole 500 mg b.i.d.	10–14	70–85%	Consider in penicillin allergic patients who have not previously received a macrolide or are unable to tolerate bismuth quadruple therapy
Bismuth subsalicylate 525 mg p.o. q.i.d., metronidazole 250 mg p.o. q.i.d., tetracycline 500 mg p.o. q.i.d., ranitidine 150 mg p.o. b.i.d. or standard dose PPI q.d. to b.i.d.	10–14	75–90%	Consider in penicillin allergic patients
PPI + amoxicillin 1 g b.i.d. followed by: PPI, clarithromycin 500 mg, tinidazole 500 mg b.i.d.	5 5	>90%	Requires validation in North America

PPI = proton pump inhibitor; pen = penicillin; p.o. = orally; q.d. = daily; b.i.d. = twice daily; t.i.d. = three times daily; q.i.d. = four times daily.

*Standard dosages for PPIs are as follows:

lansoprazole 30 mg p.o., omeprazole 20 mg p.o., pantoprazole 40 mg p.o., rabeprazole 20 mg p.o., esomeprazole 40 mg p.o.

Note: the above recommended treatments are not all FDA approved. The FDA approved regimens are as follows:

1. Bismuth 525 mg q.i.d. + metronidazole 250 mg q.i.d. + tetracycline 500 mg q.i.d. × 2 wk + H₂RA as directed × 4 wk.
2. Lansoprazole 30 mg b.i.d. + clarithromycin 500 mg b.i.d. + amoxicillin 1 g b.i.d. × 10 days.
3. Omeprazole 20 mg b.i.d. + clarithromycin 500 mg b.i.d. + amoxicillin 1 g b.i.d. × 10 days.
4. esomeprazole 40 mg q.d. + clarithromycin 500 mg b.i.d. + amoxicillin 1 g b.i.d. × 10 days.
5. Rabeprazole 20 mg b.i.d. + clarithromycin 500 mg b.i.d. + amoxicillin 1 g b.i.d. × 7 days.

Terapia di eradicazione dell'*H. pylori*

Table 5. Salvage Therapies for Persistent *H. pylori* Infection (164)

Regimen	Duration	Eradication Rates	Comments
Bismuth quadruple therapy PPI q.d. tetracycline, Pepto Bismol, metronidazole q.i.d.	7	68% (95% CI 62–74%)	Accessible, cheap but high pill count and frequent mild side effects
Levofloxacin triple therapy PPI, amoxicillin 1 g b.i.d., levofloxacin 500 mg q.d.	10	87% (95% CI 82–92%)	Requires validation in North America

For recommendations regarding rifabutin and furazolidone, please refer to the text.
PPI = proton pump inhibitor; q.d. = daily; q.i.d. = four times daily; b.i.d. = twice daily.

Linee guida Europee

- PPI (bid), claritromicina (500 mg bid), amoxicillina (1000 mg bid) o metronidazolo (400-500 mg bid) per 14 gg (possono essere sufficienti 7 gg in aree geografiche selezionate)
- PPI-claritromicina-amoxicillina o metronidazolo in popolazioni in cui la resistenza alla claritromicina sia inferiore al 15-20%. In caso contrario la combinazione con PPI-claritromicina-metronidazolo è preferibile, ammesso che la resistenza al metronidazolo sia inferiore al 40%

High rate of *Helicobacter pylori* eradication with sequential therapy in elderly patients with peptic ulcer: a prospective controlled study

A. ZULLO*, L. GATTA†, V. DE FRANCESCO‡, C. HASSAN*, C. RICCI†, V. BERNABUCCI†, M. CAVINA†, E. IERARDI‡, S. MORINI* & D. VAIRA†

SUMMARY

Background: *Helicobacter pylori* eradication rates with triple therapies are decreasing, and few data in elderly patients are available. A 10-day sequential regimen succeeded in curing such *H. pylori* infection in unselected patients.

Aim: To compare this sequential regimen and the standard triple therapy for *H. pylori* eradication in geriatric patients with peptic ulcer.

Methods: Overall, 179 *H. pylori*-infected patients with peptic ulcer were enrolled (mean age: 69.5 years; range: 65–83). Patients were randomized to 10-day sequential therapy (rabeprazole 20 mg b.d. plus amoxicillin 1 g b.d. for the first 5 days, followed by rabeprazole 20 mg, clarithromycin 500 mg and tinidazole 500 mg, all b.d., for the remaining 5 days) or standard 7-day triple regimen (rabeprazole 20 mg, clarithro-

mycin 500 mg and amoxicillin 1 g, all b.d.). *Helicobacter pylori* status was assessed by histology and rapid urease test at baseline and 4–6 weeks after completion of treatment.

Results: The sequential regimen achieved eradication rates significantly higher in comparison with the standard regimen at both intention-to-treat (94% vs. 80%; $P = 0.008$) and per-protocol (97% vs. 83%; $P = 0.006$) analyses. In both treatment groups, compliance to the therapy was high (>95%), and the rate of mild side-effects was similarly low (<12%). At repeated upper endoscopy, peptic ulcer lesions were healed in 97% patients, without a statistically significant difference between the sequential regimen and the standard triple therapy.

Conclusions: In elderly patients with peptic ulcer disease, the 10-day sequential treatment regimen achieved significantly higher eradication rates in comparison with standard triple therapy.

Terapia nell'anziano

	Number of patients	Eradication ITT (%)	Eradication PP (%)	Drop outs (%)	Side-effects (%)
Double Therapies					
PPI + C	37	43.2	47.0	8.1	8.1
PPI + A*†	83	59.0	61.2	3.6	3.6
Triple Therapies					
PPI + C + M or T	296	88.2	90.9	3.0	3.4
PPI + A* + C	253	84.2	89.1	5.5	7.1
PPI + A* + M	154	79.8	83.7	4.5	7.1

ITT = Intention-to-treat analysis; PP = Per-protocol analysis; PPI = proton pump inhibitors, i.e. omeprazole 20 mg/daily or twice daily, lansoprazole 30 mg twice daily or pantoprazole 40 mg/daily; C = Clarithromycin 250 mg twice daily; M = Metronidazole 250 mg four times a day or 500 mg twice daily; T = Tinidazole 500 mg twice daily; A = Amoxicillin *1 g twice daily or †500 mg three times a day.

Indicazioni su conferma eradicazione (dopo un mese dall'eradicazione)

- **Qualsiasi paziente con ulcera associata ad infezione di HP**
- **Individui che presentano persistenza di sintomi dispeptici nonostante test-and-treat strategy**
- **Riscontro di linfoma MALT associato ad infezione di HP**
- **Pregresso intervento di gastrectomia per early gastric cancer**

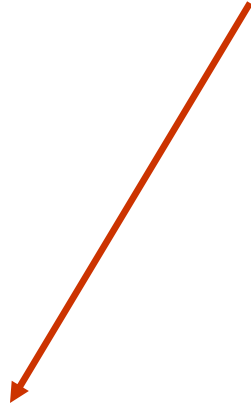
Cause di fallimento del trattamento

- 1) **Effetti collaterali dei farmaci**
- 2) **Scarsa compliance**
- 3) **Resistenza alla terapia antibiotica**

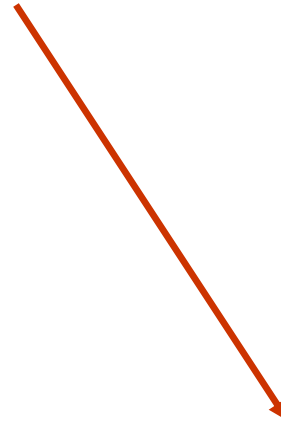
Effetti collaterali dei farmaci

- Circa il 50% dei pazienti in terapia per HP ha effetti collaterali dovuti alla terapia
- La maggior parte degli effetti collaterali sono lievi e necessitano solo correzione della terapia in corso
- Meno del 10% dei pazienti deve sospendere il trattamento
- I principali effetti sono dovuti al trattamento con metronidazolo e claritromicina (sapore metallico); saltuariamente ai PPI (diarrea)
- Evitare di associare l'uso di bevande alcoliche durante il trattamento con metronidazolo (eruzioni cutanee, cefalea, nausea, vomito e tachicardia)

Scarsa compliance



**Comunicazione con paziente
e caregiver**



Stretto follow-up

Resistenza alla terapia antibiotica

- **Fino al 20% dei pazienti trattati per HP non guariscono dopo un primo ciclo di terapia**
- **Pochi studi nell'anziano**
- **Il principale fattore di rischio di fallimento della terapia è legato all'aumento delle resistenze alla claritromicina.**

Primary antibiotic resistance in *Helicobacter pylori* strains isolated in northern and central Italy

A. ZULLO*, F. PERNA†, C. HASSAN*, C. RICCI‡, I. SARACINO†, S. MORINI* & D. VAIRA†

Results

Overall, 255 *H. pylori* strains were evaluated. The resistance rate was 16.9% for clarithromycin, 29.4% for metronidazole and 19.1% for levofloxacin. Clarithromycin resistance was significantly higher in non-ulcer dyspepsia than in peptic ulcer patients (19.1% vs. 0%, $P = 0.02$), metronidazole resistance was higher in foreign than Italian patients (50% vs. 22.9%, $P = 0.0004$) and levofloxacin resistance was higher in old than younger patients (28.4% vs. 14.4%, $P = 0.048$). Levofloxacin resistance was also more frequent in those strains with either clarithromycin or metronidazole resistance.

Conclusion

A very high rate of primary resistance towards the tested antibiotics was detected in our study.

Risk Factors for *Helicobacter pylori* Resistance in the United States: The Surveillance of *H. pylori* Antimicrobial Resistance Partnership (SHARP) Study, 1993–1999

Joette M. Meyer, PharmD; Nancy P. Silliman, PhD; Wenjin Wang, PhD; Nancy Y. Siepman, PhD; Jennifer E. Sugg, MS; David Morris, PhD; Jie Zhang, PhD; Helen Bhattacharyya, PhD; Eileen C. King, PhD; and Robert J. Hopkins, MD, MPH + TM

Background: Pretreatment antimicrobial resistance has an important impact on the efficacy of many *Helicobacter pylori* treatment regimens.

Objective: To estimate the prevalence of *H. pylori* resistance to antimicrobials in the United States, to characterize risk factors associated with *H. pylori* antimicrobial resistance, and to explore the association between drug utilization and antimicrobial resistance patterns over time.

Design: Meta-analysis using patient-level data.

Setting: 20 nationwide trials of *H. pylori* eradication.

Patients: 3624 men and women, each of whom contributed one isolate.

Measurements: Rates of *H. pylori* resistance to clarithromycin, metronidazole, and amoxicillin, according to geographic region, age, sex, study year, ethnicity, ulcer status, test method, and study.

patients]), 36.9% (CI, 35.1% to 38.7% [1063 of 2883 patients]), and 1.4% (CI, 1.0% to 1.8% [48 of 3486 patients]), respectively. In multivariable analyses, multiple risk factors were associated with resistance to individual agents. Clarithromycin resistance was significantly associated with geographic region ($P = 0.050$), older age ($P < 0.001$), female sex ($P < 0.001$), inactive ulcer disease ($P < 0.001$), and study ($P = 0.010$). Metronidazole resistance was significantly associated with female sex ($P < 0.001$), earlier year of study enrollment ($P = 0.036$), Asian ethnicity ($P < 0.001$), use of an epsilometer test ($P = 0.002$), and study ($P < 0.001$). Amoxicillin resistance was low and was not significantly associated with any risk factor. In the 1990s, when rates for use of oral macrolides and metronidazole were relatively stable, clarithromycin resistance rates were stable and metronidazole resistance rates varied.

Conclusions: Clinicians should consider risk factors for antimicrobial resistance when deciding which patients should have susceptibility testing and when choosing appropriate *H. pylori* treatments in the empirical setting.

Conclusioni

- **La prevalenza di HP è alta nell'anziano**
- **La diagnosi è fondamentale in tutti i pazienti con ulcera, anche nei pazienti anziani (migliora la prognosi in termini di guarigione, e prevenzione delle recidive)**
- **Tra i protocolli terapeutici di eradicazione di HP la tripla terapia ha mostrato la minor percentuale di recidive, ciò nonostante le resistenze alla terapia antibiotica (particolarmente ai macrolidi) spesso condizionano negativamente il trattamento**