

## #144 - QUADRUPLE AND DUAL THERAPIES ARE SUPERIOR TO STANDARD CLARITHROMYCIN-BASED TRIPLE THERAPY FOR HELICOBACTER PYLORI FIRST-LINE ERADICATION THERAPY USED IN THE LATIN AMERICAN REGISTRY ON THE MANAGEMENT OF HELICOBACTER PYLORI INFECTION (Hp-LATAMReg)

<https://doi.org/10.46613/congastro2023-144>

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**Background:** *Helicobacter pylori* infection is a public health problem in Latin America.

**Objectives:** Describe and evaluate the main *Helicobacter pylori* eradication therapies, their eradication rates, adherence, and side effects.

**Methods:** A multicenter, retrospective, international registry (Hp-LATAMReg) was conducted. Information about therapies used by gastroenterologists in six countries (Argentina, Chile, Colombia, Costa Rica, Mexico, and Peru) from 2015 to 2023 was registered in an e-CRF AEG-REDCap database. The modified intention-to-treat (mITT) effectiveness, safety, and adherence was analyzed for the first-line regimens. The mITT and the side effects rate of the schemes were compared by a Poisson multivariate regression, adjusted by sex, age, proton pump inhibitor (PPI) dose used in the schemes and the length of the treatment.

**Results:** 1,378 patients were registered, of which 1,218 (88%) were treatment-naïve. The most commonly prescribed first-line therapies (n=1,117, 81%) were analyzed: standard clarithromycin-based triple therapy (SCTT) (PPI-amoxicillin (A)-clarithromycin (C); n=405, 29%), PPI-C-A-Metronidazole (M) (n=219, 16%), dual therapy (DT) (PPI-A; n=139, 10%), PPI-M-Tetracycline (Tc)-Bismuth (B) (n=133, 9.7%), PPI-C-A-B (n=70, 5.1%), PPI-A-M-B (n=41, 3%), PPI-A-Levofloxacin (L) (n=39, 2.8%), PPI-M-Doxycycline (D)-B (n=37, 2.7%) and PPI-A-D-B (n=34, 2.5%). Most of the regimes were 14-day long (n=1,051, 96%), and administered high-dose PPIs (54 to 128 mg omeprazole equivalents b.i.d.) (n=548, 50%). The first-line mITT overall effectiveness ranged from 72% to 100%, being the DT, PPI-A-M-B, PPI-M-Tc-B, PPI-C-A-M and PPI-A-D-B significantly more effective than SCTT. Moreover, the DT, PPI-M-Tc-B, PPI-C-A-B and PPI-A-D-B schemes had significantly fewer side effects compared with SCTT. Good adherence, defined as >90% of drug intake, was observed in 98% (n=1,090), without differences between the schemes (p=0.16) (Table 1).

**Conclusions:** In Latin America, quadruple and dual therapies were superior to SCTT and were safer than standard triple therapy. SCTT should not be considered as a first-line eradication treatment in Latin America.

Prescription (% , n)	SCTT (29%, n=405)	PPI-C-A-M (16%, n=219)	DT (10%, n=139)	PPI-M-Tc-B (9.7%, n=133)	PPI-C-A-B (5.1%, n=70)	PPI-A-M-B (3%, n=41)	PPI-A-L (2.8%, n=39)	PPI-M-D-B (2.7%, n=37)	PPI-A-D-B (2.5%, n=34)
mITT eradication rate (% , n) (p<0.01*)	75%, n=301	93%, n=201	90%, n=125	89%, n=118	81%, n=57	100%, n=41	72%, n=28	81%, n=30	94%, n=32
Side effects rate (% , n) (p<0.01*)	39%, n=156	37%, n=82	10%, n=14	6.8%, n=9	16%, n=11	40%, n=16	21%, n=8	43%, n=16	2.9%, n=1
Good adherence rate (% , n) (p=0.16*)	97%, n=391	99%, n=215	99%, n=138	98%, n=130	99%, n=69	98%, n=40	100%, n=39	92%, n=34	100%, n=34
<b>Poisson multivariate model to eradication per scheme</b>									
	Scheme	RR eradication (95% CI)	p-value						
	SCTT	Reference	-						
	PPI-A-L	0.97 (0.79-1.20)	0.78						
	DT	1.13 (1.03-1.23)	0.01						
	PPI-A-M-B	1.25 (1.16-1.34)	<0.01						
	PPI-M-Tc-B	1.15 (1.05-1.26)	<0.01						
	PPI-M-D-B	1.05 (0.88-1.26)	0.60						
	PPI-C-A-M	1.21 (1.13-1.30)	<0.01						
	PPI-C-A-B	1.07 (0.95-1.22)	0.27						
	PPI-A-D-B	1.15 (1.03-1.29)	<0.01						
<b>Poisson multivariate model to side effects per scheme</b>									
	Scheme	RR side effects (95% CI)	p-value						
	SCTT	Reference	-						
	PPI-A-L	0.53 (0.27-1.04)	0.07						
	DT	0.36 (0.21-0.63)	<0.01						
	PPI-A-M-B	1.33 (0.87-2.03)	0.18						
	PPI-M-Tc-B	0.24 (0.12-0.46)	<0.01						
	PPI-M-D-B	1.27 (0.82-1.95)	0.28						
	PPI-C-A-M	0.91 (0.73-1.12)	0.37						
	PPI-C-A-B	0.35 (0.19-0.65)	<0.01						
	PPI-A-D-B	0.11 (0.02-0.74)	0.02						

**Table 1.** Eradication, side effects and acceptable adherence rates of the different schemes and the Poisson multivariate models (adjusted by sex, age, PPI dose used in the schemes and the length of the treatment) for eradication per scheme and side effects per scheme. \*Chi square test. mITT = modified intention to treat; SCTT = Standard clarithromycin-based triple therapy; DT = Dual therapy; PPI = Proton pump inhibitor; C = Clarithromycin; A = Amoxicillin; B = Bismuth salts; M = Metronidazole; L = Levofloxacin; T = Tetracycline; D = Doxycycline.