Pharmacy Intervention Matters: Improving the Quality of Care of *Helicobacter pylori* Treatment

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Background

Helicobacter pylori (HP) infection has a prevalence estimated at over ~4.4 billion individuals worldwide

Clinical features range from asymptomatic to mucosa-associated lymphoid tissue lymphoma

It is important to ensure effective strategies for **eradication** including patient compliance and appropriate treatment courses

The **study aim** was to compare HP treatment managed by a clinical pharmacist to standard care in regard to medication compliance and successful eradication

Methods

A **retrospective review** of adult patients diagnosed and treated for HP at our center was performed between 3/2019 and 11/2021

All included individuals were then divided into 2 groups:
-The **pre-pharmacy group** (3/2019 to 6/2020) received standard care for HP infection;
-The **pharmacist intervention group** (7/2020 to 11/2021) had a clinical pharmacist manage treatment and document eradication or persistence of HP upon completion as the primary outcome variable

Data analyzed included: age, gender, BMI, alcohol use, drug/tobacco use, pre-treatment symptoms, diagnostic method (gastric biopsy, stool antigen, urea breath test), EGD results, pharmacologic treatment, clinic follow-up type, confirmation test type/result, post-treatment symptoms and any previous HP therapy

Results

Table 1: *Helicobacter pylori* (HP) confirmation testing outcomes in the pre-pharmacy and pharmacy intervention groups after treatment.

HP Eradication Confirmation Test Result	Pre-Pharmacy intervention N=38	Pharmacy Intervention N=95	p value
Not Done	**4**	**23**	<0.05
Indeterminate	0	3	
Successful Eradication	23	62	0.009
Not Eradicated	**11**	**7**	

Total patients diagnosed and treated for HP: 133
Pre-pharmacy group= 38, Pharmacist intervention group= 95

The pharmacy intervention group more frequently used a regimen of **PPI, clarithromycin, amoxicillin, and metronidazole** vs clarithromycin triple therapy (p=0.001)

Interestingly, the pre-pharmacy group were **more likely to complete** eradication confirmation testing (pre pharmacy 34/38, 89.4% vs intervention, 73/95, 77%, p<0.05)

Among patients having eradication testing after treatment, the pharmacy intervention group had **increased rates of successful eradication** compared to the pre-pharmacy group (intervention, 62/69, 92.7% vs pre-pharmacy 23/34, 67.6%, p=0.009)

Clinical and demographic factors as well as method of diagnosis, EGD findings or previous treatment were not different between groups

Pearls

Clinical pharmacist intervention **improved care** of patients with HP treated at our academic center by increasing **eradication rates, more appropriate selection of antibiotic regimens and improved rates of follow up** for eradication confirmation testing

Such a model should be considered at other institutions with difficulty obtaining successful HP eradication