



Background and Importance

- Gastritis, dyspepsia and peptic ulcer disease are common causes of abdominal pain and may be caused by Helicobacter pylori (*H. pylori*) infection.
- Testing for *H. pylori* infection is uncommon in US Emergency Departments (EDs).
- In *H. pylori* positive patients, antibiotic treatment can speed initial healing of some ulcers and can prevent ulcers from returning.

Goals of This Investigation

- To study the feasibility of ED testing for *H. pylori* patients.
- To calculate *H. pylori* eradication rates for treated patients.
- To measure patient reported outcomes such as pain score in patients treated in the ED.

Study Designs and Setting

- A prospective observational study over nine months.
- Single center urban academic ED, GWUH.



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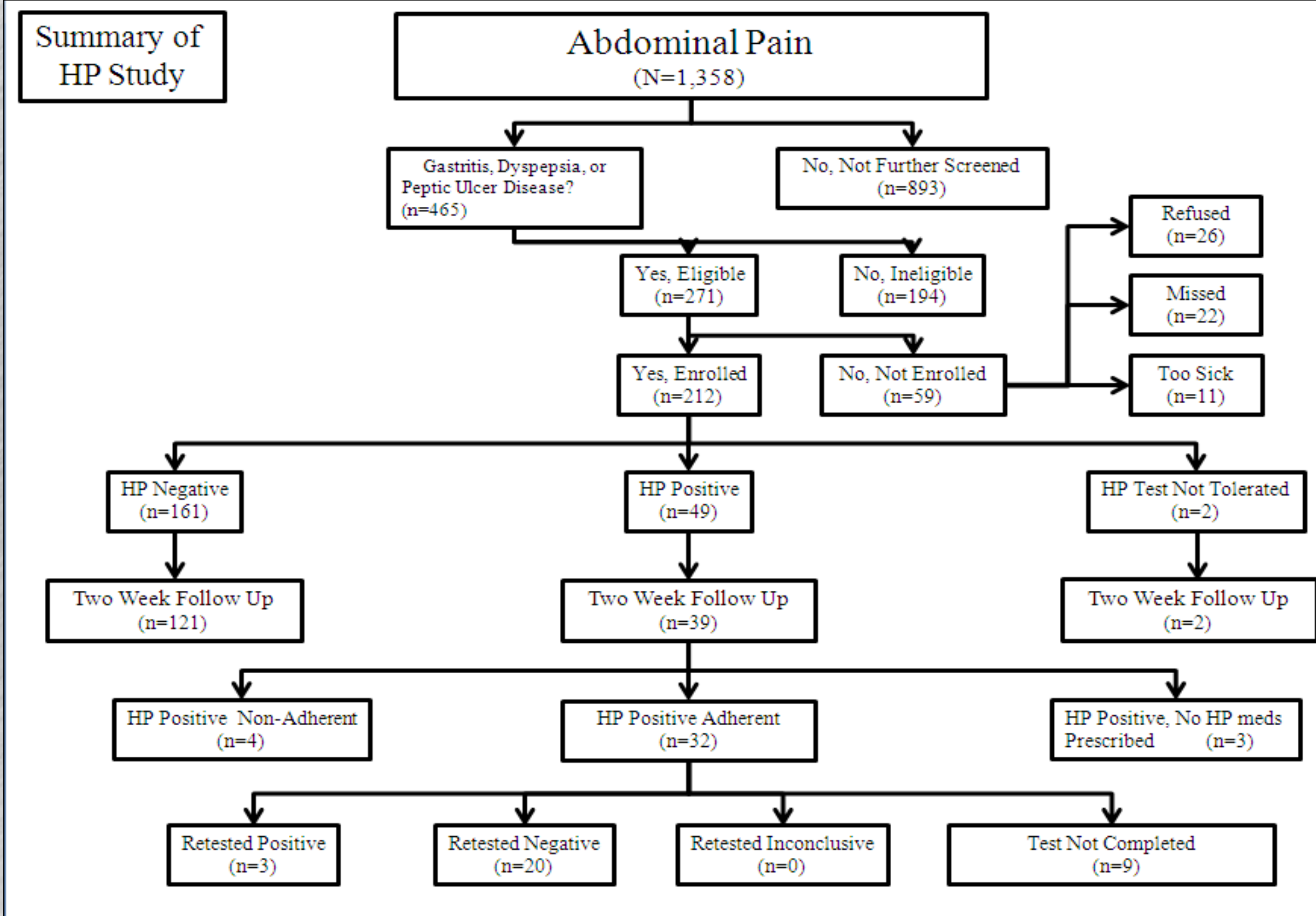
Breath ID UBT

Disclosures

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Methods

- ED abdominal pain patients in whom the provider suspects:
 - ✓ Gastritis,
 - ✓ Dyspepsia, or
 - ✓ Peptic Ulcer Disease
- Eligible patients tested in ED using point-of-care urea breath test (UBT: Breath ID, Exalenz Bioscience).
- Positive patients were prescribed triple-therapy antibiotics:
 - Amoxicillin, clarithromycin, omeprazole
- Two week follow-up interview (report pain and functional status).
- Four week urea breath re-test following completion of treatment for a retest to confirm eradication and evaluate symptoms.
- Feasibility estimated by measuring patient tolerance, comparing length of stay to controls and by the ease of training staff to conduct the test.
- Statistical analyses were performed with SAS Proc GLMMIX .



Results

- 212 patients analyzed: (40% Females, 59% Black, 22% White, 11% Hispanic).
- Most common reasons for exclusion were due to current medication regimen: (1) PPI's (37%), (2) Antibiotics (14%) and (3) Bismuth (10%).
- Other exclusions ($\leq 5\%$) were due to pregnancy, recently tested, inability to walk, non-Spanish or English speaker
- 49 (23%) of patients were H. Pylori Positive.**
- 23 (72%) of the 32 positive patients came in for a retest.

- 77 (73%) of patients demonstrated improvement in pain score at two weeks.**

- 20/23 (87%) were negative four weeks after antibiotic therapy.**

- No increased LOS (hr) :**
 - Enrolled (N=212): 5.2 (95%CI 2.8-7.6)
 - Ineligible (N=172): 7.6 (95%CI 7.0-8.2)

- H. pylori positive were less likely to receive narcotic pain meds (0% vs 12%)**

	H. Pylori Positive	H. Pylori Negative	Total
Acuity Level			
1-2	16%	13%	14%
3	76%	82%	81%
4-5	6%	2%	3%
When did current episode of abd pain start?			
< 24 hours ago	24%	35%	33%
1-2 days	6%	3%	4%
3-7 days	39%	47%	45%
> 1 week ago	31%	15%	18%
Triage Pain Score			
0	4%	4%	4%
1-3	8%	4%	5%
4-6	16%	23%	21%
7-9	41%	32%	34%
10	10%	13%	13%
Pain Medication Prescribed at Discharge			
Yes, narcotic	0%*	12%	9%
Yes, non narcotic	0%	9%	7%
No	100%	79%	84%
Imaging Performed in ED			
No imaging	41%**	29%	32%
ABD/Pelvic CT	8%	21%	18%

* (p<0.0001), ** (p=0.13)

Conclusions

- ED testing appears feasible with minimal additional resources or increased LOS.
- H. pylori* infection is seen in more than 20% of patients who are suspected of having gastritis, dyspepsia or peptic ulcer disease.
- Four-week eradication rates were over 85%.
- We observed good patient reported outcomes following test and treat in the ED.