Treating Gastritis, Peptic Ulcer Disease and Dyspepsia in the Emergency Department: the Feasibility and Patient Reported Outcomes of Testing and Treating for H. pylori infection

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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.

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 (≤ 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
  - Ineligible (N=172): 7.6
  - H. pylori positive were less likely to receive narcotic pain meds (0% vs 12%)

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.

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