

# ALASKA NATIVE MEDICAL CENTER

## GUIDELINES FOR THE DIAGNOSIS AND TREATMENT OF *HELICOBACTER PYLORI*

### Background

*Helicobacter Pylori* (*H Pylori*) infection of the stomach is common condition identified in Alaska Natives. Serosurveys conducted by the Arctic Investigations Program (AIP) of the Centers for Disease Control and Prevention (CDC) have found that the prevalence of *H Pylori* is 66%, range by region 53% to 78%, which is considerably higher than prevalence rates in the lower 48 US states which averages between 30% and 40%.<sup>1,2</sup> Practice guidelines have been written by the American College of Gastroenterology for the United States.<sup>3</sup> Unfortunately, it has become apparent to clinicians at ANMC that these guidelines are not useful in Alaska Natives, since the epidemiology of *H Pylori* resembles that of developing countries.<sup>4</sup> Therefore, a committee of clinicians and scientists at ANMC and CDC was formed to draft guidelines more suitable to this population. The clinical departments at ANMC have reviewed these guidelines.

Several important findings listed below in Alaska Natives and recent studies in *H Pylori* treatment outcomes have been pertinent to the development of these guidelines:

- 1) The high prevalence of *H Pylori* in this population makes the use of *H Pylori* antibody screening for clinical purposes, i.e. to treat dyspepsia, almost useless.

- 2) Findings by the CDC of a high proportion of antimicrobial resistance of this organism to Clarithromycin (26%) and Metronidazole (79%) in Alaska Natives with positive cultures for *H Pylori*.<sup>5</sup>
- 3) Data from a study on re-infection in patients treated for *H Pylori* conducted by the CDC and ANMC Surgery and Medicine departments and showing that 36% of Alaska Natives initially treated for *H Pylori* fail 2 weeks of antibiotics and approximately 20% of those successfully treated are re-infected within one year.<sup>5</sup>
- 4) Increasing antimicrobial resistance in AK
- 5) Controlled trials showing little or no improvement in symptoms of dyspepsia after treatment.<sup>6-8</sup>
- 6) A randomized double-blinded population-based study on the test and treat strategy (*H Pylori* antibody test or breath test) and treatment showed only a 5% improvement in dyspepsia symptoms.<sup>9</sup>

## **Recommendations**

### **Screening for *H Pylori*:**

**Recommendation 1: Screening for *H Pylori*, utilizing serology, UBT or other screening techniques, for the routine evaluation of dyspepsia or other gastrointestinal symptoms is not recommended in Alaska Natives or other high prevalence populations.**

### **Justification:**

One strategy that has been utilized in patients with dyspepsia is to utilize a serologic test for *H Pylori*, and if positive, empirically treat the patient with antibiotics, the so-called “Test and Treat Strategy”. However, due to the high prevalence of *H Pylori* in Alaska Natives there is a high probability that serology testing might be positive in any given person regardless of symptomatology. Also, there is some data that commercial assays developed elsewhere may not be as sensitive or specific in Alaska Natives (personal communication Alan Parkinson, CDC). In addition, the lack of correlation of improvement for dyspeptic symptoms with whether or not *H Pylori* is eradicated in controlled trials makes this strategy unreliable. Therefore the “Test and Treat Strategy” should not be utilized in Alaska Natives or other populations with a high prevalence of *H Pylori*.

Persons who should be considered for treatment for *H Pylori*

**Recommendation 2: The following are candidates for antimicrobial treatment for *H***

***Pylori*:**

**Treatment should consist of FDA approved regimes, unless there are**  
**contraindications, which could include medication allergies, failure to eradicate *H***  
***Pylori***

- 1) **Persons with duodenal ulcers.**
- 2) **Persons with gastric ulcers.**
- 3) **Persons with malt lymphoma.**
- 4) **Persons with severe gastritis not associated with use of NSAIDs or ETOH.**

**Recommendation 3: The following persons who should not be considered for**  
**antimicrobial treatment for *H Pylori* but are candidates for other therapies (i.e. PPI,**

**H2 Blockers, Pro-kinetic drugs would include:**

**1) Persons with mild to moderate gastritis and esophagitis or clear reflux symptoms**

**2) Persons with poor gastric motility, Bezoars or condition predisposing to GI motility disorder such as scleroderma or diabetes.**

**3) Persons with the absence of gastritis or only mild gastritis**

**Justification:**

Over 60% of Alaska Natives harbor *H Pylori* in their gastric mucosa. Almost all of these persons would be expected to have gastritis on biopsy. The failure rate to eradicate *H Pylori* after antibiotic therapy would be about 35% in this population. In addition since some of the above persons have other reasons for dyspeptic symptoms and in those who do not, eradication is unlikely to correlate with improvement of symptoms. In addition, the wide spread use of antibiotics to eradicate *H Pylori* could have adverse effects on this population by increasing the proportion of *H Pylori* isolates resistant to recommended antibiotics. Since there is a very limited arsenal of antibiotics that are effective against *H Pylori*, increasing antimicrobial resistance to *H Pylori* would make it more difficult to eradicate *H Pylori* from persons who are good candidates for treatment. Also widespread use of antibiotics in the above persons could result in increasing the antimicrobial resistance patterns in the community at large.

## Test of Cure after Treatment of *H Pylori*

**Recommendation 4. In Alaska Natives who are candidates for treatment for *H Pylori*, a test of cure 2 months after completion of therapy should be performed, such as a urea breath test (UBT) or stool antigen.**

### Justification

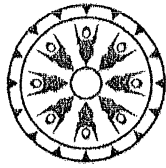
Under the ideal conditions of a study, which included calling patients every 3 days to remind them to take their medications, only 65% of Alaska Natives with *H Pylori* had the organism eradicated from their stomachs 2 months after completing 2 weeks of triple or quadruple therapy. In patients listed under **recommendation 2** who need to have *H Pylori* eradicated, a test of cure should be done due to the high failure rate. Before the stool antigen test is utilized in Alaska Natives, the sensitivity and specificity of this test should be examined in this population.

### References:

- 1) Parkinson AJ, Gold BD, Bulkow L, Wainwright RB, Swaninathan B, Khanna B, Petersen KM, Fitzgerald MA. High prevalence of *Helicobacter pylori* in the

- Alaska Native population and association with low serum ferritin levels in young adults. Clin Diagnostic Lab Immunol 2000. In press.
- 2) Howden CW, Hunt RH. Guidelines for the management of *Helicobacter pylori* infection. Am J Gastroenterol 1998;93:1869-1874.
  - 3) Graham DY, Malaty HM, Evans DG, Evans DJ, Klein PD, Adam E. Epidemiology of *Helicobacter pylori* in an asymptomatic population in the United States: Effect of age, race and socioeconomic status. Gastroenterology 1991;100:1495-1501.
  - 4) Bardhan PK. Epidemiological features of *Helicobacter pylori* infection in developing countries. Clin Infect Dis 1997;25:973-978.
  - 5) Parkinson AJ, McMahon B, Bulkow L, et al. Decreased *Helicobacter pylori* antibiotic susceptibilities and treatment failure in Alaska Native patients [Abstract]. Gut 1999;45 (Suppl 3):A15.
  - 6) Blum AL, Talley NJ, O'Morain C, et al. Lack of effect of treating *Helicobacter pylori* infection in patients with nonulcer dyspepsia. N Engl J Med 1998;339:1875-1881.
  - 7) Talley NJ, Vakil N, Ballard ED et al. Absence of benefit of eradication *Helicobacter pylori* in patients with nonulcer dyspepsia. N Engl J Med. 1999;341:1106-1111.
  - 8) McColl K, Murray L, ElOOnar E, et al. Symptomatic benefit from eradication *Helicobacter pylori* in patients with nonulcer dyspepsia. N Engl J Med. 1998;339:1869-74.

- 9) Moayyedi P, Feltbower R, Brown J, Mason S, Mason J, Nathan J, Richards IDG, Dowell AC, Axon ATR, for the Leeds HELP study group. Effect of population screening and treatment for *Helicobacter pylori* on dyspepsia and quality of life in the community: a randomised controlled trial. Lancet 2000;335:1665-1669.



# ALASKA NATIVE MEDICAL CENTER



## Memorandum

**To:** Primary Care Providers  
**From:** Frank Sacco, MD, Chief of Surgery ANMC  
**Re:** *Helicobacter pylori* Guidelines for ANMC  
**Date:** March 31, 2008

The document "Guidelines for the Diagnosis and Treatment of *Helicobacter pylori*" was recently reviewed by Brian McMahon, MD, Michael Bruce, MD, and I. We do not recommend any changes in treatment guidelines for the Alaska Native population at this time. This document can be utilized by primary care providers when planning treatment for patients at Alaska Native Medical Center.

Sincerely,

*Frank Sacco MD*

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