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Section:	Pharmacy

Helicobacter pylori (*H. pylori*)

Testing for *H. pylori*

- Patients with the following conditions **should** be tested for infection with *H. pylori:*
  - Active peptic ulcer disease (PUD)
  - Past history of PUD (unless previous cure of *H. pylori* infection has been documented)
  - Low-grade gastric mucosa-associated lymphoid tissue (MALT) lymphoma
  - History of endoscopic resection of early gastric cancer (EGC)
  - In whom chronic treatment with non-steroidal anti-inflammatory drugs (NSAIDs) are being initiated
  - Unexplained iron deficiency anemia despite an appropriate evaluation
  - Idiopathic thrombocytopenic purpura (ITP)
  - Dyspepsia and are undergoing upper endoscopy (tested via gastric biopsies)
- **Consider** testing in the following scenarios:
  - Uninvestigated dyspepsia in patients who are under the age of 60 and without alarm features (via non-endoscopic testing)
  - Patients taking long-term, low-dose aspirin to reduce risk of ulcer bleeding
- There is insufficient evidence to support routine testing in the following:
  - Patients with typical symptoms of gastroesophageal reflux disease who do not have a history of PUD
  - Asymptomatic individuals with a family history of gastric cancer
  - Patients with lymphocytic gastritis, hyperplasic gastric polyps, and hyperemesis gravidarum

Treatment

- All patients with a positive *H. pylori* test should be offered treatment
- Quadruple therapy (see table below) is recommended in most patients

Regimen	Antibiotics	Duration
Quadruple therapy	Pantoprazole 40 mg PO twice daily PLUS Bismuth subsalicylate 525 mg PO four times daily PLUS Metronidazole 250 mg PO four times daily PLUS Tetracycline 500 mg PO four times daily	10 – 14 days

- Triple therapy (see table below) remains a recommended treatment option:
  - for patients without previous exposure to macrolides
  - in areas where clarithromycin resistance is known to be < 15%^

Regimen	Antibiotics	Duration
Triple therapy	Pantoprazole 40 mg PO twice daily PLUS Clarithromycin 500 mg PO twice daily PLUS Amoxicillin 1000 mg PO twice daily*	14 days

*substitute metronidazole 500 mg three times daily if penicillin allergy

^Clarithromycin resistance rates for H. pylori at BMC are unknown, but assumed to be >15%

- There is a limited role for IV antibiotics for the treatment of *H. pylori*. Treatment should be delayed until a patient is able to tolerate oral antibiotics. If IV antibiotics are necessary, please contact the antibiotic stewardship team.

Salvage Regimens

In patients with persistent infection, a salvage regimen (see options in table below) should be selected that utilizes different antibiotics than their previous regimen

- Clarithromycin- or levofloxacin-containing salvage regimens are the preferred treatment options if they received bismuth quadruple therapy as their first regimen

Regimen	Antibiotics	Duration
Levofloxacin triple regimen	Pantoprazole 40 mg PO twice daily PLUS Levofloxacin 500 mg daily PLUS Amoxicillin 1000 mg PO twice daily**	14 days
Macrolide-Nitroimidazole Concomitant Regimen	Pantoprazole 40 mg PO twice daily PLUS Clarithromycin 500 mg PO twice daily PLUS Amoxicillin 1000 mg PO twice daily** PLUS Metronidazole 500 mg PO three times daily	10-14 days

**Penicillin allergic patients should be evaluated for skin testing for consideration of amoxicillin-containing salvage regimens

- Bismuth quadruple therapy or levofloxacin salvage regimens are the preferred treatment options if their first regimen contained clarithromycin

Regimen	Antibiotics	Duration
Bismuth quadruple regimen	Pantoprazole 40 mg PO twice daily PLUS Bismuth subsalicylate 525 mg PO four times daily PLUS Metronidazole 250 mg PO four times daily PLUS Tetracycline 500 mg PO four times daily	14 days

Reference

Am J Gastroenterol. 2018 Jul;113(7):1102.