Helicobacter pylori Diagnostic Algorithm

Suspect Helicobacter pylori infection

≥60 years old; OR Alarming signs and symptoms:
- Family history of proximal gastrointestinal cancer
- Previous malignancy of the esophagus or stomach
- Unexplained iron-deficiency anemia
- Palpable mass or lymphadenopathy
- Melena
- Dysphagia
- Hematemesis
- Anemia
- Gastrointestinal bleeding
- Odynophagia
- Persistent vomiting
- Unintentional weight loss

Endoscopy with biopsy

Order: Histology (with or without rapid urease testing)2
Order:3 HPFRP / Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR, Feces (preferred)4 OR UBT / Helicobacter pylori Breath Test1

POSITIVE3

Positive

PCR Positive

Clarithromycin resistance predicted

Treat for H pylori infection using a regimen that does not contain clarithromycin.
Consider endoscopy with biopsy for culture and antimicrobial susceptibility testing: HELIS / Helicobacter pylori Culture with Antimicrobial Susceptibilities, Varies

NEGATIVE3

Clarithromycin resistance not predicted

Treat for H pylori infection. May use clarithromycin-containing regimen

Evaluate for other causes of symptoms or signs

Monitor treatment efficacy or confirmation of eradication.5,6
HPFRP / Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR, Feces (preferred)4 OR UBT / Helicobacter pylori Breath Test

YES

NEGATIVE

<3 years old

Order:cl

Order:2 HPFRP / Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR, Feces (preferred)4 OR UBT / Helicobacter pylori Breath Test1

POSITIVE3

Positive

PCR Positive

Clarithromycin resistance predicted

Treat for H pylori infection

NEGATIVE3

Clarithromycin resistance not predicted

Evaluate for other causes of symptoms or signs

Evaluate for other causes of symptoms or signs

Monitor treatment efficacy or confirmation of eradication.5,6
HPFRP / Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR, Feces (preferred)4 OR UBT / Helicobacter pylori Breath Test

1. Mayo Clinic Laboratories utilizes the Meridian BreathID® qualitative spectrophotometry for analysis; with the Breath Test Kit, IDkit Hp™ Two. This system is indicated for use in adult patients and pediatric patients ages 3-17 years old. Safety and effectiveness has not been assessed in children below the age of 3 years.

2. Consider HELIS / Helicobacter pylori Culture with Antimicrobial Susceptibilities, Varies.

3. Antimicrobials, proton pump inhibitors, and bismuth preparations are known to suppress H pylori. Ingesting these medications within 2 weeks prior to performing the breath test may produce false negative test results.

4. HPFRP / Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR, Feces has equivalent accuracy to fecal antigen testing for H pylori detection and predicts clarithromycin susceptibility or resistance in H pylori if detected. Although, fecal antigen testing is available elsewhere, Mayo Clinic providers prefer and recommend the use of molecular testing for the detection of H pylori.

5. Consider HPFRP / Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR, Feces to assess for clarithromycin susceptibility if HELIS / Helicobacter pylori Culture with Antimicrobial Susceptibilities, Varies is not done.

6. Post treatment monitoring of H pylori using the Meridian BreathID® should be performed after at least 6 weeks of treatment for H pylori infection. Earlier assessment may give inaccurate results.

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