HAUTE AUTORITÉ DE SANTÉ

CNPHGE
Conseil National Professionnel d'Hépato-Gastroentérologie

APPROPRIATENESS OF CARE

Diagnosis of *Helicobacter pylori* infection in adults

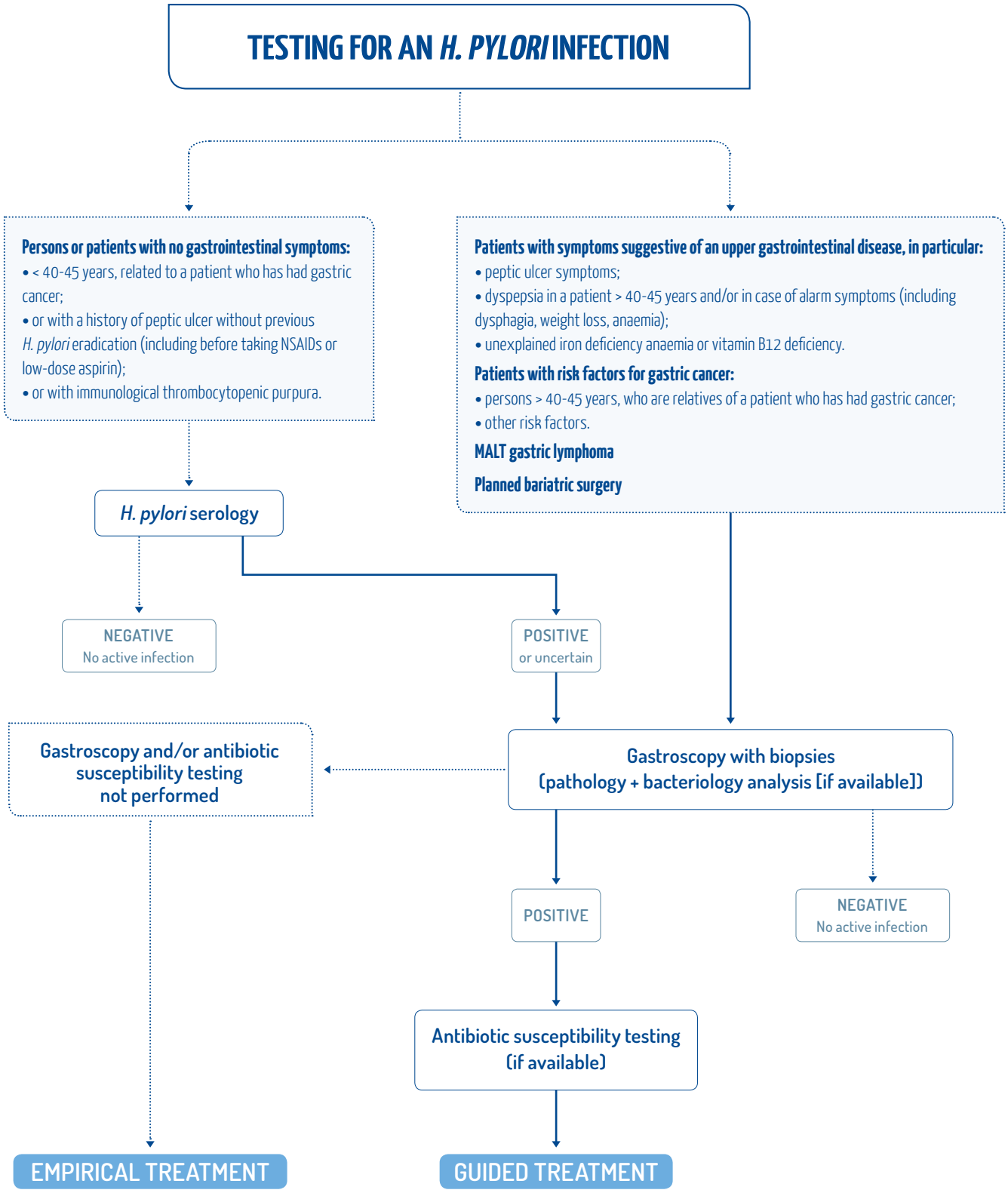
May 2017

- *Helicobacter pylori* (*H. pylori*) infection plays a major role in the development of gastroduodenal ulcer and gastric cancer (adenocarcinoma and MALT lymphoma). Treatment of the infection as demonstrated its efficacy in preventing the occurrence of gastric cancer and recurrences of gastric and duodenal ulcer. It leads to a durable remission of low-level MALT gastric lymphoma. However, progression of bacterial resistance to antibiotics, in particular to clarithromycin (22% of strains), means there is a need to adapt diagnostic and therapeutic practices.
- Practice surveys and database analysis s have revealed deviations from the recommended practices. For example, indication of *H. pylori* testing in case of family history of gastric cancer is not well known, biopsies are not always performed during gastroscopy, and serology is sometimes mistakenly used to monitor eradication.
- This guide is an aid for professionals for making decisions about adult patients infected with *H. pylori*. Its aim is to improve the quality of care of patients infected with *H. pylori* and the prevention of gastric cancer and gastroduodenal ulcer, while preserving the bacterial ecology and reducing selection pressure.

Indications for testing for *H. pylori* infection

- Gastric or duodenal ulcer (history of ulcer or active ulcer, complicated or uncomplicated).
- Before taking non-steroidal anti-inflammatory drugs (NSAIDs) or low-dose aspirin in patients with history of gastric or duodenal ulcer.
- Chronic dyspepsia with normal appearance on gastroscopy.
- Unexplained iron deficiency anaemia or that is resistant to oral iron therapy.
- Unexplained vitamin B12 deficiency.
- Patients at increased risk factors for gastric cancer:
  - first-degree relatives of a patient who has had gastric cancer (parents, siblings, children);
  - patients with hereditary digestive cancer predisposition disorders (HNPCC/Lynch);
  - patients with previous gastric neoplasia already treated by endoscopic or subtotal gastric resection;
  - patients with preneoplastic gastric lesions (severe gastric atrophy and/or intestinal metaplasia, dysplasia).
- MALT gastric lymphoma.
- Patient requiring bariatric surgery (bypass).
- Immunological thrombocytopenic purpura in adults.

What to do if *H. pylori* infection is suspected



Details of the procedure for diagnosis of an *H. pylori* infection

During gastroscopy

Routine gastric biopsies make it possible to test for an *H. pylori* infection and for preneoplastic lesions. They also make it possible to perform the bacteriological examination with antibiotic susceptibility testing, if available*.

If there are no contraindications to biopsies, the following is recommended:

→ **for anatomical pathology:** at least 5 gastric biopsies (2 at the antrum, 1 at the angular incisure and 2 at the body) for diagnosis of infection (preferably by immunohistochemistry) and for study of inflammatory activity, atrophy and intestinal metaplasia (new OLGA[1] or OLGIM[2] classifications, making it possible to evaluate the risk of progression to gastric cancer according to the extent and severity of the preneoplastic lesions);

→ **and for bacteriological examination with antibiotic susceptibility testing, if feasible:** 2 additional biopsies (at the antrum and the body) to send to the bacteriology lab in specific transport medium.

** Taking into account constraints related to the transport and preservation of samples and the possibility of performing the culture and antibiotic susceptibility testing (limited number of clinical laboratories performing these techniques to date).*

Apart from indications for gastroscopy

Non-invasive methods include serology, urea breath test and faecal antigen testing.

→ **Serology is indicated for pre-treatment *H. pylori* testing** (choice of reagents with sensitivity/specificity ≥ 90%).

- The objective of the serology is to avoid gastroscopy in *H. pylori*-negative patients who are unlikely to have a severe gastroscopic lesion and to refer *H. pylori*-positive patients for a gastric endoscopic assessment. In case of positive serology, a gastroscopy is recommended because it makes it possible to confirm the diagnosis of infection and, more importantly, to detect and manage any bacteria-induced preneoplastic lesions; it also makes it possible to carry out the bacteriological examination with antibiotic susceptibility testing, if feasible.
- The serology detects IgG antibodies. It is not indicated to monitor eradication; antibodies may persist for months or even years after eradication of the bacteria. Repeating a serological test is of no use.

→ **Urea breath test is reliable for pre-treatment diagnosis and for eradication control, but it is only reimbursed for eradication control.**

→ **Faecal antigen testing is reliable for pre-treatment diagnosis and for eradication control, but it is not reimbursed.**

Specific situations

Serology is recommended in certain situations where other tests (urea breath test, faecal antigen testing, gastric biopsy examination) are less reliable: bleeding ulcer, gastric atrophy, MALT lymphoma, use of antibiotics in the last 4 weeks, use of proton-pump inhibitors (PPIs) in the last 2 weeks.

Precautions

The diagnostic methods, with the exception of serology, must be performed at least 4 weeks after discontinuation of antibiotics and at least 2 weeks after discontinuation of antisecretory agents (PPI or anti-H2).

1. Rugge M, Genta RM. Staging and grading of chronic gastritis. Hum Pathol 2005;36:228–33. Rugge M, Correa P, Di Mario F, et al. OLGA staging for gastritis: a tutorial. Dig Liv Dis 2008;40:650–8.
2. Capelle LG, de Vries AC, Haringsma J, *et al.* The staging of gastritis with the OLGA system by using intestinal metaplasia as an accurate alternative for atrophic gastritis. Gastrointest Endosc 2010;71:1150–8.

The method used to develop this guide as well as the literature review are available in the preparation report (available on the HAS website: www.has-sante.fr).

Also available on the HAS website:

→ an appropriateness guide on "Treatment of Helicobacter pylori infection in adults";

→ several examples of letters between general practitioner and gastroenterologist to optimise coordination of care;

→ an analysis report from private and healthcare administrative databases.

Learn more

→ **National Cancer Institute (INCa) works published in 2013 about prevention of gastric cancer**
www.e-cancer.fr/Professionnels-de-sante/Facteurs-de-risque-et-de-protection/Agents-infectieux/Prevenir-le-cancer-de-l-estomac

→ **French National Reference Centre for Campylobacters and Helicobacters**
www.cnrch.u-bordeaux2.fr/contact – Tél: +33 (0)5 56 79 59 77

→ **Website of the French Helicobacter Study Group**
www.helicobacter.fr

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