H. pylori Perspectives - Part 1

Updated Guidelines and Long-term Risks

PODCAST 52

00:03

Dr. Jane Caldwell

Hi, I'm your host, Jane Caldwell. Welcome to the *On Medical Grounds* podcast, your source for engaging, relevant, evidence-based medical information. As stated in the 2024 American College of Gastroenterology Clinical Guidelines, *Helicobacter pylori* is a gram-negative, spiral-shaped bacterium that has adapted to survive in the harsh, acidic environment of the human stomach

H. pylori remains one of the most common chronic bacterial infections of humans worldwide and is the leading cause of infection-associated cancer globally. In this OMG interview, we will discuss *H. pylori* testing and treatment based on the ACG guidelines with a leading expert in the field, Dr. Stephen Moss. Dr. Moss is a Professor of Medicine and Program Director of the Gastroenterology and Fellowship Training Program at Brown University. He is also the Director of Endoscopy at the Providence, Rhode Island VA Medical Center. Dr. Moss's research has been focused on the basic and clinical aspects of *H. pylori* infection, including the mechanisms of *H. pylori* associated gastric carcinogenesis and more recently antimicrobial resistance testing.

He is a co-author of the 2017 and the 2024 ACG Commissioned U.S. Guidelines on *H. pylori* Management, has over 200 peer-reviewed publications, and has served on the editorial boards of multiple gastroenterology journals. Hello, Dr. Moss, and welcome to *On Medical Grounds.*

Dr. Steven Moss

Hello, thanks for having me.

01:52

Dr. Jane Caldwell

Doctor Moss, please bring us up-to-date with the recommendations in the 2024 ACG clinical guidelines for *H. pylori*. Could you summarize the most important elements for our listeners?

Dr. Steven Moss

Sure, yes. So the most important part of these management guidelines was really focusing on treatment choices. We do touch on testing, but much less so, but we focus on treatment for first-line treatment, people who've never been treated before. The emphasis here was that there was one best treatment—bismuth quadruple therapy—which has been around for a long time, and we feel that's the best treatment. There were two other what we call "recommended" treatments that are relatively new, that have been less subject to real-world data in the United States. So those are relatively new and we do discuss those as possible first-line treatments. And then we also discuss quite extensively what to do when a first-line treatment fails, which it might do in twenty to thirty percent of patients, what to use in second-line, how to approach these patients, whether to use susceptibility testing to find the next antibiotic to use and so on. So that's the main thrust.

There were some other elements that were also included in the guidelines; some testing recommendations really reinforcing what we'd previously said back in 2017 regarding testing methodology, and also the need to confirm after a course of treatment that *H. pylori* has actually been eradicated successfully.

And if it hasn't, then then we should choose a second-line treatment. And then we do discuss also, briefly, screening; whether the population should be screened for the presence of *H. pylori* with the objective of preventing gastric cancer in the future.

03:38

Dr. Jane Caldwell

Thank you for that summary. I'd like to circle back to screening persons with high risk for gastric cancer in just a few minutes. Both the 2017 and the 2024 ACG guidelines emphasize the need to retest for eradication after treatment in order to verify that the treatment was effective. I wonder, is this difficult to do to encourage patients to return for a retest? And do you have any data on what percentage of treated patients get retested?

Dr. Steven Moss

Yeah, so it depends…the answer to that question. Many patients come to see physicians with symptoms and once they get treated for *H. pylori*, the symptoms may go away. And then for the patient, they may not really understand that the importance of retesting. So it's important on the physician when they first prescribe treatment to explain to the patient, you know, we're doing this to improve your symptoms, but more importantly, we really want to make sure the *H. pylori* has gone away, so that you're not at increased risk for gastric cancer, because *H. pylori* is the biggest risk factor for gastric cancer.

And so normally if the patient understands that, you know, they understand the importance of testing, even if they're feeling okay and feeling better, and they get buy-in, the patient understands that the goal here is to make sure they've got rid of something which could be a potential carcinogen. If that's explained to the patient up front, normally they do return for testing, I find, but in many cases that explanation may be lacking, and the patient may be feeling better and not bother to have follow-up testing.

Regarding your second question, you know, how much testing of cure is actually being done? So back in 2017, the last the previous time that we did the ACG guidelines, we put that in as an emphasis that testing after treatment should be done to confirm cure. Prior to that, actually our *H. pylori* success rates with treatment were better than they are now, in the 90+ %, because most of the infections were sensitive to the antibiotics. And in those early days we didn't think it was terribly important to retest because most of the time the patients, the *H. pylori* would be eradicated. It's only in the last 10-20 years, as we realize we're getting more and more antimicrobial resistance among *H. pylori*, then our success rates with treatment have not been as good as they were in the past, so that's one of the reasons that we test to make sure the *H. pylori* is gone after the first treatment, because in, you know, 20% of cases it may not be. And we also have much more evidence than we used to that eradicating *H. pylori* successfully will prevent the development of gastric cancer. So that data has really accumulated over the last decade or so. So that's why we feel much stronger the need to, once you embark on a treatment, to actually follow it through to make sure that the treatment was successful.

06:55

Dr. Jane Caldwell

So you're a gastroenterologist. Do your challenges differ from that of, say, a primary care physician?

Dr. Steven Moss
Yes, certainly. So most gastroenterologists will make the diagnosis of *H. pylori* during endoscopy. That's what we do spend a lot of our time on. Or they might or we might get referred a patient who already is known to be *H. pylori* positive, but the primary care may refer to gastroenterologists because it's difficult to treat or they fail treatment or something like that. A primary care physician obviously has many, many things to think about, and *H. pylori* is just one of numerous things they should be thinking about, particularly in a patient with abdominal pain. And they if they want to test for *H. pylori*, they usually use non-invasive testing, though sometimes they send patients for endoscopy, for us to do the testing, if the patient has symptoms, or particularly if they're over the age of 50 or so, which is generally the age at which we worry about cancers.

08:04
Dr. Jane Caldwell
Is there a place for non-invasive tests such as stool antigen and the urea breath test?

Dr. Steven Moss
Yes, certainly. For many years we've encouraged primary care physicians, nurse practitioners and people in primary care to test for *H. pylori* using these non-invasive methods in patients under the age of about 50, or, in patients particularly if they have no alarm symptoms such as vomiting, weight loss, difficulty swallowing, things like that.

If they have those alarm symptoms, they should really get endoscopy at any age. But if they have symptoms just of upper abdominal discomfort and they're relatively young, they don't need endoscopy. The strategy should be to test for *H. pylori*. If it's positive, treat it, hopefully confirm eradication. And then if they still have symptoms after getting rid of *H. pylori*, then it would be appropriate to refer the patient on to a gastroenterologist for consideration of endoscopy.

09:10
Dr. Jane Caldwell
Do you have a preference yourself for retesting?

Dr. Steven Moss
For the non-invasive testing, you mean? Yes. So for non-invasive testing, I actually use both stool tests and breath tests. I think they're both equally useful. It depends on the setting in which you're seeing the patient. In one of my offices, we have the breath test available in the office, and it's nice for the patient to do the test on the visit and they get the result very quickly. In another of my office settings, we don't have the breath test available and then I send patients for stool tests and I think are both are excellent tests.

09:51
Dr. Jane Caldwell
Let's talk about patients that are on proton pump inhibitors. Do you have some recommendations for these patients prior to taking a retest?

Dr. Steven Moss
Yeah, so many patients with upper abdominal symptoms are on proton pump inhibitors, and the data shows that patients on these drugs, it can reduce the sensitivity of these indirect tests, both the breath test and the stool test. And so the recommendations for many years have been to get the patient off these drugs if at all possible for two weeks prior to testing to avoid false-negative results. A positive result is still

a positive result, but a negative result in a patient on a PPI may be a false negative, that's why we get them off the drugs and try and tide them over with H2 receptor antagonists in the meantime for that two-week window.

10:46
Jane Caldwell
Let's circle back to screening persons with high risk for gastric cancer. So, what are the ACG cancer prevention guidelines and treatment recommendations for those populations?

Dr. Steven Moss
Yes, so the ACG does not have strict screening guidelines to prevent gastric cancer. We touch on it in our ACG *H. pylori* Guidelines in which we state that screening should be considered in basically all non-white groups in the United States because they have a relatively higher risk of gastric cancer compared with white patients, particularly in patients from Southeast Asia.

And then there is another set of ACG guidelines, not authored by me but other colleagues, in which they talk about the prevention of gastric cancer. That's the ACG Guidelines on the Management of Premalignant Lesions [ACG Clinical Guideline: Diagnosis and Management of Gastric Premalignant Conditions], which came out 2025, in which they summarize the evidence as not conclusive, you know, not proven one way or the other regarding whether we should be screening. And that's really because we don't have any trials of screening in the United States. Data from other places in the world which is accumulating, suggests that high-risk patients, in other words certain ethnicities or in high-risk countries, screening, certainly for *H. pylori,* is a good idea and some countries also do endoscopic screening for gastric cancer, but we don't have those hard data in the United States.

12:31
Jane Caldwell
Are there initiatives in place to promote both the retesting and screening?

Dr. Steven Moss
So retesting has been, you know, for the last… in the 2017 and the 2024 guidelines has been recommended by guidelines, so we should be doing retesting. Everyone should be doing retesting, that's clear now. And then your other question was guidelines regarding screening, was it? Sorry.

13:02
Jane Caldwell
Yes, that's right. Do we have initiatives in place to encourage screening?

Dr. Steven Moss
Initiatives regarding screening, very interesting. So two or three years ago the U.S. Preventive Task Force actually put out an announcement they would be interested in exploring the possibility of screening to prevent gastric cancer, but ultimately it was of too low a priority for them to pursue and so that's a great lost opportunity in my opinion.

And the USPSTF currently is not in a very functional state, so I don't think that's going to happen again anytime soon. But clearly that would be the kind of initiative that could scientifically address the question of whether screening should be addressed. Other countries are already starting screening trials and they will have the data, though it may take another five, ten years, from in European countries, for example, to

know whether screening for *H. pylori* around the same time as we do colorectal cancer screening, could ultimately reduce gastric cancer. Hopefully those data will inform U.S. policy if we don't do our own studies.

14:19

Jane Caldwell

We've discussed testing in detail. Let's shift to treatment. How has rising antimicrobial resistance contributed to the need for appropriate treatment?

Dr. Steven Moss

Yeah, so that's a really important issue. So the standard treatment for many years for *H. pylori* from really the mid-1990s was to use clarithromycin-based therapy, and what we've seen is clarithromycin resistance has gone up and up and up in the U.S. and around the world, partially related to *H. pylori* treatments, but also the widespread use of antibiotics for everything else.

And the other drugs which we've seen resistance emerge and which are relevant for *H. pylori* treatment are levofloxacin and also metronidazole, though the relationship between metronidazole resistance and ability to kill the drug with metronidazole is not quite so clear cut as for the other two. And so in the U.S. we're seeing now clarithromycin and levofloxacin resistance in about 30% or more of *H. pylori* strains, and knowing that information, and knowing that once you have a resistant organism it's not going to be so well treated or eradicated by regimens that contain these antibiotics, in the 2024 guidelines we felt strongly that we should not be using these drugs empirically as we used to, but we could use them if we did susceptibility testing to find out if the strain was sensitive. If it's sensitive, then it's a very good treatment to use these drugs in combination with others. But if it's resistant, then it should be avoided, and that was one of the conclusions of the 2024 guidelines.

16:12

Jane Caldwell

So do I hear you recommending susceptibility testing as well?

Dr. Steven Moss

We're recommending it before using regimens which include clarithromycin and levofloxacin. And these are regimens which can be very helpful, particularly in people who've failed multiple courses of treatment. So when you get faced with a patient like that, which probably comes to gastroenterologists more than it does to primary care physicians, someone who's failed multiple courses of treatment, then we are suggesting susceptibility testing be done.

16:45

Jane Caldwell

Finally, what would you say to a person who has gastric distress but is reluctant to seek medical advice?

Dr. Steven Moss

Seek medical advice. Yes. I mean gastric distress, you know, stomach pains could be due to a multitude of causes, some potentially serious, many nuisance, but not so serious. It really needs proper evaluation, history, physical examination, some testing. They should start by going to their primary health care provider if possible. Sometimes these patients don't have great health resources, and they end up in the emergency room. But it's not good to ignore any kind of symptom without having it evaluated in some form.

17:37

Jane Caldwell

Dr. Moss, why is it so important to get rid of *H. pylori*?

Dr. Steven Moss

Well, what we've learned over the last ten to twenty years, particularly, is that *H. pylori* is the most important cause of gastric cancer, and this cancer is the 4th most common cause of death globally. So it's an enormous public health problem. And now we have a relatively easy thing to do to prevent one of the major cancer killers globally. Just a two weeks course of antibiotics and you can greatly reduce your risk of getting gastric cancer. The data suggests that the reduction is about 40-50%, so that's enormous when you compare it with many of the other, you know, screening things that we do. The benefits are really great and the difficulty to the patient is not very high. So I think many primary care physicians are well aware of the link between *H. pylori* and peptic ulcer disease, but they may be unaware that *H. pylori* eradication can reduce gastric cancer development by about 40%.

18:46

Jane Caldwell

Dr. Moss, thank you so much for taking time from your busy schedule to talk with us.

Dr. Steven Moss

It's been a pleasure.

Jane Caldwell

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