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Managing Barrett's Esophagus with Dysplasia: A Review of the Latest ACG Guideline

Dr. Buch:
Welcome to *GI Insights* on ReachMD. I'm your host, Dr. Peter Buch. And joining me to talk about the latest guideline and treatment updates for Barrett's esophagus is Dr. Nicholas Shaheen. Dr. Shaheen is Professor of Medicine and Epidemiology and Chief of the Division of Gastroenterology and Hepatology at the University of North Carolina School of Medicine. He's also the lead author of "Diagnosis and Management of Barrett's Esophagus: An Updated ACG Guideline," which was published in the *American Journal of Gastroenterology* in April 2022.

Dr. Shaheen, welcome to the program.

Dr. Shaheen:
It's a pleasure to be here, Peter. Thanks for having me.

Dr. Buch:
Let's start with definitions, Dr. Shaheen. Should we eliminate short-segment Barrett's esophagus from our lexicon?

Dr. Shaheen:
It's a terrific question, Peter, and we have real issues with folks that have very small segment of disease, so let's go back to basics here. The basic idea is that Barrett's esophagus, this potentially precancerous condition of the esophagus, takes up some space in your distal esophagus. The space that it takes up is proportionate to the risk of cancer that it entails. By that I mean long-segment Barrett's, the Barrett's that stretches well up into the esophagus, implies a greater risk of conversion to cancer than short-segment Barrett's esophagus, which we define as 3 or less centimeters.

Now the issue though is that although there is less risk in shorter segments, many more people have shorter-segment disease, so if we got rid of these shorter segments in terms of calling them a disease definition, we may actually get rid of a sizable proportion of the folks that are going to have cancer just because there are so many more of them walking around. For this reason, we really do need to stick with the current definition of Barrett's esophagus, which is any segment of columnar mucosa in the esophagus of greater than a centimeter of length that has a biopsy that is consistent with Barrett's esophagus, meaning that it shows goblet cells.

Dr. Buch:
That's great. And following up on that question, should patients with Barrett's esophagus and low-grade dysplasia have endoscopic therapy or endoscopic surveillance?

Dr. Shaheen:
Another terrific question. The answer is yes. And by that I mean both are reasonable alternatives, and it really becomes a shared decision-making question. So when you've got the Barrett's esophagus, that means you're at some increased risk of moving on to

esophageal adenocarcinoma. If you are going to move on to this adenocarcinoma, you're going to do so through a series of steps from no dysplasia to low-grade dysplasia, to high-grade dysplasia, to cancer. The first of those steps, the step from no dysplasia to low-grade dysplasia, does imply a greater risk of cancer, perhaps a two-fold increase in risk. For that reason, we begin to offer these endoscopic therapies, which essentially involve burning or freezing the tissue in the bottom of the esophagus to change it back to healthy, normal squamous mucosa. However, the increased risk is not such that we feel strongly that every patient should have this. And in fact, there's a very reasonable counterargument to say, "Well, gosh, at least in older patients who perhaps don't have that many life years at the table, perhaps just watching these patients with somewhat closer endoscopic surveillance and biopsying them and make sure that they don't move on to high-grade dysplasia is actually a winning strategy." And in fact, I do that for some of my patients, especially those in whom I think life expectancy is relatively short. So both are reasonable alternative strategies, and it really is a nice role for shared decision-making between the clinician and the patient.

Dr. Buch:
And how frequently should patients who have had endoscopic therapy be reassessed?

Dr. Shaheen:
So this issue of endoscopic therapy and what to do afterwards is really quite interesting. In the old days, if you developed high-grade dysplasia or early cancer in your Barrett's esophagus, we had one answer for you, and that answer was esophagectomy. "You need to have your esophagus removed." That's what we recommended to any good surgical candidate. Now we've developed these endoscopic therapies where in the vast majority of cases of patients with Barrett's with high-grade dysplasia or patients who have Barrett's with an intramucosal cancer, we can actually treat them endoscopically and induce reversion of the Barrett's back to normal squamous epithelium, and this is becoming a very common event.

The answer to your question what to do with these patients in terms of making sure that they don't redevelop Barrett's is that we do endoscopy based on their pretreatment grade of histology because very interestingly, it turns out that what happens after you ablate somebody with precancerous Barrett's is decided by what you ablated in the first place. By that I mean if they had more serious Barrett's, Barrett's with intramucosal cancer or high-grade dysplasia, rates of recurrent Barrett's or recurrent dysplasia are higher. For that reason, we recommend very intensive surveillance for these patients. We want to have them have endoscopy 3 months after we have treated them, 6 months after we treated them, 12 months after we treated them, and then once a year thereafter, so we're looking at them very closely to make sure this doesn't happen again.

On the other hand, if we treated you for low-grade dysplasia, we don't have to surveil you as aggressively. We want to look at you endoscopically 1 year after we treated you, 3 years after we treated you, and every 2 years thereafter, so essentially half as often or less as the people with the more serious Barrett's.

So you have to kind of know what happened to the patient and why the patient was treated in the first place to understand the best way of treating them.

Dr. Buch:
Thank you. Switching gears a bit, Dr. Shaheen, would you comment on the twin problems of early endoscopy for Barrett's surveillance and when to stop screening in the elderly?

Dr. Shaheen:
These are a pair of my favorite questions, and I think this is where docs often get it wrong. We have big problems with utilization of endoscopy in Barrett's. In some patients we do way too much. In some patients who really could use it we do way too little. And it's really a problem both in my field as well as a problem for primary care docs because we're jointly not getting this right. Either way it really is the fault of the gastroenterologist for not giving better guidance.

So this is what you need to know. If you're one of those short-segment Barrett's patients, you only need endoscopy once every 5 years. If you're getting endoscopy more often than that, you're getting it too often. And patients like getting the endoscopy because they feel that we're being conservative or being checked out, but in reality, these things all have risks as well, so you're not necessarily getting better care just because you're getting more care.

On the other hand, when to stop surveillance in the elderly is a very interesting question, and it really has an awful lot to do with the comorbidities of the patient and their overall health. I feel very comfortable having an 80-year-old with long-segment Barrett's in my unit for Barrett's surveillance if they are healthy and out riding their bike otherwise because I think that such a patient has 5 to 10 years at least of further life expectancy in front of them. On the other hand, it's not unusual for me to tell a 72-year-old, "Gosh, this should probably be your last Barrett's surveillance because you've got heart failure; you've got diabetes." It's hard to tell a patient that you don't think their life expectancy is long enough to make it worthwhile to do this again, but that's essentially what we're looking at when we think about who deserves more endoscopy and who doesn't.

Dr. Buch:
And when it comes to surveillance, how would you follow a 35-year-old female with nondysplastic Barrett's esophagus who was diagnosed by a "out-of-town physician"?

Dr. Shaheen:
The first thing I would say, Peter, is that many of these diagnosed cases, when you look at them carefully, don't have Barrett's at all. The reason that we call the Z line, which is the line that demarcates the end of the esophagus from the beginning of the stomach, the Z line is that it Zs, meaning that it goes up and down. You'll recall that earlier I mentioned that you need a centimeter of this abnormal tissue in the esophagus to really be considered Barrett's esophagus, and many times when I see a patient such as one that you describe and I do an initial endoscopy on them, I find they don't even make criteria for the diagnosis of Barrett's esophagus and therefore require no standard surveillance endoscopy.

In order to understand that, obviously, you have to repeat the endoscopy. Some people do it immediately when the patient first comes into their practice. If they have a previous endoscopy that I look at and am satisfied that the quality is good on, I will repeat that initial endoscopy in 3 years thinking that that's still a relatively conservative number, and we'll be able to tell then if there's Barrett's or not. If that Z line looks normal, I don't biopsy it, and I tell the patient that they are the same risk, as best we can tell, as others in the general population, and they don't require ongoing surveillance. On the other hand, if I do see at least a centimeter of cephalad displacement of that columnar epithelium, then I will go ahead and do biopsies. If it truly is a short segment of Barrett's, i.e. less than 3 centimeters, they will be in surveillance every 5 years.

One thing I'll raise with you, Peter, that is important for your listeners to know is that we are seeing more cancer at a younger age. And in fact, at our annual meeting this year, there was a very interesting paper to suggest that we are seeing increasing incidence of esophageal adenocarcinoma in younger folks, and that's an important trend that we really need to watch.

Dr. Buch:
For those just tuning in, you're listening to *GI Insights* on ReachMD. I'm Dr. Peter Buch, and I'm speaking with Dr. Nicholas Shaheen about updated guidelines for Barrett's esophagus.

Now if we look ahead for just a moment, Dr. Shaheen, what does the future hold for diagnosing asymptomatic Barrett's esophagus?

Dr. Shaheen:
You know, this is an exciting topic and an exciting area to work in, and it's an area where our group has really had a lot of interest. The problem with the way we take care of Barrett's patients is that we could only find the Barrett's with a very expensive test that is only available in specialized centers, i.e., upper endoscopy, yet somewhere between 1 and 3 million Americans have Barrett's, so we're looking for a very common condition with a very expensive test.

So one really exciting area is these new devices that we have now to make a diagnosis non-endoscopically, and they are delightfully low-tech. One of them is a capsule on a string. You swallow the capsule. Inside the capsule is a sponge that has been compressed. The capsule dissolves while the string is hanging out of the patient's mouth over about a 5-minute period. We then pull the sponge back through the esophagus where it samples the tissue, and the sponge is picking up the cells. We then essentially get these cells off of the sponge. We stain them for trefoil factor 3, which is a very sensitive assay for Barrett's esophagus, and in this way, we can tell who has Barrett's and who doesn't. This device, which is called Cytosponge and was invented at Cambridge in England by an investigator named Rebecca Fitzgerald, has demonstrated remarkable test characteristics and hopefully someday will be broadly available here for non-endoscopic screening for Barrett's.

There are variations on this theme using different markers and different cell collection devices, but the upshot of this is that I hope someday we are making most of our initial diagnoses of Barrett's with a very cheap, very broadly available point-of-service test, perhaps seeded in primary care to look for patients with Barrett's esophagus. And if we do that, I think we'll become much more effective in averting this cancer.

Dr. Buch:
And again, the part that I want to reemphasize is asymptomatic Barrett's esophagus. I think this may have a role to play there as well.

Dr. Shaheen:
That's where it's especially exciting because 40% of these cancers occur in patients who don't have chronic reflux symptoms. The reason that we go after the chronic reflux patients is because we need to narrow our funnel right now. We can't do screening on everyone with a test as expensive as upper endoscopy, so we look for patients with chronic heartburn because we know those are the ones most likely to have the Barrett's esophagus, but we already know when we start that we've lost 40% of the potentially preventable cancers by not looking in the asymptomatic population. So that's why these tests are so compelling is because they give you a bridge to potentially someday screen the asymptomatic population where that other 40% of those cancers arise.

Dr. Buch:
Well as that brings us to the end of today's program, I want to thank my guest, Dr. Nicholas Shaheen, for sharing the latest guidelines for managing Barrett's esophagus. Dr. Shaheen, thank you for a fantastic discussion.

Dr. Shaheen:
It was a pleasure to be here, Peter. Thanks for having me.

Dr. Buch:
For ReachMD, I'm Dr. Peter Buch. To access this and other episodes in this series, visit ReachMD.com/GIInsights where you can Be Part of the Knowledge. Thanks for listening and see you next time.