

Mayo Clinic Q & A - Dr. James East - Barrett's Esophagus

Thu, Oct 27, 2022 8:01AM 12:02

SUMMARY KEYWORDS

esophagus, barrett, mayo clinic, damage, reflux symptoms, reflux, esophageal, patients, diagnosing, risk, acid, stomach, technique, reduce, lining, develop, cells, cancer, endoscopy, today

SPEAKERS

Dr. James East, Narrator, Jason Howland

N Narrator 00:01
Coming up on Mayo Clinic Q&A...

D Dr. James East 00:03
So Barrett's is related to chronic acid damage, where recurrent burning of the lower esophagus by acidic reflux, those cells are pre-malignant and increase your risk of developing esophageal cancer.

N Narrator 00:19
Barrett's esophagus is a condition in which the pink lining of the esophagus connecting the mouth to the stomach becomes damaged by acid reflux. Medications and lifestyle changes can reduce the risk of damage and the chances of developing cancer.

D Dr. James East 00:33
I think lifestyle measures that reduce the risk of reflux are the key here because once Barrett's esophagus develops, it's a permanent change unless we use some of the ablation techniques. Stopping smoking, alcohol, caffeine, some medications that can reduce lower esophageal sphincter pressure, losing even quite a small amount of weight can really help reduce reflux symptoms.

J Jason Howland 00:57
Welcome everyone to Mayo Clinic Q&A. I'm Jason Howland sitting in today for Dr. Halena

Gazelka. Barrett's esophagus is a condition in which the lining of the esophagus becomes damaged by acid reflux. This causes the lining to thicken and become red. While frequent heartburn may be a sign, many people with Barrett's esophagus have no symptoms. Having Barrett's esophagus does increase your risk of developing esophageal cancer. Although the risk is small, it's important to have regular checkups to check for precancerous cells. Joining us today to discuss diagnosing and treating Barrett's esophagus is Dr. James East. He is a gastroenterologist at Mayo Clinic Healthcare in London. Dr. East, welcome back to the program.

D Dr. James East 01:44
Jason, thank you. Great to be back.

J Jason Howland 01:46
Well, let's start off first by talking about how common is Barrett's esophagus for people that maybe have never heard of it.

D Dr. James East 01:56
So Barrett's esophagus, in the whole population, maybe about one to one and a half percent of the population have Barrett's esophagus, but it's not evenly distributed. It mainly occurs in patients who have symptoms of gastro esophageal reflux disease, or GERD. And in that population who have reflux symptoms, maybe five to 15% of those patients have Barrett's esophagus.

J Jason Howland 02:23
What causes it?

D Dr. James East 02:24
So Barrett's, as you've alluded to, is related to chronic acid damage, where recurrent burning of the lower esophagus by acidic reflux damages the cells, which are then replaced by more acid-resistant cells. That's the Barrett's esophagus. That's good, because it stops hurting. But it's bad, because those cells are pre-malignant and increase your risk of developing esophageal cancer.

J Jason Howland 02:59
And for people that are familiar, acid reflux, is it the same thing as heartburn? Or is it something different?

D Dr. James East 03:00

D Dr. James East 03:06

So acid reflux can present with a range of symptoms, heartburn is one of them. But people can also have chest pain, they can sometimes have trouble swallowing, a feeling of a lump in the throat, or some slightly more unusual symptoms related to reflux high up in the throat, where patients can have maybe a chronic cough or a worsening of their asthma.

J Jason Howland 03:31

And essentially it is the stomach's acid is coming up to where it's not supposed to be, right?

D Dr. James East 03:39

Indeed. So the lower esophageal sphincter, so that's the ring of muscle that is at the bottom of the gullet and compresses and stops the content of the stomach, which is acidic, coming up into the esophagus. The stomach is well designed to handle highly acidic conditions. But the esophagus is not designed to cope with acid. And so when acid comes up, it forms a burn and can and that damage, as it repairs, can develop into Barrett's esophagus.

J Jason Howland 04:14

So who is at risk for Barrett's esophagus?

D Dr. James East 04:18

So again, the risk is not evenly distributed in the population. People who are at more at risk, men are at greater risk than women, particularly Caucasian men, older men, over 50. Patients with long standing reflux, maybe for more than five years. People who smoke, people who are overweight, and patients who have a family history of either Barrett's esophagus, or esophageal adenocarcinoma, that's the cancer that comes from Barrett's esophagus. And in fact, if you have three of those risk factors that I've just described, then probably you should have a screening endoscopy for Barrett's esophagus, according to current guidelines.

J Jason Howland 05:05

We mentioned it earlier, but can you talk a little bit more about the link between Barrett's esophagus and esophageal cancer?

D Dr. James East 05:13

So Barrett's esophagus is thought to be the first stage in the cellular changes that progress slowly towards esophageal cancer. It's after patients develop Barrett's esophagus, they can then develop low grade dysplasia, so early precancerous change, that progresses to high grade dysplasia, and in sequence then progresses to Barrett's esophagus with acquiring a sequence of genetic changes that make it more likely to develop into cancer, over time.

J Jason Howland 05:49

As a gastroenterologist, how do you diagnose Barrett's esophagus?

D Dr. James East 05:54

So the standard method to diagnose Barrett's esophagus is currently to have a gastroscopy, an upper GI endoscopy. Where with a thin flexible telescope, with a light and a video chip on the end, we can look down very gently into the gullet and see the changes of Barrett's esophagus. Normally, we would take biopsies as well to send off to the lab to confirm the diagnosis.

J Jason Howland 06:22

So you're able to get a very clear picture with this.

D Dr. James East 06:26

Absolutely. With modern high-definition endoscopes, we can see very nicely where the bottom of the esophagus or sometimes we see a small hiatus hernia, where that ends, and then we see darker red tongues of the Barrett's esophagus extending up against the rather paler pink appearances of the normal esophageal lining.

J Jason Howland 06:53

So if someone is diagnosed with Barrett's esophagus, how do you go about treating it?

D Dr. James East 06:59

So I think that there are a number of things. First, lifestyle measures, stopping smoking, reducing alcohol, maybe trying to lose some weight, and these are primarily thinking about things that will reduce reflux and esophageal acid exposure. In terms of medication, this is also focused on reducing esophageal acid exposure and commonly proton-pump inhibitors. So these are medicines like omeprazole or lansoprazole are now recommended, with the idea to completely abolish all reflux symptoms, with the idea that if we're not damaging the esophagus, we're not promoting that cell turnover that leads to progression toward precancerous changing to cancer. Finally, there's been some recent work, though it's now more established in clinical practice, about now trying to eradicate Barrett's esophagus. And the most frequent technique used for this is called radiofrequency ablation. Where a balloon is used to heat the lining of the esophagus press tightly against it over the Barrett's area. And this just makes it burn, maybe half a millimeter in depth, that destroys the Barrett's. And when it regrows, hopefully it grows back as the normal esophageal lining with a lower cancer risk.

J Jason Howland 08:29

That specific treatment is that a recent advance in treatment, and are there any other recent advances in diagnosing or treating Barrett's esophagus?

D Dr. James East 08:38

So, thinking about diagnosis. First, there's been a non-endoscopic mechanism for diagnosing Barrett's esophagus that's been explored quite a bit during COVID. This is called cytosponge. It looks like a large tablet on a string that you swallow it and when it reaches the stomach, the capsule that it's in dissolves, and it looks like one of those buzzy toothbrushes and you pull the string out and it scrapes the cells off the bottom of the esophagus, and those can be analyzed to see if they have changes associated with Barrett's. We've also seen the use of advanced endoscopic imaging techniques like narrowband imaging that can show superficial blood vessels, and in combination with magnification, can help doctors target the biopsies to the highest risk areas. In terms of treatment, we've talked about radiofrequency ablation with a balloon that heats the very superficial layers of the esophagus and destroys them. But equally, techniques like cryoablation, which instead uses freezing to get rid of those superficial cellular layers, are also now available to remove small sections of the esophagus with a banding technique that that avoids the need for more invasive surgery, though this is a subspecialist technique.

J Jason Howland 10:10

It's all fascinating stuff. I guess we're just about out of time. But lastly, is there anything that people can I do to prevent Barrett's esophagus? I know you mentioned some of the lifestyle factors such as smoking and some of the others. What can we do to prevent getting Barrett's esophagus?

D Dr. James East 10:29

I think lifestyle measures that reduce the risk of reflux are the key here because once Barrett's esophagus develops, it's a permanent change unless we use some of the ablation techniques that we've previously discussed. So absolutely, smoking, alcohol, caffeine, some medications that can reduce lower esophageal sphincter pressure are all important changes, but particularly perhaps, in the sort of current climate, losing even quite a small amount of weight can really help reduce reflux symptoms.

J Jason Howland 11:10

All right, well, thank you so much. We are all out of time. But our thanks today to gastroenterologist, Dr. James East for joining us today from Mayo Clinic Healthcare in London. Thank you, Dr. East.

D Dr. James East 11:22



Pleasure.



Jason Howland 11:23

And thank you for joining us here on Mayo Clinic Q&A. Have a great day.



Narrator 11:28

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