



Cystic Fibrosis Research News

Title:

Cystic fibrosis is associated with an increased risk of Barrett's esophagus

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What was your research question?

Barrett's esophagus is a condition where the cells of the esophagus change over time due to constant stomach acid reflux. We assessed whether people with cystic fibrosis (CF) have an increased risk of Barrett's esophagus or related esophageal adenocarcinoma, a type of esophageal cancer.

Why is this important?

People with CF have an overall increased risk of cancer, in particular within the gastrointestinal tract. Gastroesophageal reflux disease (GERD) is the strongest modifiable risk factor for esophageal adenocarcinoma and is very common among people with CF. Because of this, people with CF may have an increased risk of GERD-related complications, including Barrett's esophagus and esophageal adenocarcinoma. It is important to determine the risk of Barrett's esophagus among patients with CF as it can eventually develop into esophageal cancer. Therefore, a diagnosis of Barrett's esophagus would allow for surveillance and therapy, which could decrease the risk of esophageal cancer related deaths among patients with CF.

What did you do?

We examined all CF patients who underwent endoscopy over a 12-year period at a single centre and matched them to patients without CF in a 1:4 ratio by age, sex, year of endoscopy and endoscopist. All of the endoscopy reports were manually reviewed, and cases of Barrett's

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esophagus or esophageal cancer were confirmed by two Barrett's esophagus experts. We compared differences between CF and non-CF patients. We also used a statistical model called multivariable logistic regression to assess the risk of Barrett's esophagus among patients with CF.

What did you find?

We found that adults with CF have a 3-fold increased risk of Barrett's esophagus or related esophageal cancer and both of these appear to develop at younger ages than in people without CF. In addition, the majority of those CF patients who had Barrett's esophagus also had a history of solid lung (or other organ) transplant.

What does this mean and reasons for caution?

Given the younger age of Barrett's esophagus diagnosis in CF patients, consideration should be given to performing upper endoscopy in CF patients with long-standing GERD, especially among those who have had a prior transplant. While we found a 3-fold increased odds of Barrett's esophagus or related cancer in patients with CF, the actual prevalence of disease should be interpreted with caution. It is possible that the patient population examined within our study may be more likely to undergo upper endoscopy and be diagnosed with complications of GERD.

What's next?

Larger studies with more patients to confirm the true prevalence and risk factors for Barrett's esophagus in the CF community.

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