Risk of esophageal cancer in patients with Barrett's esophagus

October 14 2011, by Deborah Braconnier

(Medical Xpress) -- A new study published in the *New England Journal of Medicin*e reveals that the risk of patients with Barrett's esophagus developing adenocarcinoma of the esophagus are not as high as once originally thought.

Barrett's esophagus is a condition where the lining of the esophagus is damage by stomach acid due to gastroesophageal reflux disease, or GERD, and affects as many as one million Americans. This is also known as simply acid reflux. It is more common in men than women and a patient is more likely to develop this condition the longer they suffer from GERD.

Previous studies have shown an increased risk of adenocarcinoma cancer in patients with Barrett's esophagus, but this new study shows the risk is not as high as originally thought. Researchers in the new study looked at 11,000 people in Denmark that were diagnosed with Barrett's esophagus and how many went on to be diagnosed with adenocarcinoma. Their results showed the numbers equaled one case out of every 860 patients. This number accounts for an 80 percent lower risk than previously reported.

However, the researchers also note that dysplasia, or change in the Barrett's tissue, at the time the patient is diagnosed with Barrett's esophagus plays a role in the risk factor. If dysplasia was present, the occurrence of adenocarcinoma increased to 5.1 cases per 1,000.

The results of this study, according to lead researcher Dr. Peter Funch-Jensen from the Hamlet Hospital and Clinical Institute at the University of Aarhus, show that it may not be necessary or cost-effective for physicians to perform regular invasive cancer screening tests on these patients. He notes that patients without dysplasia only need endoscopic evaluation in the first year and not again unless new symptoms develop.

More information: Incidence of Adenocarcinoma among Patients with Barrett's Esophagus, N Engl J Med 2011; 365:1375-1383October 13, 2011. www.nejm.org/doi/full/10.1056/NEJMoa1103042

Abstract

Accurate population-based data are needed on the incidence of esophageal adenocarcinoma and high-grade dysplasia among patients with Barrett's esophagus.

METHODS We conducted a nationwide, population-based, cohort study involving all patients with Barrett's esophagus in Denmark during the period from 1992 through 2009, using data from the Danish Pathology Registry and the Danish Cancer Registry. We determined the incidence rates (numbers of cases per 1000 person-years) of adenocarcinoma and high-grade dysplasia. As a measure of relative risk, standardized incidence ratios were calculated with the use of national cancer rates in Denmark during the study period.

RESULTS We identified 11,028 patients with Barrett's esophagus and analyzed their data for a median of 5.2 years. Within the first year after the index endoscopy, 131 new cases of adenocarcinoma were diagnosed. During subsequent years, 66 new adenocarcinomas were detected, yielding an incidence rate for adenocarcinoma of 1.2 cases per 1000 person-years (95% confidence interval [CI], 0.9 to 1.5). As compared with the risk in the general population, the relative risk of adenocarcinoma among patients with Barrett's esophagus was 11.3 (95% CI, 8.8 to 14.4). The annual risk of esophageal adenocarcinoma was 0.12% (95% CI, 0.09 to 0.15). Detection of low-grade dysplasia on the

index endoscopy was associated with an incidence rate for adenocarcinoma of 5.1 cases per 1000 person-years. In contrast, the incidence rate among patients without dysplasia was 1.0 case per 1000 person-years. Risk estimates for patients with high-grade dysplasia were slightly higher.

CONCLUSIONS Barrett's esophagus is a strong risk factor for esophageal adenocarcinoma, but the absolute annual risk, 0.12%, is much lower than the assumed risk of 0.5%, which is the basis for current surveillance guidelines. Data from the current study call into question the rationale for ongoing surveillance in patients who have Barrett's esophagus without dysplasia. (Funded by the Clinical Institute, University of Aarhus, Aarhus, Denmark.)