Screening for Esophageal Adenocarcinoma

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Introduction

Esophageal adenocarcinoma presents a very difficult challenge to physicians. At least 95% of esophageal adenocarcinomas present as symptomatic advanced disease according to a recent population based study of Denmark.1 Those that have been diagnosed with Barrett’s esophagus represent less than 5% of the total cancers. This would mean that in order to truly impact the incidence of Barrett’s esophagus, a screening program would be essential.

Defining At-Risk Population:

The patients at greatest risk of Barrett’s esophagus and potentially adenocarcinoma are those with chronic reflux symptoms. It has clearly been shown that a increased history of reflux disease correlates with increased prevalence of Barrett’s esophagus.2 In addition, it appears that Caucasian males are in the highest risk group for Barrett’s esophagus, particularly those greater than age 50. Truncal obesity is also associated with increased systemic inflammation and is associated with Barrett’s esophagus.3 Tobacco use has been found to be associated with Barrett’s esophagus although alcohol does not appear to be associated. Another group might be patients with two or more family members with Barrett’s esophagus or adenocarcinoma.

Screening Tools

The use of standard endoscopy for screening does not appear to be a cost effective method of screening. This may be because of the sedation involved in the West and the need for ambulatory surgical centers to perform the procedure. Office based methods such as transnasal endoscopy may be cost effective but they still require a skilled endoscopist to perform the procedure although sedation is not required and biopsies can be taken.4 Most recently, a novel cytosponge was found to be cost effective in a Markov model since this technique can be applied by a technician.5 Confirmation of Barrett’s esophagus would still have to be performed by endoscopy. It is important to note, that the acceptability of the cytosponge to the population that would require it has not been studied. More technologically advanced methods such as volume laser endomicroscopy have also been
described that might be more diagnostic but these are still in early stages of clinical translation.

References


