Barrett's Esophagitis

Background
1. Definition:
   - Change in the distal esophageal epithelium
   - Columnar type mucosa on endoscopy
   - Intestinal metaplasia of the tubular esophagus, confirmed by biopsy (SOR:B)
2. General Information
   - Major risk factor for the development of esophageal adenocarcinoma.
   - Esophageal adenocarcinoma incidence continues to rise rapidly.
     - The rate of rise alarming and widespread in Western countries

Pathophysiology
1. Pathology of Disease
   - Exposure of esophageal epithelium to acid
   - Damage of the lining
   - Chronic esophagitis
   - Abnormal columnar cells replacing squamous cells
   - Intestinal metaplasia
   - Progress to dysplasia, ultimately leading to carcinoma
2. Incidence, Prevalence
   - Annual incidence of Esophageal Adenocarcinoma (EAC):
     - 3.6/100,000 in Caucasian men
     - 0.8/100,000 in African American men
     - 0.3/100,00 in Caucasian women
3. Risk Factors
   - Gastroesophageal reflux disease (GERD)
   - Smoking
   - White or Hispanic race
   - Male sex
   - Advancing age, smoking
   - Increased BMI in women but not in men
4. Morbidity / Mortality - All cause mortality increased by 37%

Diagnostics
1. History
   - Dysphagia
   - Odynophagia
   - Upper gastrointestinal bleeding
   - Cough
   - Weight loss
2. Physical Examination
   - Non-specific
3. Diagnostic Testing
   - Endoscopy
   - Biopsy
   - Endoscopic brush cytology
4. Laboratory evaluation
Diagnostic criteria
1. Endoscopist must document that columnar epithelium lines distal esophagus.
2. Columnar epithelium biopsy specimens must reveal intestinal metaplasia histologically\(^9,^{10}\)

Differential Diagnosis
1. GERD
2. Esophageal cancer
3. Stomach cancer

Therapeutics
1. Proton pump inhibitor therapy
2. Photodynamic therapy\(^8\)
3. Mucosal ablation therapy
4. Surgical resection (esophagectomy)

Follow-Up
1. Endoscopic surveillance is suggested for patients with Barrett's esophagus using the following surveillance intervals:
   - No dysplasia: 3 to 5 years
   - Low-grade dysplasia: 6 to 12 months
   - High-grade dysplasia in the absence of eradication therapy: 3 months\(^{11}\)
2. Evidence rating: Category B

Prognosis
1. Endoscopy factors predicting low risk of adenocarcinoma
   - Low grade or no dysphasia on initial endoscopy
   - Barrett’s esophagus length less then 6 cm\(^{12}\)

Prevention
1. Early GERD diagnosis and treatment
2. H. Pylori eradication
3. Diet and lifestyle modification changes

Patient Education
   - Avoid dietary fat, chocolate, caffeine, and peppermint because they may cause lower esophageal pressure and allow retrograde gastric acid flow
   - Avoid alcohol and tobacco
   - Avoid lying down after meals
   - Lose weight
   - Sleep with the head of the bed elevated
   - Take all medications with plenty of water
References


Author: Monika Kumanova, MD, Bronx Lebanon Hospital Center FPRP, NY

Editor: Robert Marshall, MD, MPH, MISM, CMIO, Madigan Army Medical Center, Tacoma, WA