

Characteristics and Treatment of Adenocarcinoma Associated with Barrett's Esophagus

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ABSTRACT

Barrett's esophagus and Barrett's esophageal adenocarcinoma are rare diseases with an increasing incidence in Japan. Barrett's mucosa is columnar epithelium that spreads continuously from the stomach to the esophagus. The definition of Barrett's mucosa differs between western countries and Japan. This study was based on the definition established in Japan (i.e., the lower end of longitudinal vessels which can be observed through endoscopic examination). In addition, the definition of pathological diagnosis differs between Japan and western countries, excluding the United Kingdom. In western countries, a biopsy is required for the diagnosis of Barrett's mucosa and it is necessary to determine the presence of intestinal metaplasia. However, in Japan and the United Kingdom, the diagnosis of Barrett's esophagus is based on the presence of a metaplastic columnar-lined esophagus. Mucosal injury, induced by esophagitis and the repair process, is responsible for the replacement of esophageal squamous epithelium by columnar epithelium. Gastric acid, the involvement of duodenal fluid and/or bile acid reflux are causes of esophageal mucosal injury. Jianwen Que et al. reviewed the mechanism involved in the replacement of the squamous epithelium by columnar epithelium: 1) reflux-induced transdifferentiation or transcommitment to produce columnar cells from the basal layer; 2) extension from the proper esophageal glands and conduit; 3) extension mucosa from the gastric cardiac glands; 4) circulating bone marrow cells for progenitor cells; and 5) transdifferentiation from residual embryonic cells. We reported that the presence of metaplastic epithelium with intestinal metaplasia is an indicator of a premalignant lesion of esophageal adenocarcinoma. The clinical guidelines suggest endoscopic surveillance for the diagnosis of esophageal adenocarcinoma among high-risk populations. Recently, several studies showed that cytopathology and MUC2 immunohistochemical staining are useful methods for the screening of intestinal metaplasia, dysplasia and adenocarcinoma. In this presentation, I discuss the characteristics and treatment of adenocarcinoma associated with Barrett's esophagus, including recent evidence from basic and clinical research.

Keywords: Barrett's esophagus, Adenocarcinoma, Characteristics, Diagnosis, Treatment

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