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It Is Time to Reconceive the Concept of the Known Premalignant Barrett's Esophagus: Which Part Is the Culprit?

Aiming to prevent and cure cancer, premalignant condition is the target for screening and surveillance in order to monitor and capture it early. Barrett's esophagus (BE) is the only known premalignant condition for the development of esophageal adenocarcinoma (EAC), which has risen dramatically (more than sixfold over the past four decades) in incidence and remains with poor prognosis (overall 5-year survival lower than 20%). Fundamental issues of BE, however, have constantly been debated since this condition (columnar lined esophagus in the context of gastroesophageal reflux) was first described by Dr. Philip Rowland Allison in 1946, although the eponym was not Allison's esophagus, instead of Barrett's esophagus, even though Dr. Barrett initially misinterpreted it as a segment of stomach. Regarding the diagnostic criteria, an international consensus has not been reached according to current Guidelines. Debates are around two criterions: 1, whether or not the presence of goblet cells (GC) should be included; 2, the minimal length (1cm) of BE segment should be required or not. This conceptional confusion in diagnosis unavoidably accompanies with uncertainties along the following steps of clinical management, including who should enter endoscopic surveillance and intervals to benefit the most, when is the right time for endoscopic intervention, named endoscopic eradication therapy (EET). After EET, the recurrence rate is unignorable, debates continue regarding the post-EET surveillance intervals. What are these debates brought to patients? When a patient was diagnosed with BE, the stress is inevitable as it was told as precancerous. After another or more times of endoscopic surveillance procedures, which are expensive economically, psychologically and physically, in hoping to prevent cancer by removing dysplasia when detected. After the named eradication therapy, it's hard to answer whether or not the whole process is really helpful. It is worth reminding that the sequence of low-grade dysplasia (LGD) to high-grade dysplasia (HGD) to cancer is Not an absolute direction. BE, the metaplastic change is initially a protective mechanism in surviving erosive attack of the acid and bile reflux in gastroesophageal reflux disease (GERD). Is there misleading area in clinical management of BE patients? The goal of this article is to propose an alternative notion: the culprit for malignancy in Barrett's esophagus, might be something other than what it is dominantly defined, at least in some (if not most) of patients diagnosed with BE. The issue of stem cell origin of BE is emphasized. This notion has the potential to provide guidance for recategorizing, perhaps, reconceptualizing Barrett's esophagus.

Biography

Youxin Yang obtained her PhD in Physiology and Physiopathology from Paris 6 Pierre and Marie Curie University, after completing MD and MS from Southeast University School of Medicine.

She was awarded a prize from AEPP (Association pour l'Étude de la Pathologie Pédiatrique: Association déclarée par la loi du 1er Juillet 1901 - JO 21 Mai 1970) in 1999 for her work on the WT1 gene in Denys-Drash syndrome and diffuse mesangial sclerosis

She is a cancer researcher at BIDMC, Harvard Medical School. Her research areas include tumor suppressors, genomic instability, and cancer stem cells. Currently, she focuses on the premalignant lesions for esophageal adenocarcinoma.

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