

Early Detection and Endoscopic Treatment of Gastric Cancer

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Introduction;

Although early gastric cancer (EGC) has an excellent prognosis, diagnosis of EGC is however a major challenge. In many cases of EGC, the traditional approach with surgery represents over-treatment. This paper reviews the methods available for detecting EGC, and techniques of endoscopic treatment.

Background & Present status;

Except for the few countries in East Asia which have ready access to screening, the majority of cases still present with advanced disease. While mass screening for gastric cancer (GC) with photofluorography has been conducted in Japan since 1960, Esophago-Gastro-Duodenoscopy (EGD) is more accurate and more widely used.

The incidence of gastric cancer is different between countries in East Asia due to *H.pylori* and other environmental factors. The low incidence of EGC in many countries might be partially explained by the different criteria used by Western and Japanese pathologists.

Screening, Detection and Diagnosis of EGC;

In populations at high risk for GC, screening is accepted as a cost-effective way of lowering GC mortality, by increasing the proportion of early-stage cancers diagnosed. Atrophic gastritis and intestinal metaplasia, along with *H.pylori* infection, increase GC risk. In moderate-risk populations, a screening strategy targeted at individuals with multiple risk factors for GC may be cost-effective.

Barium photofluorography is widely performed in screening programs due to relatively low cost and non-invasiveness, but sensitivity is sub-optimal. High-quality EGD is the most sensitive and specific modality for detecting EGC, but is more invasive. It requires patient preparation and good endoscopic technique, and may require specialized cognitive training.

Western histological criteria define carcinoma as invasion of the submucosa, muscularis, or at least the lamina propria. In Japan, cellular and structural atypia, regardless of invasive features, are used to diagnose gastrointestinal neoplasia. To avoid further confusion, a consensus classification should be established.

Endoscopic Treatment of EGC;

Endoscopic Mucosal Resection (EMR) is well-accepted, but can only be used to remove lesions of up to 15mm *en-bloc*. Although follow-up data showed extremely low recurrence, larger lesions requiring piecemeal resection carried significantly higher recurrence rates. Endoscopic submucosal dissection (ESD) was developed to enable *en-bloc* resection regardless of tumor size. ESD can however be a challenging procedure involving long procedure times, and increased risks.

Conclusions;

As a starting point for developing an Asian consensus on EGC, and to facilitate future research, histological staging should be standardized. Concurrently, cost-effective screening protocols, and joint endoscopic and surgical training centers should be established.