Female Gender in Esophageal Intramucosal Adenocarcinoma Treated with Endoscopic Mucosal Resection: A Case Series

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**Female Gender in Esophageal Intramucosal Adenocarcinoma Treated with Endoscopic Mucosal Resection: A Case Series**

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**Background**

- Barrett’s esophagus (BE) is a premalignant esophageal condition which may lead to dysplasia and esophageal adenocarcinoma (EAC)
- Incidence of BE is increasing
- High-grade dysplasia (HGD) carries significant risk of progression to EAC
- Patients with HGD and intramucosal adenocarcinoma (IMA) are treated with endoscopic mucosal resection (EMR) and radiofrequency ablation (RFA)
- Women have a lower risk of progression from BE to HGD or EAC
- Females diagnosed with HGD are presumed to have an equal risk of progression to IMA or EAC

**Case Series Presentation**

**PATIENT 1:**

- 68 year old female with a history of pancreatic cancer and Whipple procedure
- EGDS: Gastroesophageal junction (GEJ) nodularity with HGD on biopsy
- EMR pathology: IMA with HGD
- No endoscopic evidence of nodularity on repeat EMR
- Follow up EMRs were done every 3 months with follow up EMR for GEJ subtle inflammatory changes with negative pathology

**PATIENT 2:**

- 75 year old female with a prior history of non-dysplastic BE
- Surveillance EGDS showing HGD and IMA on biopsy
- GED/EUS: Para-arteric lymph node (<1 cm) and esophageal nodularity treated with EMR
  - Pathology: BE with HGD, low-grade dysplasia (LGD), possible IMA, and negative lymph node FNA
- Repeat EGDS: No evidence of nodularity; flat Barrett’s treated with RFA
- Third EGD with mild GEJ irregularity biopsy: Non-dysplastic Barrett’s
- RFA treatment on three separate occasions for short segment BE
- Subsequent EGD with GEJ biopsy: Free of pathology

**PATIENT 3:**

- 75 year old female with a history of reflux and gastritis
- GEDS: Irregular Z-line and esophagitis
- Pathology: Barrett’s mucosa with HGD (unable to exclude IMA)
- Repeat EGDS: Low-grade dysplasia or Barrett’s ulcer
- EUS-FNA of para-aortic lymph node: Negative FNA
- Repeat EGDS: GEJ nodularity treated with EMR at two sites
- Pathology: IMA with invasion into the muscularis mucosae with negative deep margins
- Third EGDS: No residual BE

**Discussion**

- BE is found in 4% of patients undergoing EGD
- BE has and estimated 20-fold increased risk of developing EAC
- Visible nodules with HGD suggest a more advanced lesion; EMR upstages the diagnosis to cancer in up to 40% of cases
- EMR/RFA is the standard of care for BE with HGD or IMA
- Female patients with esophageal HGD and/or IMA undergo EMR/RFA, but no data suggests their response is the same as male patients
- Further investigation of gender differences may reveal distinct incidence and response to EMR/RFA
- Such differences would affect prognostication, timing of surveillance, and treatment
- Our case opens a discussion to examine gender differences in esophageal HGD and IMA with further studies

References: