상부위장관의 내시경
울산대학교 의과대학 내과학과실
정 훈 용

Esophagus

Heterotopic Gastric Mucosa

Diverticulum

Zenker's Diverticulum
Midesophageal Diverticulum

Hernia

Sliding Hiatal Hernia

Paraesophageal Hiatal Hernia

Esophageal Candidiasis

Herpetic Esophagitis
CMV Esophagitis

Herpetic Esophagitis vs CMV Esophagitis

<table>
<thead>
<tr>
<th>Herpetic Esophagitis</th>
<th>CMV Esophagitis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Endoscopic findings</strong></td>
<td></td>
</tr>
<tr>
<td>1st phase: vesicular</td>
<td>superficial erosions with a geographic, serpiginous, nonraised border</td>
</tr>
<tr>
<td>2nd phase: sharply demarcated small ulcers with raised margins</td>
<td>may be large (1-3cm) but very superficial</td>
</tr>
<tr>
<td>Final phase: diffuse esophagitis with confluent ulcer</td>
<td>Deep ulcers with raised margin, caused by CMV, may also be noted</td>
</tr>
<tr>
<td><strong>Biopsy</strong></td>
<td></td>
</tr>
<tr>
<td>Margin</td>
<td>Base</td>
</tr>
</tbody>
</table>

Eosinophilic Esophagitis

Endoscopic findings

- Stacked circular rings ("feline" esophagus)
- Stricture (particularly proximal stricture)
- Attenuation of the subepithelial vascular pattern
- Linear furrowing that may extend length of the esophagus
- Whitish papules (representing eosinophilic microabscesses)
- Small caliber esophagus

Reflux Esophagitis

LA grade A
LA grade B
LA grade C
LA grade D
Reflux Esophagitis, Minimal Change
- Mucosal friability
- Blurring of Z line
- Increased vascularity
- Hyperemia
- Decreased transparency
- Junctional erosion
- Discoloration

Barrett’s Esophagus
- Squamocolumnar junction displaced proximal to EG junction
- Intestinal metaplasia
- Alcian blue pH 2.5 positive
- Goblet cells

Barrett’s Esophagus

Esophageal Varix
- F1
- F2
- F3

Benign Esophageal Tumor
- Acanthosis
- Papilloma
- Granular cell tumor
- Sentinel fold
- SMT
  - leiomyoma
  - Schwannoma
  - duplication cyst
  - vascular ectasia
  - lymphangioma
  - lipoma

Acanthosis
### Papilloma

- Superficial Esophageal Cancer
  - Stage 0-I (Superficial, protruding type)
  - Stage 0-II (Superficial, flat type)
  - Stage 0-III (Superficial, distinctly depressed)

### Granular Cell Tumor

- Superficial Esophageal Cancer
  - Stage 0-I (Superficial, protruding type)
  - Stage 0-II (Superficial, flat type)
  - Stage 0-III (Superficial, distinctly depressed)

### Esophageal Cancer

- Early Esophageal Cancer
  - Stage 0-I (Superficial, protruding type)
  - Stage 0-II (Superficial, flat type)
  - Stage 0-III (Superficial, distinctly depressed)

### Esophageal Cancer

- Endoscopic Classification
  - Type 0-I: Superficial, protruding type
  - Type 0-II: Superficial, flat type
  - Type 0-III: Superficial, distinctly depressed

### Chromoendoscopy

<table>
<thead>
<tr>
<th>Principle of staining</th>
<th>Stain</th>
<th>Concentration</th>
<th>Structures stained</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorptive</td>
<td>Lugol's solution</td>
<td>0.5-3.0%</td>
<td>Epithelial : metaplastic, superficial</td>
<td>Brown, black</td>
</tr>
<tr>
<td>Methylene blue</td>
<td>0.1-1.0%</td>
<td>Absorptive intestinal and colonic epithelium</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>Chrome violet</td>
<td>0.2%</td>
<td>Gastric or colonic epithelium</td>
<td>Violet</td>
<td></td>
</tr>
<tr>
<td>Toluidine blue</td>
<td>1%</td>
<td>Nuclei DNA, metaplastic</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>Contrast</td>
<td>Indigo carmine</td>
<td>0.1-0.3%</td>
<td>Epithelial, crypts, folds</td>
<td>Blue-violet</td>
</tr>
<tr>
<td>Reactive</td>
<td>Congo red</td>
<td>0.3-0.6%</td>
<td>Gastric secretions</td>
<td>Red at neutral or alkaline pH, black at acid pH</td>
</tr>
<tr>
<td>Phosphotungstic red</td>
<td>0.1%</td>
<td>Gastric secretions</td>
<td>Yellow at neutral or alkaline pH, black at acid pH</td>
<td></td>
</tr>
</tbody>
</table>

### Lugol's Solution

- Normal
- Abnormal
Superficial Esophageal Cancer

Type O-I

Type O-Iiia

Type O-Iib

Type O-Iic

Where is the cancer?

Advanced Esophageal Cancer

Type I

Type II

Type III, SCC, M/D

Stomach
Gastric Ulcer

Benign vs Malignant

양성 위궤양과 악성 병변의 감별

전형적인 위암의 주름 변화

양성 궤양의 병기에 따른 형태 분류

조기 위암의 주기 변화

3 weeks later
주름 관찰과 적절한 공기주입의 중요성

Other than gastric cancer

Chronic Superficial Gastritis

Erosive Gastritis
Raised Erosive Gastritis

Chronic Atrophic Gastritis

Metaplastic Gastritis

Lymphofollicular Gastritis

AGML (Acute Gastric Mucosal Lesion)

Portal Hypertensive Gastropathy
**NSAIDs-induced Gastropathy**

- NSAIDs for OA, knee
- Pain killer for pubic bone fracture

**GAVE (Gastric Antral Vascular Ectasia)**

**CMV Gastritis**

- KT status, CMV viremia
- CMV gastritis

**Gastric Angiodysplasia**

- BX: Chronic active gastritis, severe, with ulcer, severe submucosal lymphoid cell infiltration
- Thin filamentous organism in the ulcer bed by silver stain
- Consistent with syphilitic gastritis

M/57 Gastric ulcer로 치료 후 호전없이 내원
외부 CT: Diffuse wall thickening
외부 EGD: r/o AGC, B-IV
외상 근 파열로 NSAIDs 복용 중
Gastric Diverticulum

Bezoar

Hyperplastic Polyp

Adenoma

Familial Adenomatous Polyposis

Peutz-Jeghers Syndrome
Gastric SMT

Gastric SMT (GIST)

Gastric Carcinoid

Gastric Varix

Gastric MALT Lymphoma

Bx: Atypical lymphoid cells, favor extranodal marginal zone lymphoma, mucosa associated lymphoid tissue

Bx: Atypical lymphoid cells infiltration with lymphoepithelial lesion and intestinal metaplasia, suggestive of MALToma

CD20 (+); CD5 (-); CD10 (-); BCL6(-); CD3 (-); Ki-67 LI (5 %)
**Diffuse Large B Cell Lymphoma**

Bx: Diffuse large B cell lymphoma, EBV (+)

CD20 (+); BCL6 (+); MUM1 (+); LCA (+); CD5 (-); CD10 (-); CD3 (-);

Cytokeratin (-); Ki-67 LI (80%)

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**Metastatic Cancer from Burkitt Lymphoma**

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**Metastatic Cancer from Choriocarcinoma**

Bx: Choriocarcinoma, metastatic B-HCG (+)

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**Duodenum**

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Duodenal Diseases

- Duodenal ulcer
- Duodenal cancer
- Duodenitis
- Duodenal polyp
- Duodenal SMT
- Diverticulum

Duodenal Ulcer

Pyloric Deformity

Bulb Deformity

Malignant Duodenal Ulcer

2° Duodenal Malignancy

- 62 -
Other Malignancies

- Burkitt lymphoma
- Diffuse large B cell lymphoma

Duodenitis

- Duodenitis
- Radiation duodenitis
- Tuberculosis

Duodenal Polypoid Lesions

- Hyperplastic polyp
- Inflammatory polyp
- Heterotopic gastric mucosa

- Adenomatous polyp
- Brunner's gland hyperplasia
- Ectopic pancreas

Duodenal SMT

- Ectopic pancreas
- Cystic SMT
- Lymphangioma

Duodenal SMT

- Lipoma
- GIST
- Carcinoid

Diverticulum