Endoscopic findings of gastric cancer

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Endoscopy for gastric cancer

• Starting endoscopy with BOXIM and DEX
• AGC Borrmann type 4
• EGC at blind area
• Interpretation of biopsy result – atypia
Traditional

Brief observation

Insertion

Current or Future

BOXIM (box simulator training)

Lectures and book-reading

DEX (description exercise)

Clinical observation

Insertion under supervision

CEE (off-line & on-line)
What kind of simulator?
Old vs current model
BOXIM in the evening?
BOXIM training room
Daytime BOXIM training
KINGCA Master Class at SMC

2018-4-23. SMC Endoscopy Simulator Center
http://endotoday.com/endotoday/20180426.html#master
1. EndoTODAY update
2. EndoATLAS - 주제별 분류
3. Beginner Center (SMC 내시경실)
   1) 내시경 초심자 교육 - Boxim과 Dex를 중심으로
   2) 내시경 용어, description exercise, 분류법
   3) 내시경 삼입법 box simulator 훈련
   4) Quick reference, 내시경 진정
   5) 의과 fellow 내시경 교육
4. 학술 모임 - 월요소화기, 목요내시경, KSGE, KINGCA, Hp, 일본
5. 증례 토의 - 식도, GERD, 위, 위암, 궤양, 소장, 대장, LiverTODAY
6. 기타 - 기생충, 외래설명서, 검색, 링크, 블로그
7. Visiting SMC Endoscopy Unit (KINGCA 2018)

References
DEX (description exercise)

http://endotoday.com/endotoday/learning.html
Endoscopic findings for gastric cancer

성균관대학교 의과대학 내과 이준행
What is important?

Borrmann type IV AGC?

Other AGCs?

EGC?
Case 1. AGC B-4
AGC B-4 (F/55, 2013)
Stomach, total gastrectomy:
Advanced gastric carcinoma

1. Location: upper third, middle third, lower third, Center at fundus, body, and greater curvature

2. Gross type: Borrmann type IV

3. Histologic type: tubular adenocarcinoma, poorly (poorly cohesive) differentiated

4. Histologic type by Lauren: diffuse

5. Size: \textbf{20x18 cm}

6. Depth of invasion: \textit{invades serosa (pT4a)}

7. Resection margin: free from carcinoma

8. Lymph node metastasis: \textbf{no metastasis in 31 regional lymph nodes (pN0)}

9. Lymphatic invasion: not identified

10. Venous invasion: not identified

11. Perineural invasion: present

12. Peritoneal cytology: negative

13. AJCC stage by 7th edition: T4a N0
1 year ago
2 years ago
How can we make a diagnosis earlier?
Gastric folds and wall thickening
Fold thickening
- Initially peritoneal seeding (+)
Shoulder by shoulder
Shoulder by shoulder
Limited expansion by air
Antral type
AGC B-4 of the remnant stomach

Remnant stomach s/p STG due to AGC (5 years ago)

Colon involvement
Biopsy negative AGC B-4

• 2016년 3월 17일 외래 방문: "Multiple erosion & submucosal lesions on body, 송기를 하여도 expansion 잘 안됨. Fundus에도 elongated mass 양상 Bx: CG with granulation tissue" 소견으로 의뢰됨
• 3월 17일. 당일 내시경 검사 시행. 이준행 교수의 오후 시술을 끝낸 후 다시검 결과를 확인하고 환자에게 연락하여 다음 날 외래로 오시게 함
• 3월 18일 외래에서 조직검사에서 암이 나오지 않더라도 수술이 필요한 상황임을 설명함. 당일 입원
• 3월 19일 외과 전과, Bx: 암 (-)
• 3월 20일 total gastrectomy
Case 2. EGC at blind area
Something wrong is found at posterior wall aspect of the angle
Initial biopsy: adenoma

- STOMACH:
  ▶ EGC IIb + IIc. Chronic atrophic gastritis
    #1×3(PW of angle)
    - Location: posterior wall of angle
    - Size: 1.8 x 1.6 cm
    - Diffuse mucosal atrophy was seen on the antrum and lesser curvature side of body.

위양 의심부위가 보이며 indigocarmine spray를 이용하여 상세히 관찰하였음. 위각에서 위
체하부 연결부 후벽에 1.8cm x 1.6cm 크기의 uneven surface를 보이는 ovoid lesion
lesion이 있으며 병소의 중앙에서 약간 소만쪽으로 약 0.5cm 크기의 deep erosion이 있
음. 주변 점막의 화생성 변화가 현저하며 경계는 불명확함. Abnormal fold는 없음.
ESD was done ➞ 18mm W/D EGC (M)

1. Stomach, #1x1 : Posterior wall of low body, biopsy(ESD):
   - Early gastric carcinoma

1. Location : low body, posterior wall
2. Gross type : EGC type llc
3. Histologic type : tubular adenocarcinoma, well differentiated
4. Histologic type by Lauren : intestinal
5. Size of carcinoma : (1) longest diameter, 18 mm (2) vertical diameter, 9 mm
6. Depth of invasion : invades mucosa (lamina propria) (pT1a)
7. Resection margin : free from carcinoma(N)
   - safety margin : distal 8 mm, proximal 9 mm, anterior 10 mm, posterior 8 mm, deep 1800 mm
8. Lymphatic invasion : not identified(N)
9. Venous invasion : not identified(N)
10. Perineural Invasion : not identified(N)
11. Microscopic ulcer : absent
12. Histologic heterogeneity : absent

(본 진단은 조직구조학적 검사 후 판독결과입니다.)
EGD 1 year ago
Blind area

The following areas may not be viewed clearly. They should be examined carefully by the endoscopist:

1. The cervical esophagus.
2. Cardia.
3. Incisura.
4. Posterior wall of the body.
5. Pylorus.
6. Immediate post-pyloric area of the duodenal bulb.
7. Superior flexure of the duodenum.
8. Medial wall of the second part of the duodenum.
GC side of the fundus – a blind spot

(1)

(2)

Blind area
Good habit = good routine

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Some tips for finding EGC

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Subtle color change
- P/D adenocarcinoma at fundus
It may be bigger than the first look.

Two erosions
Left: adenoma with HGD
Right: W/D adenocarcinoma

ESD was done for a laterally spreading EGC. Final pathology was Tubular adenocarcinoma, well differentiated, arising from adenoma
Fold changes and others

- Focal regenerative epithelium
- Moth eaten
- Unevenness
- Fusion (V-shaped deformity)
- Regenerative epithelium
- Mucus overriding
- Abrupt tapering (Rat tail)
- Abrupt interruption
- Clubbing
- Fusion with abrupt tapering
Typical fold changes of EGC (1)
Typical fold changes of EGC (2)
Case 3. – Atypia / atypical glands
Atypia at previous endoscopy

11 months before ESD

5 weeks before ESD

Papillary adenoca (M/D)
7 x 6 mm
Resection margin (-)
SM invasion : 1900 μm
Venous invasion : present
Atypia at biopsy (2004-2010, SMCHPC)

a few atypical gland (reactive regenerating gland)
atypical regenerative epithelium
atypical foveolar glands (regenerating)
atypical gland (regenerating atypia)
atypical gland (reactive regenerating atypia)
atypical glands (reactive change of regenerating gland)
atypical regenerating glands
atypical regenerative foveolar epithelium
focal atypical cells (reactive regenerating atypia)
atypical glands (regenerating atypia)
focal atypical glands (reactive change)
focal atypical glands (regenerating atypia)
focal regenerating atypia
regenerating atypia
regenerating epithelial atypia
focal atypical glands (regenerating atypia)
focal atypical glands (regenerating gland)
focal atypical regenerative glands
regenerative atypia
regenerating foveolar epithelium with mild atypia
regenerative foveolar epithelium with moderate atypia

Atypical cell / glands

Regenerating Atypia (n=71, 57%)

Atypia (n=54, 43%)
Final pathological diagnosis

Atypia
- Cancer: 67%
- Adenoma: 12%

Regenerating Atypia
- Adenoma: 7%
- Cancer: 15%

Mean follow-up (day)
- 351.02 ± 532.53 (range 11~2600)
- 1153.15 ± 805.04 (range 49~3191)
Atypical glands

→ Repeated biopsy after referral: P/D
Atypical cells
→ Repeated biopsy after referral: M/D

비록 많이 좋아져 보이지만 이번 조직 검사에서도 암으로 나왔습니다.
Early gastric carcinoma

1. Location: lower third, center at body and lesser curvature
2. Gross type: EGC type IIc and IIa
3. Histologic type: tubular adenocarcinoma, moderately differentiated
4. Histologic type by Lauren: intestinal
5. Size: 3.9x2.5 cm
6. Depth of invasion: invades mucosa (muscularis mucosae) (pT1a)
7. Resection margin: free from carcinoma
   safety margin: proximal 3.5 cm, distal 6.3 cm
8. LN: no metastasis in 65 regional lymph nodes (pN0)
9. Lymphatic invasion: not identified
10. Venous invasion: not identified
11. Perineural invasion: not identified
12. AJCC stage by 7th edition: pT1a  N0
Endoscopy for gastric cancer

- Take home messages

• Let’s start with **Boxim** (box simulator training) and **DEX** (description exercise)

• Borrmann type IV is the most important disease.

• Be careful about blind areas.

• Interpretation of biopsy result is important, especially for atypia and atypical glands.