

How to do chromo-endoscopy

Tips and tricks

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Daily challenges in digestive
endoscopy for Endoscopists and
Endoscopy Nurses

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Reasons to do chromo-endoscopy

- ✦ to **detect** lesions ("red flag" technique)
 - ⇒ panchromo-endoscopy
- ✦ to **define** detected lesions
 - ✦ extent/margins
 - ✦ pit pattern (histology)
 - ⇒ localised chromo-endoscopy

Equipment

✦ Scope:

- ✦ HD scope
- ✦ magnification
- ✦ NBI, FICE, I-scan

✦ Stains:

- ✦ Lugol's stain 1-4%
- ✦ Methylene blue 0,1% - 0,5%
- ✦ Acetic acid 1,5-3%

✦ Stain delivery: syringe, peristaltic pump

- ✦ Spray catheter
- ✦ ERCP diagnostic catheter
- ✦ Scope working/irrigation channel



General remarks

✦ Take your time:

- ✦ staining
 - aim towards the mucosa
 - (semi)circular movements of scope
 - slowly withdraw or advance scope whilst staining
 - remove excess stain
- ✦ looking at the mucosa

✦ Area to be stained:

- ✦ clean, no debris
- ✦ non-inflamed
- ✦ Absorptive stain: use mucolytic agent pre-wash
 - N-acetylcysteine 10% for 2 min

Lugol's stain

Use: esophagus (pan-esophageal chromoendoscopy)

- glycogen in squamous epithelium stains dark
- look for unstained area's:
 - Dysplastic/neoplastic squamous cells
 - Columnar epithelium (Barrett, cardia, inlet patch)
 - (Reflux) esophagitis

Cave:

- contains iodine: do NOT use if allergic
- may cause burning sensation/pain

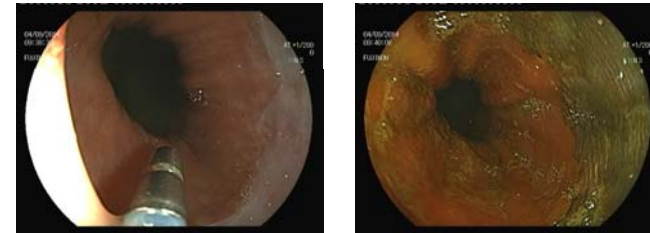
Lugol's stain

solution

- pharmacy prepared vial: 1,5 g I₂ +3g KI in 30 ml aqua
- stain: 4 ml preparation +16 ml aqua

use spray catheter, consider mucolytic prewash

stain lasts 5-10 min



Methylene blue

Use:

- absorbed in absorptive mucosa
- Barrett's esophagus (absorptive): panBarrett
 - intestinal metaplasia stains blue
 - look for heterogenous stained area's/unstained area's within homogenous stained area:
 - Dysplasia
 - cardia metaplasia
- Colon (absorptive +/- contrast enhancement): pancolonc, localised
 - look for area's with
 - altered staining
 - altered mucosal pattern

Methylene blue

Solution

- pharmacy prepared vial: 10 mg MB in 1 ml aqua

stain:

Barrett

- 1:1 preparation: aqua dilution
- 1 ml preparation in 100 ml aqua

Colon

- 10 ml preparation in 150 ml aqua: irrigation pump
- 1 ml preparation in 100 ml aqua: spray

Cave:

- possible discoloration of urine
- in Barrett's: mucolytic prewash essential



Methylene blue

➤ Barrett: mucolytic prewash

- rinsing with water
- N-acetyl cysteine 10% for 2 min
- rinse
- Methylene blue for 2 min
- Rinse until clear water

- Stain lasts 5-10 min

Acetic acid

➤ Use:

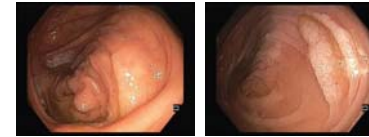
- whitening of mucosa, enhancing mucosal pattern
- look for area's with altered mucosal pattern

➤ solution

- 7 ml household vinegar + 14 ml aqua
- Effect lasts 3-5 min

➤ Cave:

- **in colon:** only localised use, NOT pancolonc



Questions?

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