North Carolina Society of Gastroenterology 2024 Annual Meeting

Unique Uses for Endoscopic Mucosal Ablative Therapies: Beyond Barrett's Esophagus

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Disclosures:

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Overview

The Technology:

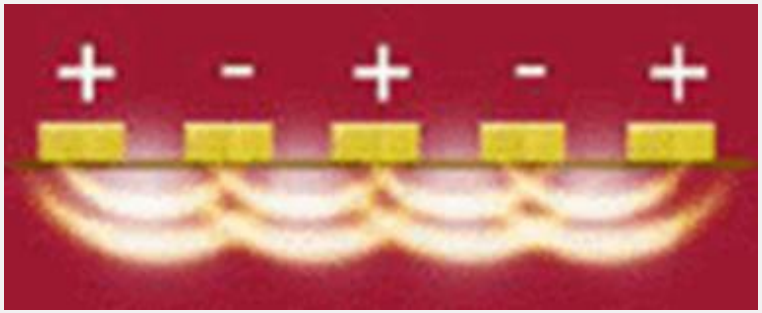
- Radiofrequency ablation (RFA)
- Cryotherapy (Balloon)

The Diseases:

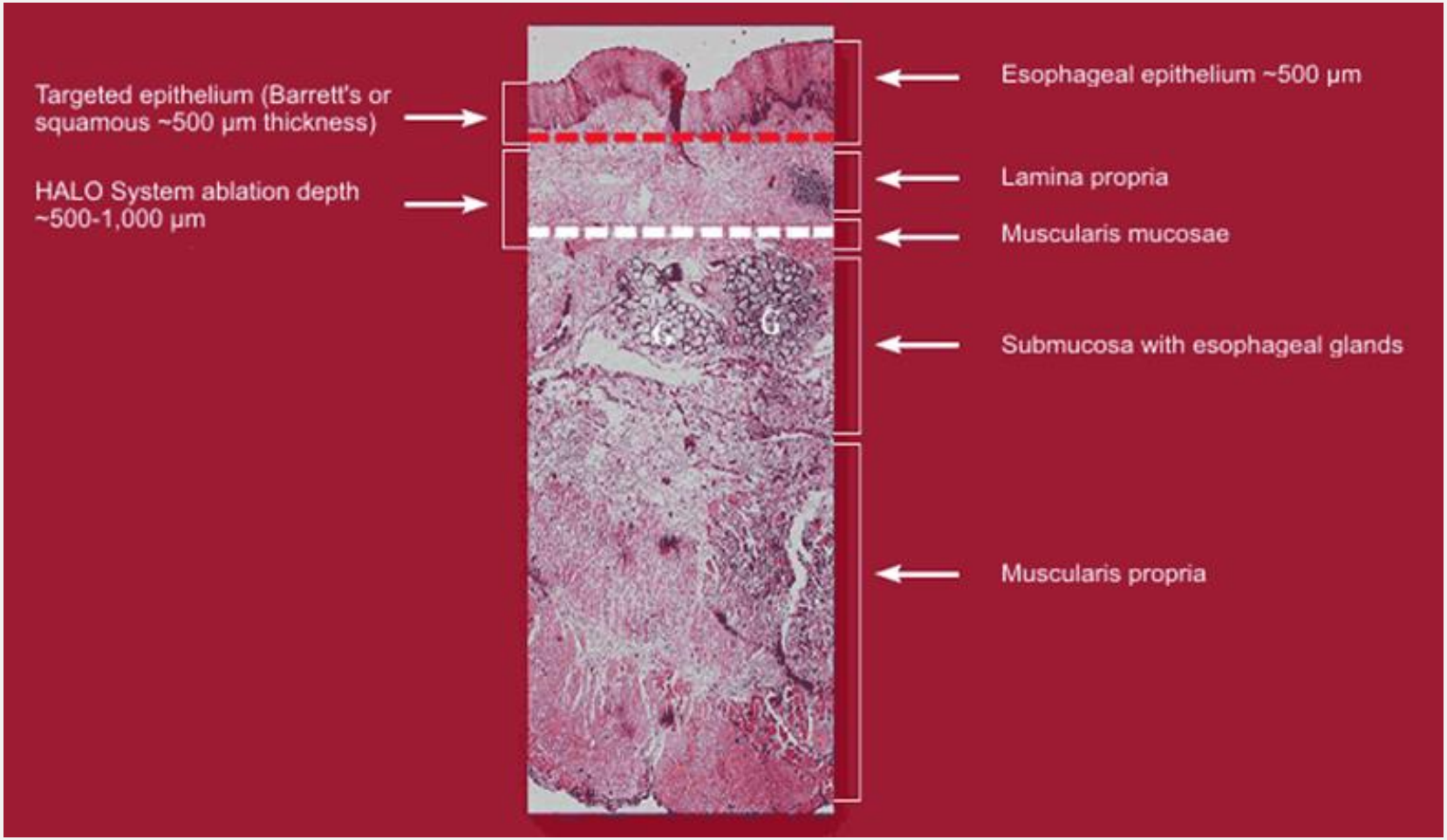
- Gastric antral vascular ectasia (GAVE)
- Radiation proctitis
- Globus

What is radiofrequency technology?

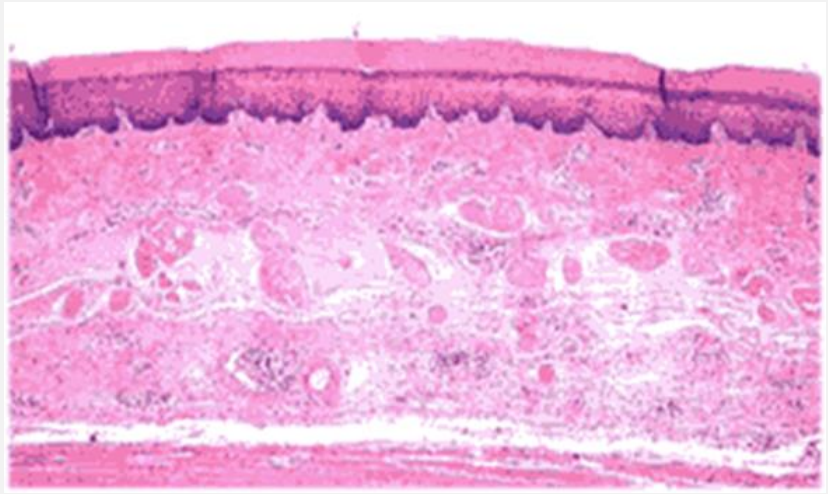
- Heat energy delivered quickly (<1 second) in a precise and highly controlled manner using bipolar electrode array.



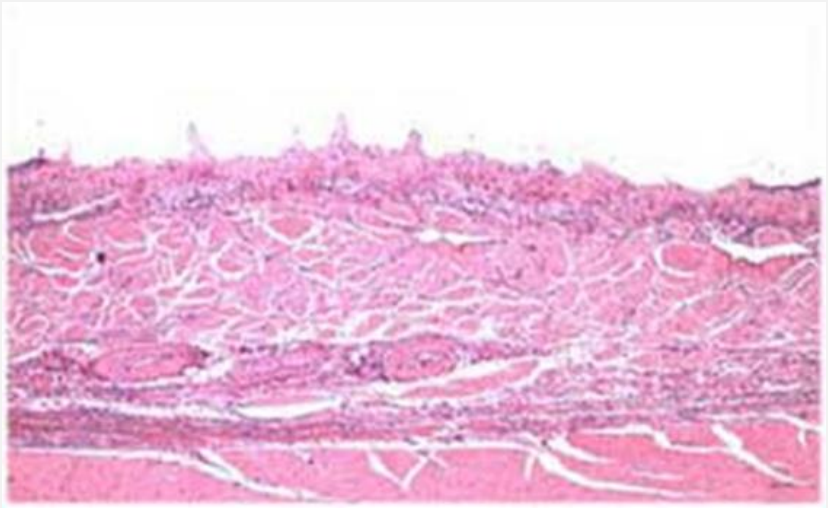
How deep is the ablation?



The depth of injury is precise and reproducible.



Normal esophagus



48 hours post RFA

Many devices for every indication!

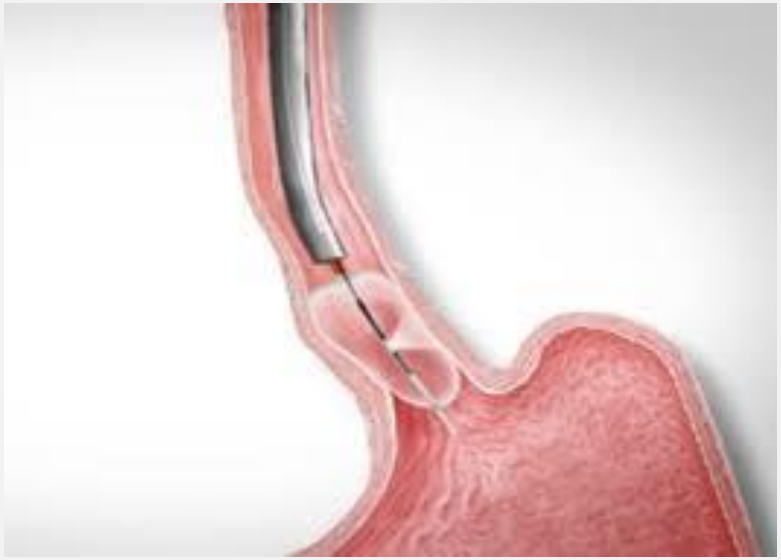
BARRX channel

What is endoscopic cryotherapy?

- Application of extreme cold to tissue results in rapid freezing leading to cell lysis and necrosis.
- The extracellular matrix is relatively preserved.
- Depth of tissue injury can be regulated by duration of cryogen exposure (ability to destroy cells in the submucosa).

C2 Therapeutics cryoballoon focal ablation system

- Self contained contact balloon system that uses liquid nitrous oxide



GAVE

- Accounts for 4% of upper GI bleeding
- Current standard of care is ablative therapies, specifically endoscopic thermal therapies (primarily argon plasma coagulation or APC)
- Despite endoscopic treatment, 2/3 of patient require ongoing transfusions

Maida et al, Gastroenterology Research and Practice, 2017

RFA for treatment of GAVE

- A review of 10 small case series using RFA with a total of 72 patients, 74.3% achieved a clinical response defined as a mean hemoglobin increase or independence from transfusion at 6 months.
- Minor adverse events in 4.2%, minor bleeding, bacteremia.
- 2 to 4 treatments, every 4 to 8 weeks.

Maida et al, Gastroenterology Research and Practice, 2017

RFA for treatment of GAVE

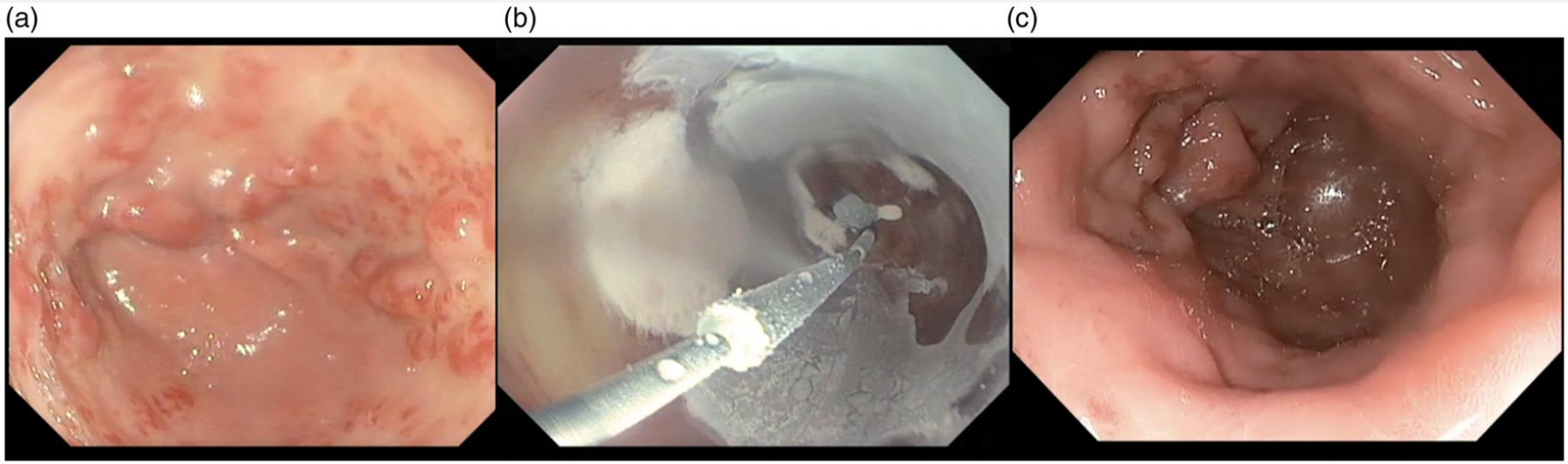
Komanduri, Endoscopedia,ASGE, 2013

Cryotherapy for treatment of GAVE

- A retrospective review of 23 patients undergoing cryoballoon therapy for refractory GAVE.
- 83% of patients were transfusion independent at 6 months
- No adverse events
- 70% had 2 treatments, 30% just 1 treatment

Patel et al, United European Gastroenterology Journal, 2018

Cryotherapy for treatment of GAVE



Patel et al, United European Gastroenterology Journal, 2018

Radiation Proctitis

- Radiation proctitis can affect up to 20% of patients who have undergone pelvic radiation.
- Can lead to chronic bleeding and transfusion dependency.
- APC has been considered first line therapy, but has a complication of 3-40% including ulceration, perforation, strictures, and fistulas.

McCarty et al., Journal of Gastroenterology and Hepatology, 2019

RFA for treatment of Radiation Proctitis

- A review of the literature identified 6 studies with 71 patients, most refractory to APC.
- After RFA treatment, 85% of patients were transfusion independent at 6 months.
- One adverse event, bleeding requiring clip placement.
- 1-2 treatment sessions.

McCarty et al., Journal of Gastroenterology and Hepatology, 2019

Cervical Inlet Patches

- Cervical inlet patches (CIP) are congenital heterotopic gastric mucosa in the proximal esophagus.
- These patches can produce acid and are believed to cause symptoms in some patients, including globus, sore throat, post nasal drip, cough, and excessive throat clearing.
- APC ablation may improve symptoms.

Dunn et al., Gastrointestinal Endoscopy, 2016

RFA for treatment of Cervical Inlet Patches

- 10 patients with CIP and globus or sore throat.
- Maximum 2 ablation sessions, 3 months apart.
- 80% achieved complete histological response.
- Globus, sore throat, and cough scores all improved significantly from baseline and persisted at 1 year follow up.

Dunn et al., Gastrointestinal Endoscopy, 2016

Conclusions

- Endoscopic mucosal ablative therapies are very safe.
- Small case series have shown that they may be effective at treating GAVE, radiation proctitis, and globus.
- Further studies are needed.

CME/MOC Question:

In which disease states has endoscopic mucosal ablative therapies been used?

a. GAVE
b. Radiation proctitis
c. Globus
d. All of the above

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CME/MOC Answer

d. All of the above

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