Esophageal Dysfunction after Bariatric Surgery

Presenter: Induja R. Nimma MD. (Nimma.Induja@mayo.edu)

Research Team: Manar Al Jawish M.D., Vivek Kumbhari M.D. PhD, Fernando Elli M.D., Andree Koop M.D., Dilhana Badurdeen M.B.B.S. M.D.

Institution: Mayo Clinic Florida

Background

Number of bariatric surgeries worldwide each year: 580K

Patients can develop esophageal dysfunction after bariatric surgery

- Reflux or Dysphagia
- Anatomical and functional changes after surgery
- POSED

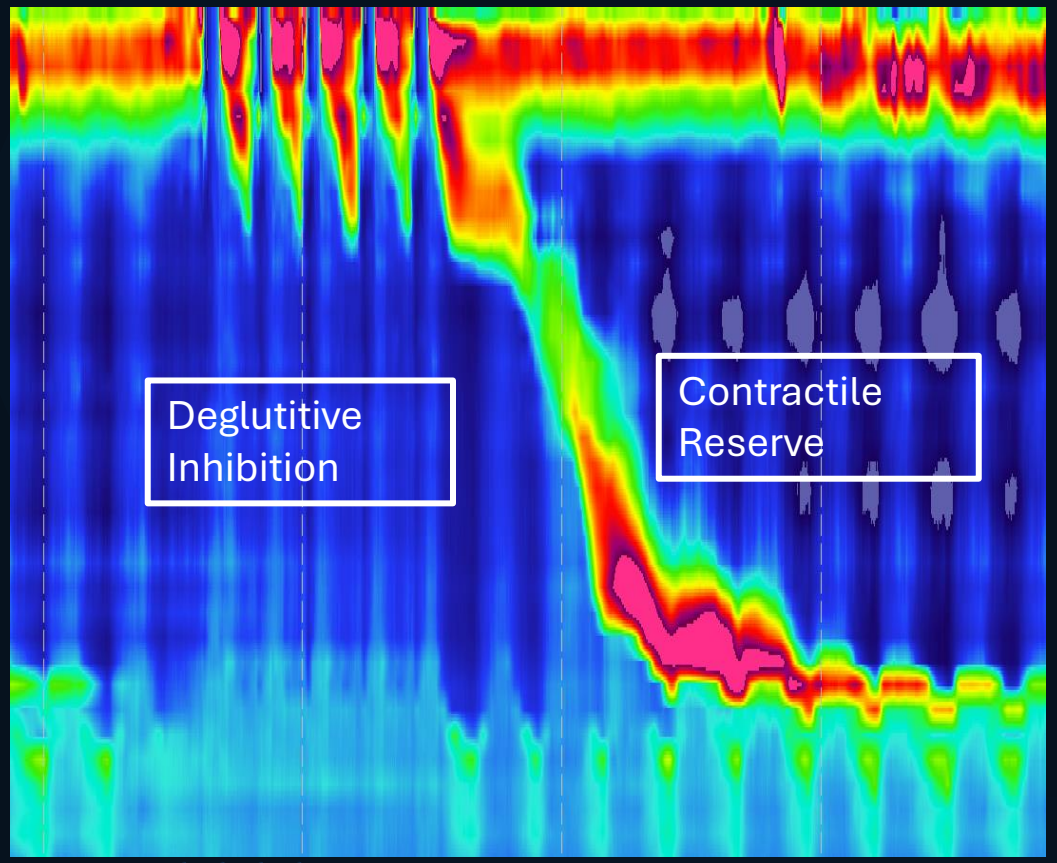
Multiple rapid swallows

Tests:

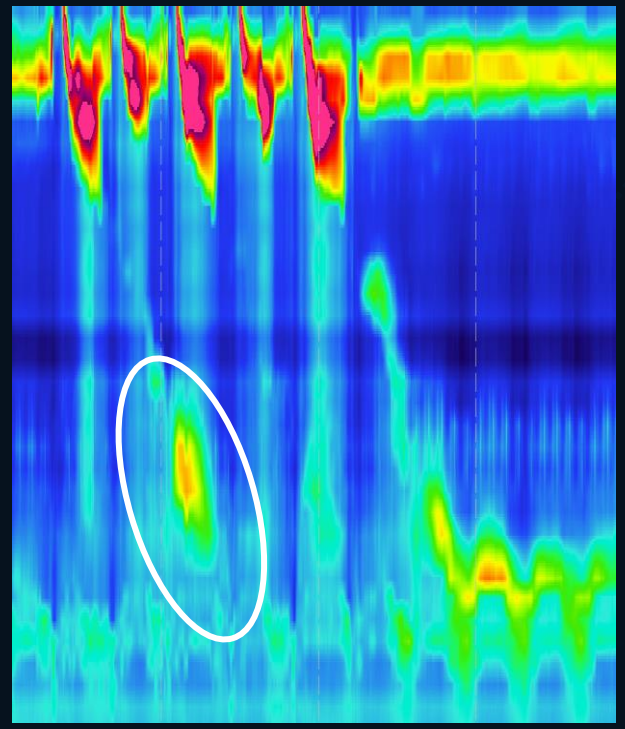
- The ability of the esophagus to relax
- The ability of the esophagus to generate an amplified contraction: contractile reserve
- Can be an early predictor of Esophageal Dysfunction

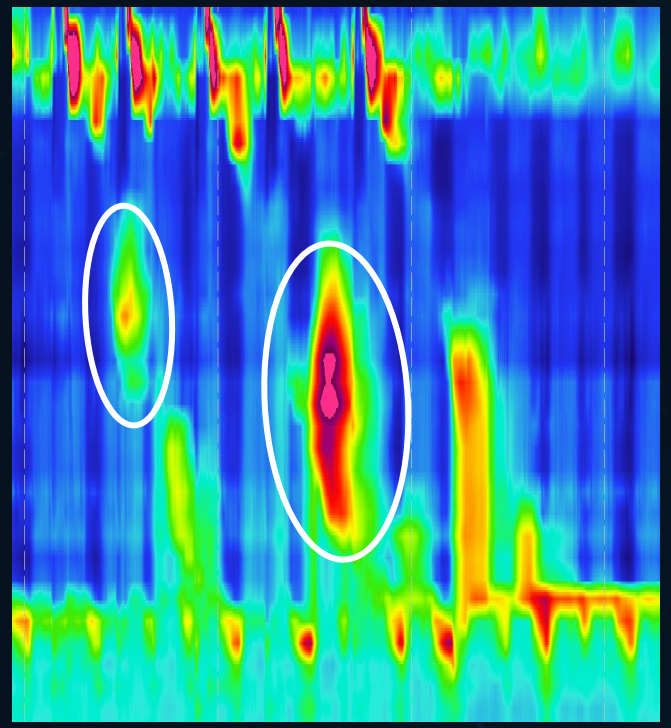
5 rapid two ml swallows of liquid at 2-3 second intervals

Multiple Rapid Swallows



Breakthrough Contraction





Neural inhibition leads to esophageal smooth muscle relaxation followed by a robust contraction in the esophageal body

Study methods/findings

High-resolution esophageal manometry studies(HREM) with multiple rapid swallow sequence

<u>23 patients met inclusion criteria:</u>

- Adult patients
- Roux-en-Y gastric bypass (RYGB) or sleeve gastrectomy (SG).
- Post operative HREM and ambulatory pH monitoring.

No difference between patients with and without contractile reserve and reflux

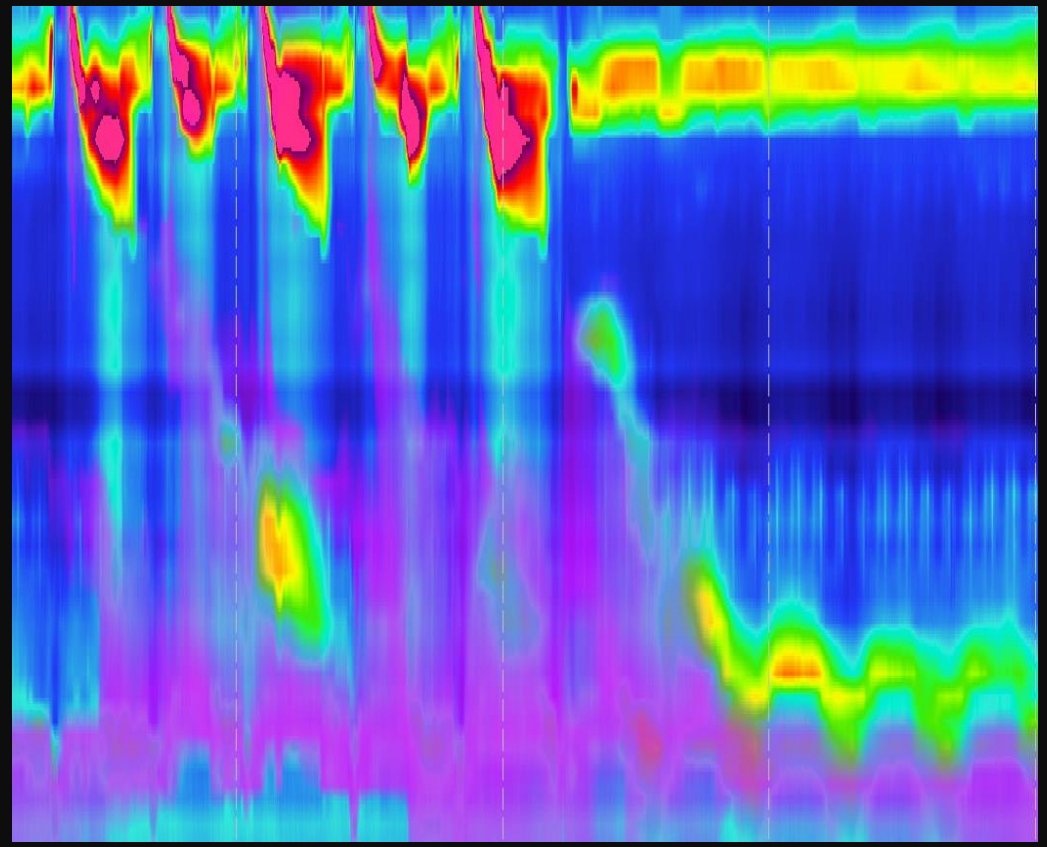
7/10 normal studies had breakthrough contraction

HREM Data w/ MRS post BA	N=23
RYGB	14 (61%)
SG	9 (39%)
Median Age	52.5 years
Female	17 (74%)
HREM Findings (Chicago 3.0)	
Normal	10 (43%)
Ineffective Esophageal Motility	4 (17%)
Absent Peristalsis	1 (4%)
Distal Esophageal Spasm	2 (9%)
Hypercontractile Esophagus	1 (4%)
Esophagogastric Junction Outflow Obstruction	5 (22%)
Contractile Reserve	13 (57%)
Breakthrough Contraction	12 (52%)

Study implications

At least half of patient (52%) had breakthrough contraction after Bariatric Surgery

- Abnormal deglutitive inhibition
- May be a predictor for the development of future esophageal dysfunction
- Correlate with other tests of esophageal function: reflux test, esophagram/ repeat future manometry testing.



Questions?

Thank you!

Induja R. Nimma M.D. (Nimma.Induja@mayo.edu)