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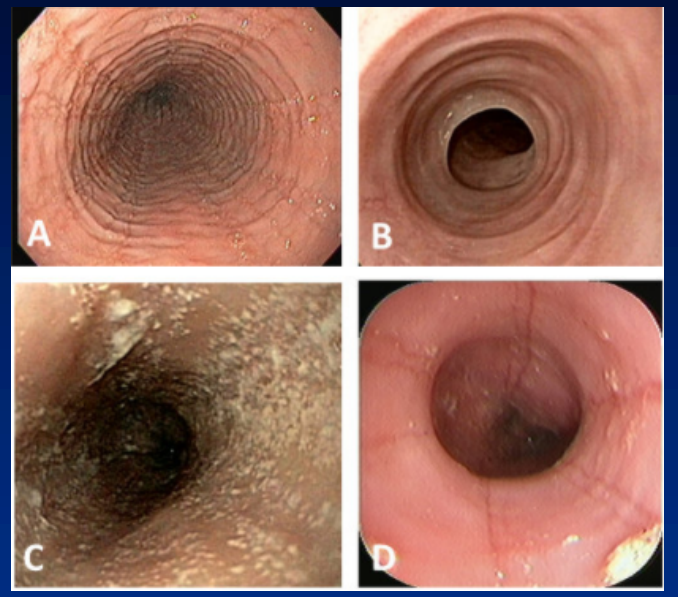
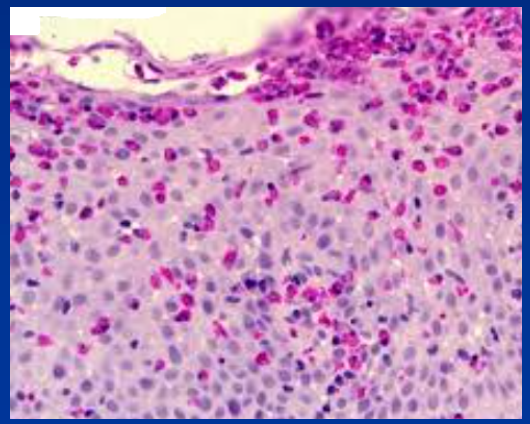
I have no disclosures

Induction of remission in Eosinophilic Esophagitis

- Available treatments:
  -- Diet : 6,4,2,1 food elimination diet. Elemental diet
  -- PPI
  -- Swallowed topical steroids (budesonide or fluticasone) budesonide slurry is made from commercially available preparation
- Budesonide orodispersible tablet has been recently approved in Europe
- Such a preparation precludes the need to prepare a slurry, or to use a preparation intended for inhalation

- No drug is approved for EoE in the US





BUDESONIDE ORAL SUSPENSION (BOS) IMPROVES ENDOSCOPIC ACTIVITY IN ADOLESCENTS AND ADULTS WITH EOSINOPHILIC ESOPHAGITIS: RESULTS AND CORRELATION ANALYSIS FROM A PHASE 3, RANDOMIZED, PLACEBO-CONTROLLED TRIAL

- The largest trial of EoE and the first phase 3 trial of EoE in the USA
- 318 pediatric and adult patients with dysphagia, treated for 14 weeks.
- Assessment by endoscopic, histologic and symptom- based scoring scales
- Efficacy co-primary end points:
  -- ≤6 eosinophils/HPF
  -- ≥30% reduction in DSQ (dysphagia score)

Hirano I et al. DDW 2020--227

BUDESONIDE ORAL SUSPENSION (BOS) IMPROVES ENDOSCOPIC ACTIVITY IN ADOLESCENTS AND ADULTS WITH EOSINOPHILIC ESOPHAGITIS: RESULTS AND CORRELATION ANALYSIS FROM A PHASE 3, RANDOMIZED, PLACEBO-CONTROLLED TRIAL

Significant improvement in all metrics with BOS

Endoscopic improvement did not correlate with dysphagia score

Efficacy endpoint[a]	BOS 2.0 mg b.i.d. (n = 213)	Placebo (n = 105)	*p* value
Co-primary			
Histologic responders, n (%)[b]	113 (53.1)	1 (1.0)	<0.001
Symptom responders, n (%)[c]	112 (52.6)	41 (39.1)	0.02
Key secondary			
DSQ score	−13.0 (1.2)	−9.1 (1.5)	0.02
Secondary			
Total EREFS	−4.0 (0.3)	−2.2 (0.4)	<0.001
Proximal EREFS	−2.2 (0.2)	−1.1 (0.2)	<0.001
Distal EREFS	−1.8 (0.2)	−1.1 (0.2)	0.001
Peak eosinop[Open Image Viewer.]	−55.2 (3.4)	−7.6 (4.3)	<0.001
EoEHSS grade total score ratio[d]	−0.2 (0.01)	−0.03 (0.02)	<0.001
EoEHSS stage total score ratio[e]	−0.2 (0.01)	−0.0 (0.02)	<0.001

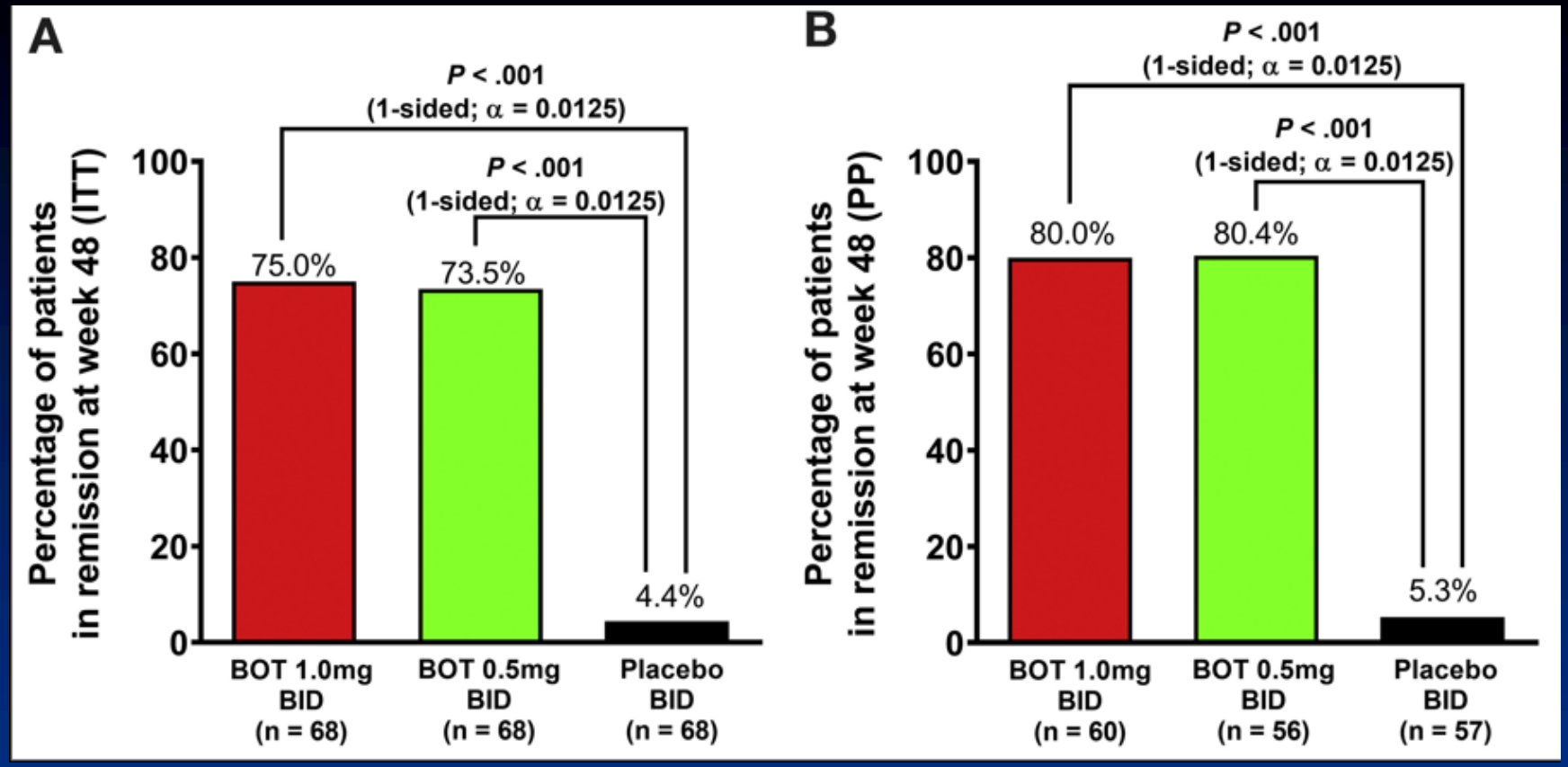
able 1. Summary of co-primary, key secondary and secondary efficacy endpoints from baseline to week 12

Hirano I et al. DDW 2020--227

Budesonide Orodispersible Tablets (BOT) Maintain Remission in a Randomized, Placebo-Controlled Trial of Patients With Eosinophilic Esophagitis

- A phase 3, randomized, double-blind, placebo-controlled, multicenter, 48-week maintenance trial of patients who achieved remission on BOT
- 3 groups of 68 patients each: placebo, BOT 0.5 mg daily, 1 mg BID daily
- End point: maintenance of remission defined by low dysphagia and odynophagia score, and ≤5 eosinophils/hpf

Straumann A et al. gastroenterology November 2020



ITT

per protocol

AE's

-- suspected candidiasis: 16.1% and 11.8% in the 0.5 mg and 1.0 mg dose respectively

-- 4 asymptomatic patients had low serum cortisol

Mortality In Eosinophilic Esophagitis - Nationwide, Population-Based Matched Cohort Study From 2005-2017

- EoE subjects (n=1625) were identified through prospectively recorded histopathology codes from all gastrointestinal pathology reports in Sweden from 2005-2017
- Matched with 8003 subjects from general population, and also with siblings

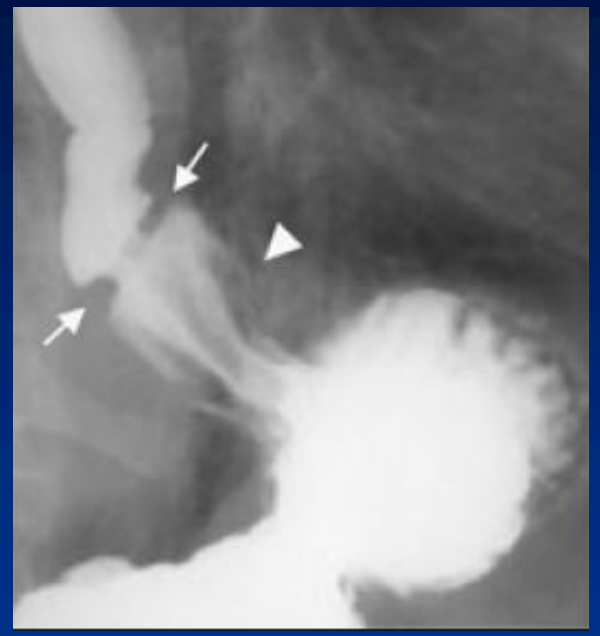
- Mortality:
  -- EoE: 4.60 per 1000 person-years
  -- General population: 4.57 per 1000 person-years
  -- Siblings: aHR=0.91 [0.44-1.85]

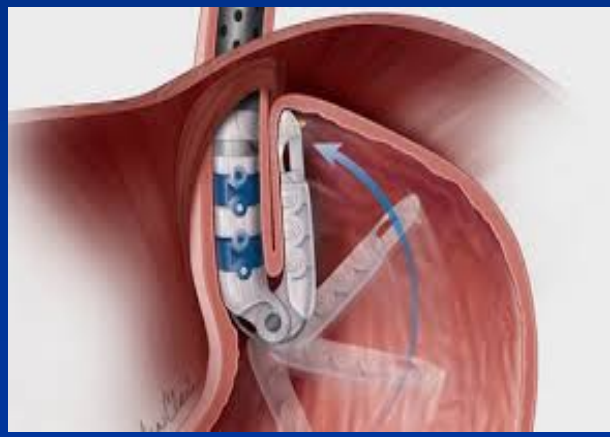
Paulson L et al. DDW 2020—Mo1221

Multicenter Comparative Study of Hiatal Hernia Repair With Transoral Incisionless Fundoplication (TIF) Versus Nissen Fundoplication For The Treatment of Gastroesophageal Reflux Disease

- A number of anti-reflux interventions, both surgical and endoscopic are currently available

- TIF is a platform for endoscopic treatment of GERD, initially approved for patients with hiatal hernia ≤ 2cm
- TIF was Lately approved for hernia size of 2-5 cm, in combination with surgical hernia repair
- Previous studies showed the combination to be effective
- **Rationale: avoid surgical fundoplication AE's, such as gas bloat, while providing an alternative fundoplication**





Jaruvongvanich V et al. DDW 2020--881

Methods

- Data of TIF + HH (2-5 cm) from 3 centers was matched with data from LNF from 3 other centers
- Follow up: 6 and 12 months
- Assessment of TIF results by questionnaires
- Assessment of LNF results by chart review

Table 1 Baseline characteristics and complications

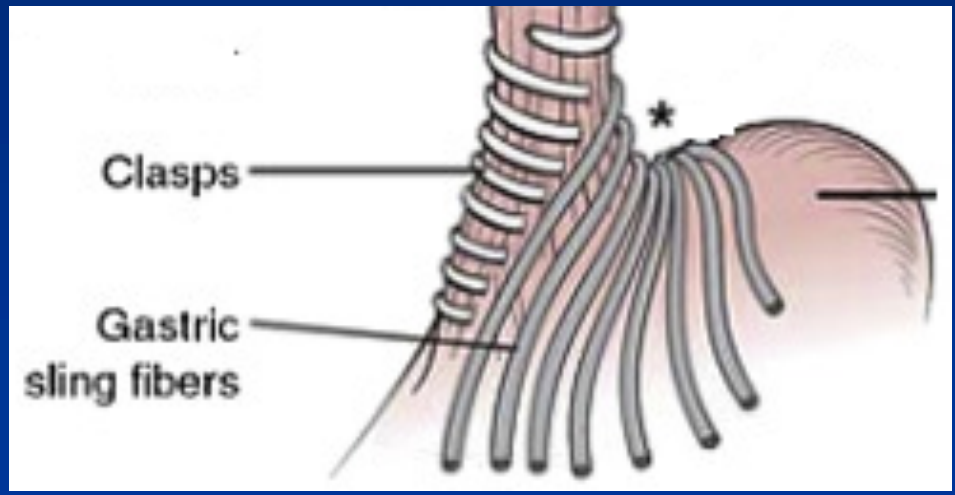
	TIF group (N=125)	LNF group (N=70)	P-value
Age (years, mean ± SD)	55.1 ± 14.5	60.9 ± 13.4	0.005
Female [n (%)]	56.8	61.4	0.53
BMI (kg/m², mean ± SD)	29.1 ± 5.0	29.2 ± 4.2	0.97
PPI use at baseline [n (%)]	119 (95.2)	66 (94.3)	0.78
Length of hospital stay (days, median [IQR])	1 (1-1)	2 (1-2)	< 0.001
Readmission in 30 days [n (%)]	0	3 (4.3)	0.013
1-year mortality [n (%)]	0	0	-
Adverse events [n (%)]			
Early adverse events (< 30 days)	0	13 (18.6)	< 0.001
Early serious adverse events	0	3 (4.3)	< 0.001
Late adverse events (30 days to 1 year)	0	0	-
Late serious adverse events	0	0	-
At 6 months [n (%)]			
Discontinued PPI use	76 (73.8)	40 (60.6)	0.07
Decreased PPI use	88 (85.4)	55 (83.3)	0.71
Start PPI use	0	0	-
Bloating (new or worse than baseline)	15 (13.8)	21 (30.0)	0.009
Dysphagia (new or worse than baseline)	9 (8.3)	10 (14.3)	0.21
No PPI use with no symptoms	65 (60.8)	44 (62.9)	0.78
PPI use with no symptoms	11 (10.3)	23 (32.9)	< 0.001
PPI use with continued symptoms	14 (13.1)	3 (4.3)	0.04
At 12 months [n (%)]			
Discontinued PPI use	50 (73.5)	35 (58.3)	0.07
Decreased PPI use	57 (83.8)	47 (78.3)	0.43
Start PPI use	0	0	-
Bloating (new or worse than baseline)	10 (14.9)	15 (24.2)	0.18
Dysphagia (new or worse than baseline)	7 (10.1)	8 (12.9)	0.62
No PPI use with no symptoms	32 (52.5)	36 (58.1)	0.53
PPI use with no symptoms	8 (13.1)	22 (35.5)	0.003
PPI use with continued symptoms	8 (13.1)	3 (4.8)	0.10

Abbreviations: BMI: body mass index; LNF: laparoscopic Nissen fundoplication; PPI: proton pump inhibitor; TIF: transoral incisionless fundoplication

- Impact of different types of fundoplication?
- **Need for a longer, randomized controlled study**

The “Anti-Reflux” POEM: A Technique Modification That Drastically Reduces Objective Measured Reflux After Per Oral Endoscopic Myotomy (POEM)

- POEM: Higher rate of GER compared to balloon/surgery
- Case control study comparing matched patients with and without sling fiber preservation
- 3-6 month F/U



Stavropoulos SN et al. DDW 2020—Sa 1227

The “Anti-Reflux” POEM: A Technique Modification That Drastically Reduces Objective Measured Reflux After Per Oral Endoscopic Myotomy (POEM)

Outcomes	Antireflux (N=116)	Control (N=116)	p-value
pH study			
No. of pts that had pH study	69 (59%)	75 (65%)	0.50
Positive pH study	43%	75%	<0.001
Total acid exposure, median [IQR]	4.1 [2,6.5]	10 [5,18]	<0.0001
Total number of refluxes, median [IQR]	29[11,54]	53[17,87]	0.005
DeMeester score	24 [13-54]	38[16-66]	0.42
No. of pts with follow-up endoscopy	66 (57%)	80 (69%)	0.08
Erosive esophagitis	30 (46%)	47 (59%)	0.13
GERD symptoms ≥2 x a week	5 (6.9%)	25 (22%)	0.01
Eckardt score, after POEM median [IQR]	0 [0,0]	0 [0,1]	0.18
% of patients with follow-up	100%	100%	1.0

Stavropoulos SN et al. DDW 2020—Sa 1227

PPI De-Escalation: Do Specialty Clinics Perform a Better Job Than Primary Care?

Aims: Assess knowledge of PPI AE's and willingness to de-escalate between patients seen in FM, IM and GI clinics.

Anonymous survey of 114 patients who use PPI for GERD

- Little or no familiarity with AE's: 79 patients (69.3%)
- Discussion of AE's by provider: 22 (19.3%) of patients
- Willing to de-escalate PPIs: 73.7%
- Willing to discontinue PPI: 56.14%

- **No difference in the results between clinics**

Khan RS et al. DDW 2020—TU1371

Anti-Reflux Surgery Reduces Mortality In Lung Transplant Patients

Lung transplantation has a poor 5-year survival relative to other solid organs
GERD is considered a risk factor for rejection and mortality

- Review of 564 patients who underwent either single or double LTx (2011-19), of which 44 underwent fundoplication
- Regression analysis to assess predictors of mortality and rejection

Table 2. Logistic Regression for Predictors of Mortality in LTx Population

	Adjusted OR	95% CI	P value
Age	1.0	0.98-1.02	0.85
Gender	1.13	0.77-1.65	0.54
Anti-Reflux Surgery	0.44	0.20-0.97	0.041

Table 1. Logistic Regression for Predictors of Rejection in LTx Population

	Adjusted OR	95% CI	P value
Age	0.98	0.96-1.00	0.10
Gender	1.10	0.72-1.67	0.66
Anti-Reflux Surgery	1.77	0.91- 3.45	0.09

Choudhry A et al. DDW 2020--51

Esophageal Function and Reflux Evaluations in Lung Transplantation: : A National Survey of UNOS Accredited Transplant Centers

63 UNOS adult transplant centers surveyed. 33 (52.3%) responded

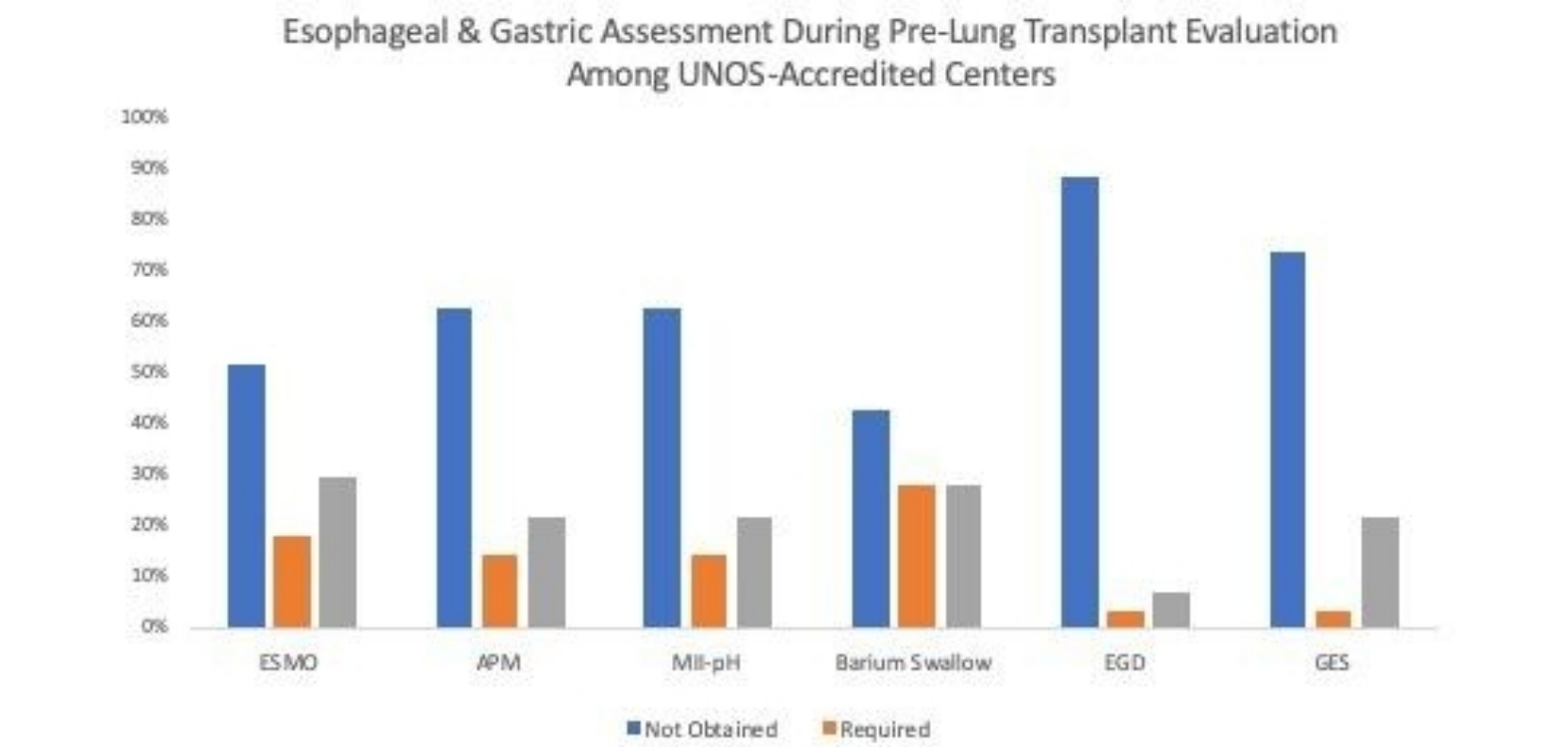


Figure 1. Esophageal and gastric testing in the evaluation and management of lung transplant candidates among UNOS-accredited transplant centers. ESMP=esophageal manometry; APM=ambulatory pH monitoring; MII-pH=multichannel intraluminal impedance-pH; EGD=upper endoscopy; GES=gastric emptying scintigraphy.

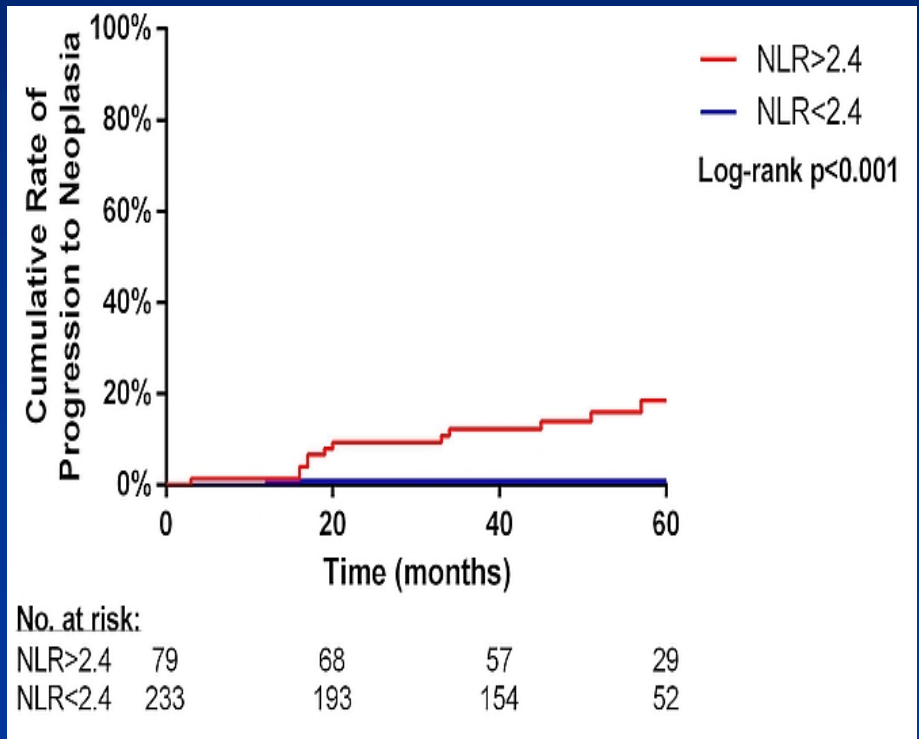
Leung R. et al. DDW 2020—TU1325

Neutrophil -To-Lymphocyte Ratio (NLR) Predicts Progression To High Grade Dysplasia And Adenocarcinoma In Patients With Barrett's Esophagus

- NLR, a proven sensitive indicator of systemic inflammation/stress
- It is associated with reduced overall survival, poor response to chemotherapy and poor prognosis in patients with EAC

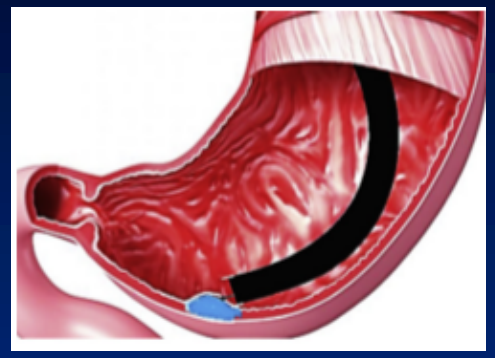
- 324 Barrett's patients followed for up to 5 years
- NLR ratio >2.4determined as a cut-off to predict progression

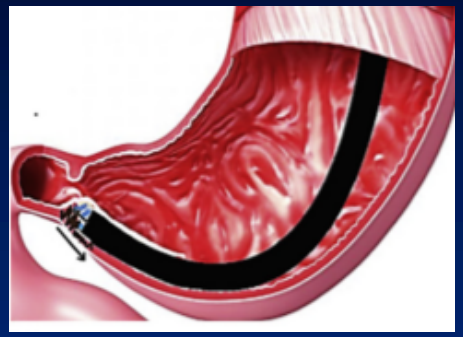
- Baseline NLR above 2.4 was associated with 3-fold increase of progression to neoplasia



Peleg N et al DDW 2020--1190

Gastric Per-Oral Endoscopic Myotomy (G-POEM) for Gastroparesis





- Gastroparesis is a chronic debilitating disease
- Medical therapy : limited menu of prokinetic drugs
- Surgical pyloric intervention: limited data in medical gastroparesis
- Origin of symptoms is multifactorial
- Relation between gastric emptying and symptoms?
- G-POEM: an endoscopic drainage procedure

Gastric Peroral Endoscopic Myotomy (G-POEM) For The Treatment Of Refractory Gastroparesis: Final Results From The First International Prospective Trial

- Prospective multicenter study, assessing safety, efficacy and predictors of success in patients with refractory gastroparesis: diabetic, idiopathic and post-surgical
- 80 patients, followed for 12 months
- Symptoms by validated questionnaires
- Gastric emptying performed before and 3 months after procedure
- EndoFlip of the pylorus before and after procedure

Vosoughi K et al. DDW 2020-667

Results

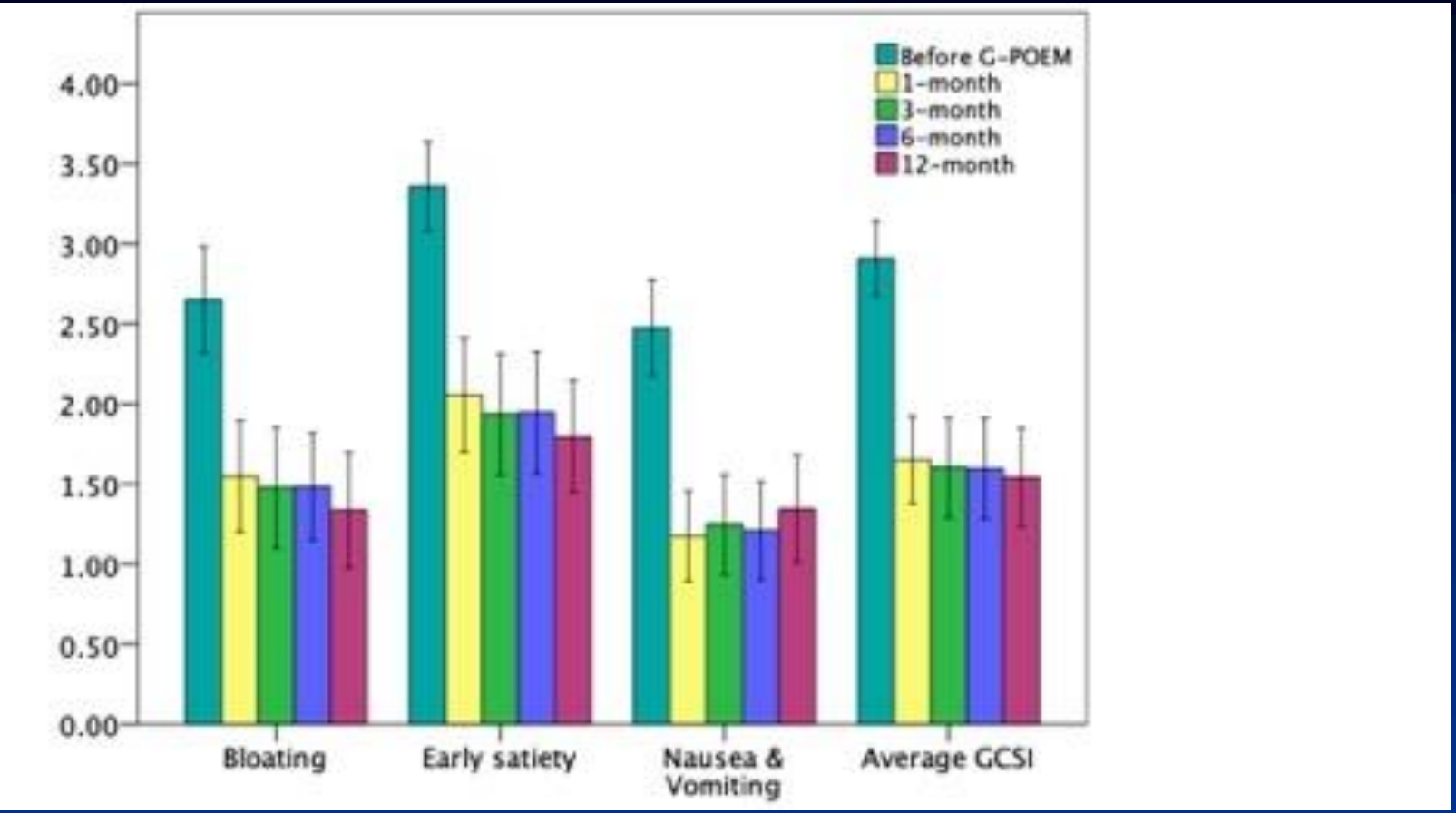


Figure 1. Improvement of GCSI and the subscales after the G-POEM

- Symptoms improved in 60% of patients
- At 3 months post G-POEM, GET normalized in 25/53 (47.2%), and improved in 34/53 (64.2%)

Results

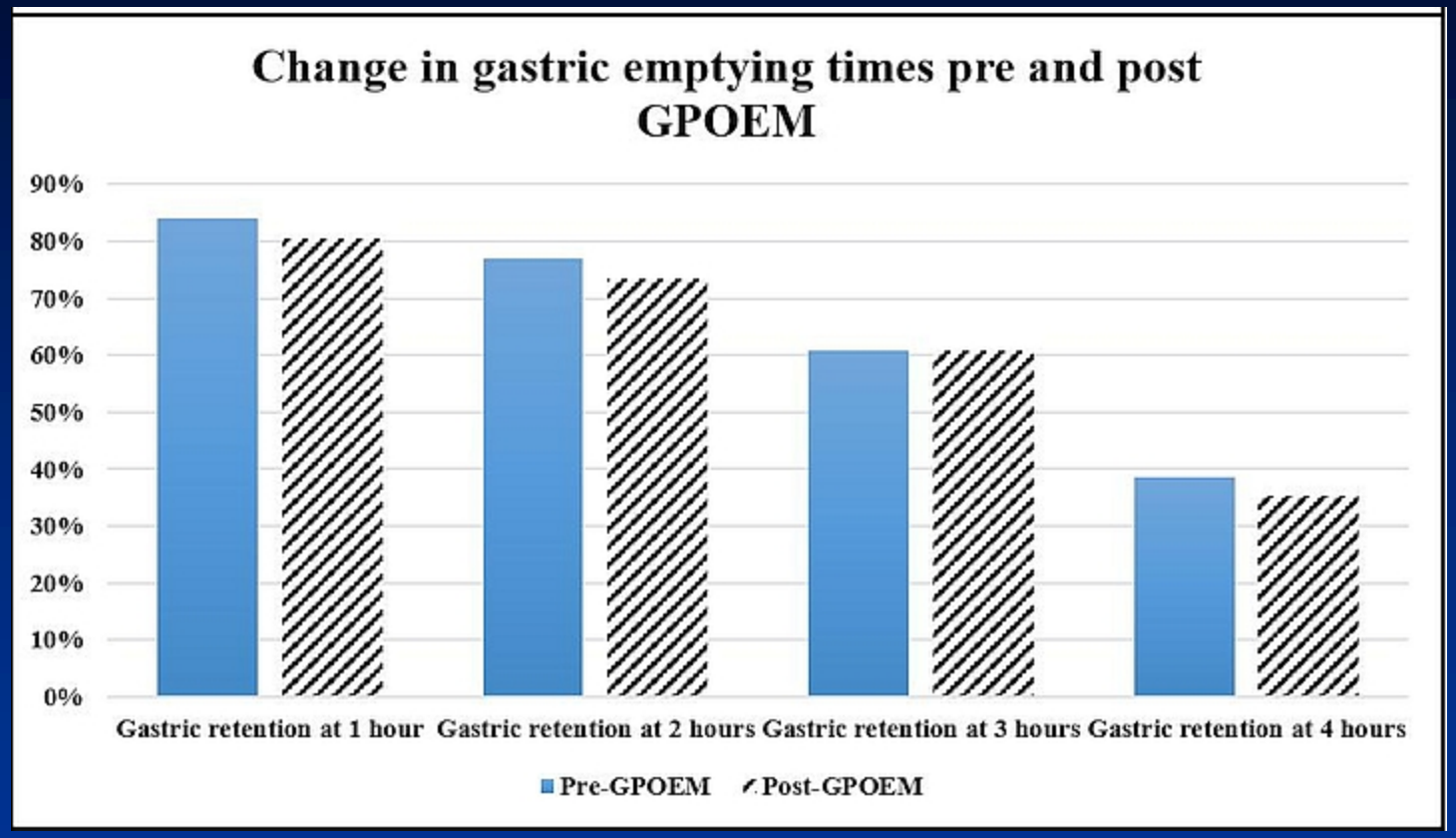
	One-year clinical success	
	OR (95% CI)	p-value
Disease severity before G-POEM (Baseline GCSI)	1.73 (1.04 - 2.88)	**0.036**
Disease duration	1.01 (1 - 1.02)	0.177
Etiology (ref: idiopathic)		
Diabetes	1.44 (0.41 - 5.07)	0.412
Post-surgical	1.63 (0.52 - 5.06)	0.522
GES improvement	1.65 (0.45 - 6.03)	0.452
Change in pylorus distensibility using 40ml volume bag	1.23 (1.03 - 1.46)	**0.021**
Change in pylorus distensibility using 50ml volume bag	1.24 (1.03 - 1.5)	**0.020**

Table 1. association between disease characteristics and one-year clinical success of G-POEM

- Predictors of success: disease severity, pyloric distensibility post procedure
- Correlation between symptoms and GET?

Vosoughi K et al. DDW 2020-667

Symptom Improvement After Gastric Per-Oral Endoscopic Myotomy Does Not Match Gastric Emptying Times: Results Of a Prospective Study



- 23 patients. Significant improvement in symptoms.
- No change in GET, and no correlation between GET and symptoms

Han S et all DDW 2020--161

What we have learned

- Open label intervention on the pylorus is beneficial
- Effect on gastric emptying is inconsistent, and may not correlate with symptoms, so as a drainage procedure how does it work?

- **There is a need for a sham control study**

Thank You