

Video Esophagography: Can It Replace Manometry?



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Disclosures

- Consultant Ethicon / Torax
- Inbred Tom DeMeester / USC



Short Answer is No!!!

VEG Does NOT Replace HRM

- Better Question: **Can VEG Serve as a Screening Test?**
 - Determine Who Needs Manometry
- Traditional Teaching
 - Prior to Anti-Reflux Surgery **EVERYONE** Needs HRM
 - Where is the Science to Suggest That?

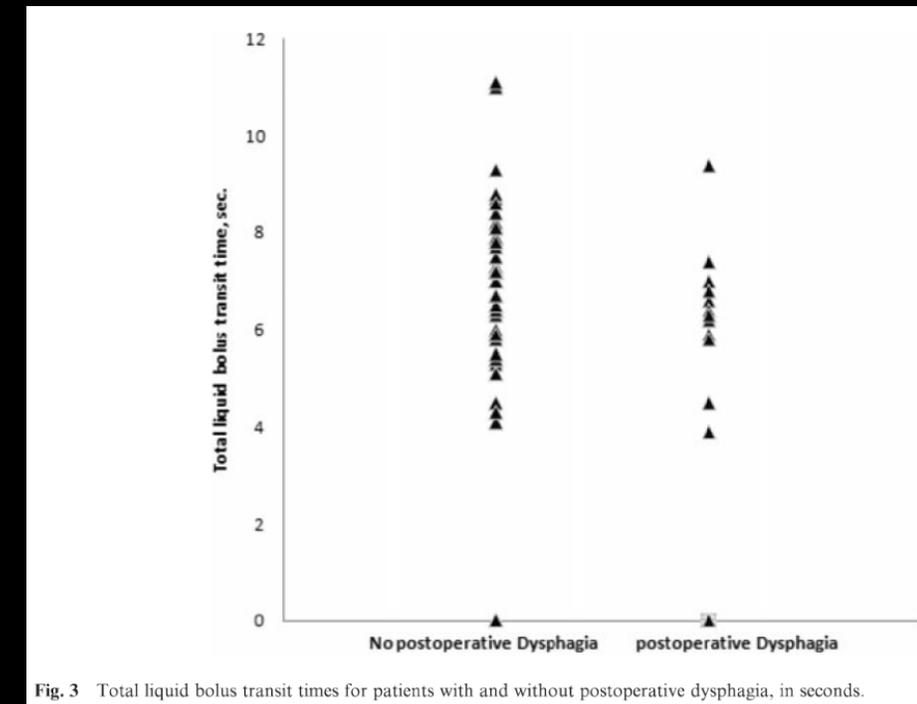
Original article

Does combined multichannel intraluminal esophageal impedance and manometry predict postoperative dysphagia after laparoscopic Nissen fundoplication?

M. Montenovo, R. P. Tatum, E. Figueredo, A. Valeria Martin, H. Vu, E. Quiroga, C. A. Pellegrini, B. K. Oelschlager

- 74 Patients
 - Manometry, MII, 24hr pH
 - LNF
- Predict Post Op Dysphagia
- Manometry Did **NOT** Predict Post Op Dysphagia
- Pre-Op Dysphagia **Only** Predictor

Post-Op Dysphagia?



Preoperative High-Resolution Manometry Criteria are Associated with Dysphagia After Nissen Fundoplication

Steve R. Siegal¹ · Christy M. Dunst² · Ben Robinson² · Elizabeth N. Dewey¹ · Lee L. Swanstrom² · Steven R. DeMeester²

- Retrospective Review 94 Pts
 - Statistical Bootstrapping 2992 Pts
- Predict Post-Op Dysphagia
 - Pre-Op Dysphagia (PD)
 - No Pre-Op Dysphagia (NPD)
- HRM Did Not Predict Dysphagia (NPD)
- PD Group More Likely to Resolve
 - Higher DCI, CFV, DL, % Peristalsis, DEA



e? Thoughts?

Randomized clinical trial of laparoscopic total (Nissen) *versus* posterior partial (Toupet) fundoplication for gastro-oesophageal reflux disease based on preoperative oesophageal manometry

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gma?

- Preop Manometry Used to Classify 127 Pts
 - Effective (75)
 - Ineffective (52)
- Randomized Nissen (64) vs Toupet (63)
- 1yr Nissen vs Toupet
 - No Difference Heartburn, Regurgitation or Other GERD Sxs
 - Nissen Higher Rate Mild Dysphagia & C.P
- No Difference Dysphagia Ineffective vs Effective
- No Reason to Tailor Degree of Fundo

	Nissen (n = 64)	Toupet (n = 63)
Age (years)	45.3 (21–86)	44.2 (19–69)
Sex ratio (M : F)	41 : 23	43 : 20
Weight (kg)	81.6 (55–103)	80.2 (51–120)
Duration of symptoms (months)	94.5 (7–516)	95.6 (6–248)
Indication		
Failed medical therapy*	48 (75)	46 (73)
Patient preference*	16 (25)	17 (27)
PPI use*	59 (92)	57 (90)
Hiatus hernia*	39 (61)	32 (51)
Erosive oesophagitis*	10 (16)	10 (16)
Barrett's oesophagus*	3 (5)	6 (10)
Preoperative acid exposure time (% total)	6.9 (2.3–28.7)	6.3 (1.3–73.0)
Ineffective motility*	26 (41)	26 (41)
LOS pressure (mmHg)	9.9 (0–27)	10.0 (0–23)
LOS length (cm)	3.9 (2–6)	3.9 (2–5)

So, Before You Drink the HRM Kool-Aid

Linx & Pre-op HRM

- **Warning:** UnPublished Data
- MultiCenter Retrospective Matched Cohort
 - 105 Pts IEM (DCI <450, <50% Peristalsis)
 - 105 Controls (Normal Motility)
- **New Onset Dysphagia**
 - 17% vs 10%, $p = 0.235$
- **Resolution of Pre-Op Dysphagia**
 - IEM 83%
 - Control 92% **NS**
- **GERD HRQL**
 - IEM 22 to 6.6
 - Control 23.2 to 6.9 **NS**



Routine esophageal manometry is not useful in patients with normal videoesophagram

Evan T. Alicuben¹ · Nikolai Bildzukewicz¹ · Kamran Samakar¹ · Namir Katkhouda¹ · Adrian Dobrowolsky¹ · Kulmeet Sandhu¹ · John C. Lipham¹

Are Motility Issues a Weakening Tool?

- 418 pts
 - VEG Set Protocol & Dedicated Radiologist
 - HRM
- NPV 99.6%
- Sensitivity 96.4%
- If VEG Normal:
 - HRM Did **Not** Detect Anything that Altered Surgical Management

Table 5 Manometric diagnoses between groups

	Normal VEG N=231	Abnor- mal VEG N=187
Achalasia	0	4
Absent contractility	0	1
Ineffective esophageal motility	1	22
EGJ outflow obstruction	2	5
Hypercontractile esophagus	8	16
Diffuse esophageal spasm	0	1

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Were Motility Issues Screening Tool?

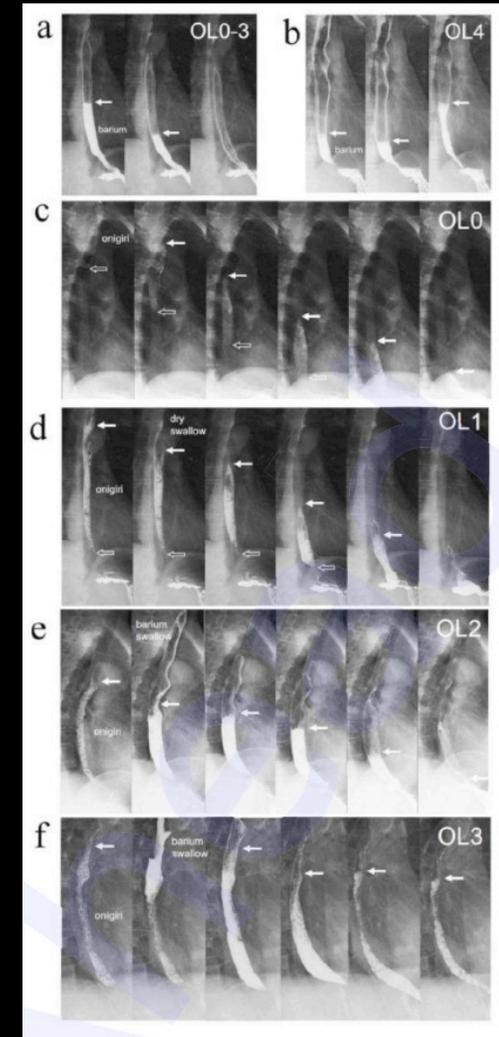
- Abnormal VEG
 - 26.2% Some Motility Disorder
 - 14.4% Significant
- Upright Swallows Didn't Predict HRM Findings
 - Only Prone-Oblique Position
- Conclusion: VEG Served as a Screening Tool to Determine Who Needed HRM

Table 6 Comparison of videoesophagram findings with clinically significant manometric diagnoses

	Motility disorder present	Motility disorder absent
Abnormal VEG	27	160
Normal VEG	1	230

Onigiri Esophagography: Screening Test for Esophageal Motility Disorders (In Press)

- 102 Pts Solid & Liquid VEG (Onigiri = Japanese Rice Ball. . . FYI)
- OL Classification (Obstruction Level)
- Solid & Liquid VEG combined with OL Classification
 - Stratify Those That Need HRM



Summary / Suggestion

And I Welcome Your Thoughts. . . .

- Follow the Science
- Yield on Routine HRM is Low
- Doesn't Seem to Help Tailor the Operation
 - Exception: Severe Motility Disorders: Achalasia, Absent Motility, Maybe Severe IEM
- Partner with Radiologist and Adopt Dedicated VEG
- VEG Can Serve as a Screening Tool to Determine Who Needs HRM



WE WELCOME YOUR
FEEDBACK

Thank You!



Improve the Care of Patients with Foregut Disease
thru Collaborative Specialization