

Eosinophilic Esophagitis: Endoscopic Modalities

NORTHWESTERN UNIVERSITY
FEINBERG
SCHOOL OF MEDICINE

Ikuo Hirano, MD
Gastroenterology Division
Northwestern University Medical School

Role of Endoscopy in the Management of EoE

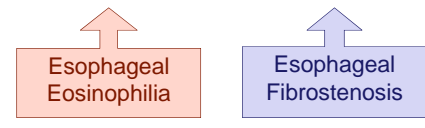
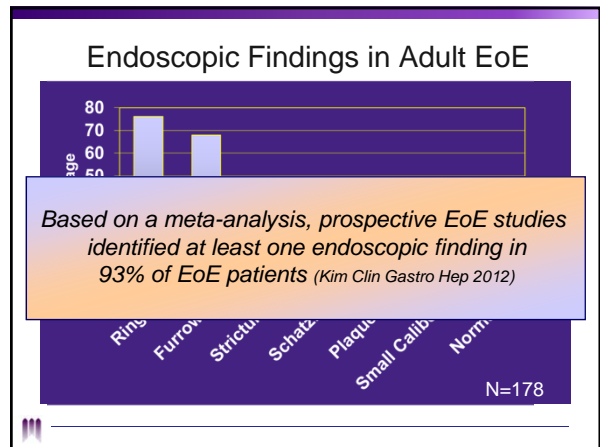
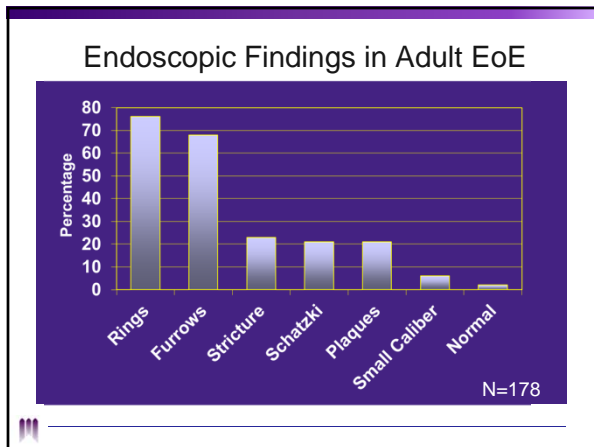
- Are symptoms and histology sufficient to assess disease activity?
- How do we characterize the endoscopically identified esophageal abnormalities?
- Can we detect significant change in esophageal abnormalities with therapy?
- What is the role for esophageal dilation?

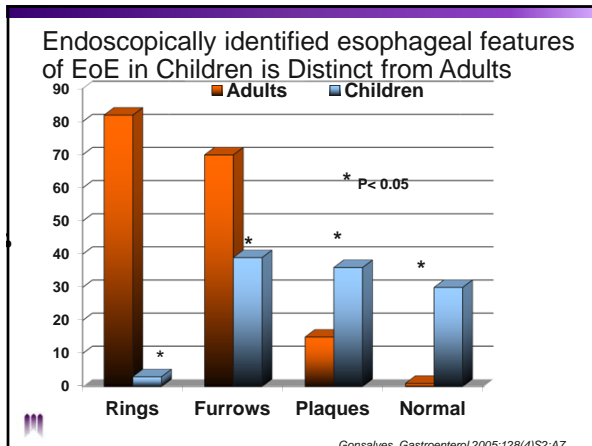
Limitations of current clinicopathologic assessment of disease activity in EoE

- Symptoms
 - Difficult to quantify and are often intermittent
 - May improve as result of changes in eating behavior and food avoidance
 - Related to both inflammation and fibrostenotic consequences of inflammation
- Histology
 - Limited correlation between degree of esophageal eosinophilia and clinical severity
 - Biopsies ignore the submucosa and muscularis where remodeling changes occur

EoE Disease Activity: More than just counting eosinophils!

Activity = Inflammation + Tissue Remodeling



- ### Endoscopic Evaluation and Management of EoE
- What is the role of endoscopy in EoE?
 - What are the characteristic esophageal abnormalities on endoscopy in EoE?
 - Can we standardize grading of esophageal features (EoE-"EREF")?
 - Can we detect significant change in esophageal features with therapy?

Classification and grading of endoscopically detected esophageal features in EoE

EoE Endoscopic Reference Score ("EREFs")

- **Edema** (pallor)
- **Rings** ("trachealization")
- **Exudates** (plaques)
- **Furrows** (vertical lines)
- **Stricture**
- Mucosal fragility
- Narrow caliber esophagus

Hirano, Moy, Heckman, Thomas, Gonsalves, Achem. Gut. 2012.

EoE Reference Score for Endoscopic Abnormalities (EoE-EREFs)

Edema (Also referred to as decreased vascular markings, pallor or edema)

Normal (Grade 0): Distinct vascular markings

Decreased (Grade 1): Loss of clarity or absence of vascular markings

EoE Endo Atlas NIA-PH ver16. Ref: Hirano, Moy, Heckman, Gut 2012.

EoE Reference Score for Endoscopic Abnormalities (EoE-EREFs)

Rings (Also referred to as esophageal rings, corrugated esophagus or trachealization)

Mild (Grade 1): Subtle circumferential ridges seen on esophageal distension

Moderate (Grade 2): Distinct rings that do not occlude passage of diagnostic (8-10 mm) endoscope

Severe (Grade 3): Distinct rings that do not permit passage of diagnostic (8-10 mm) endoscope

EoE Endo Atlas NIA-PH ver16. Ref: Hirano, Moy, Heckman, Gut 2012.

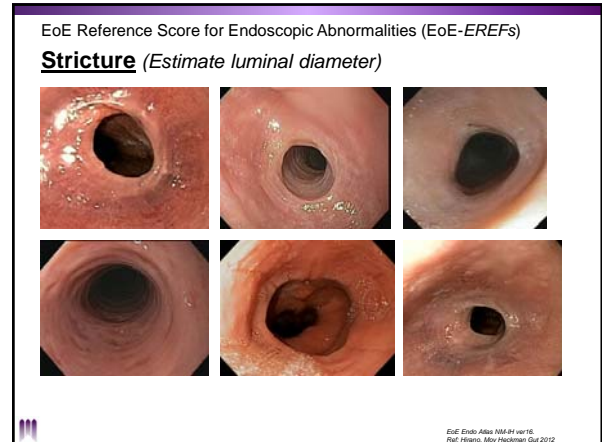
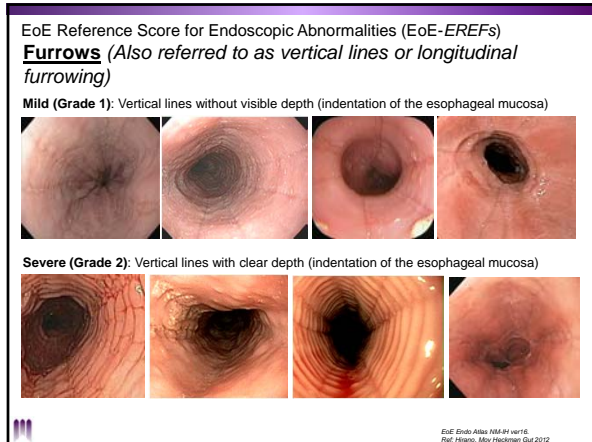
EoE Reference Score for Endoscopic Abnormalities (EoE-EREFs)

Exudates (Also referred to as white exudates, plaques or punctate white spots)

Mild (Grade 1): White lesions involving < 10% of the surface area of the esophagus

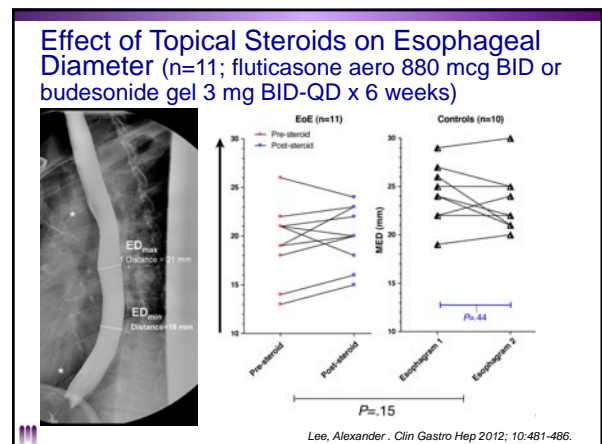
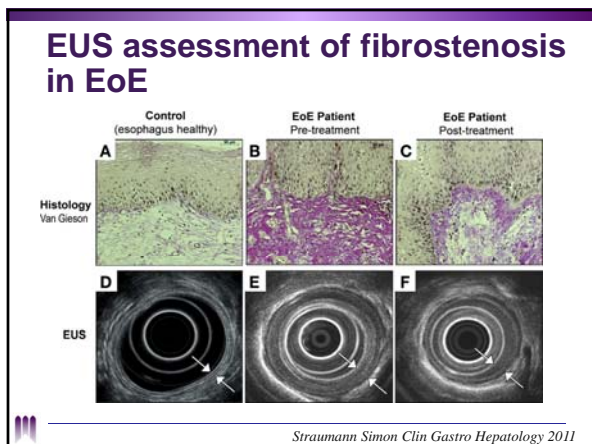
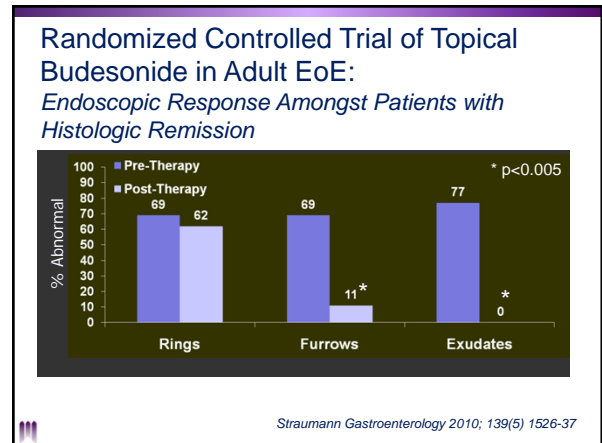
Severe (Grade 2): White lesions involving ≥ 10% of the surface area of the esophagus

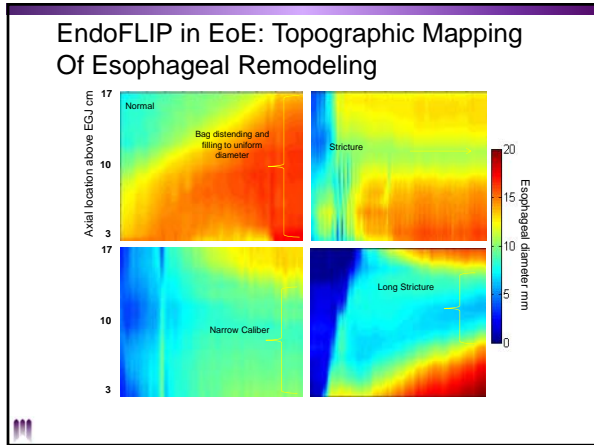
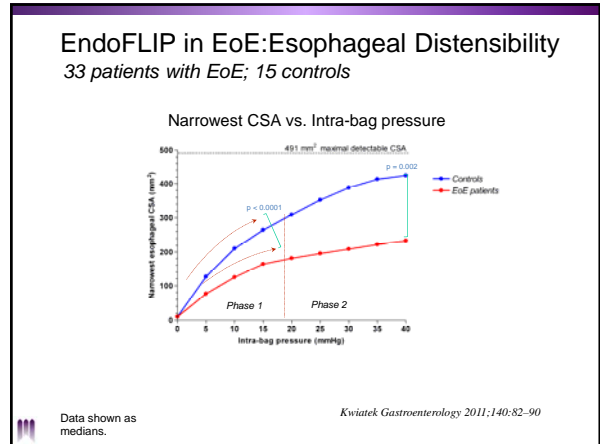
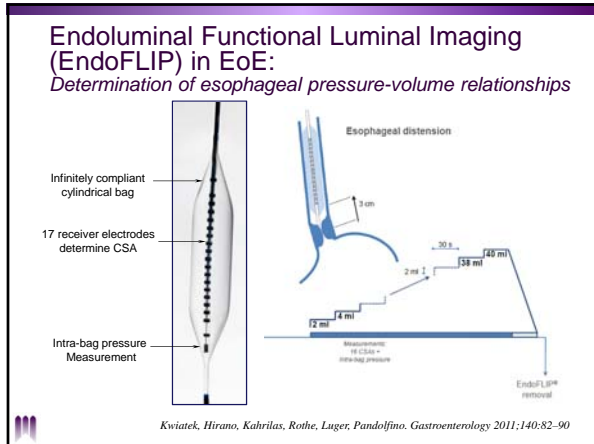
EoE Endo Atlas NIA-PH ver16. Ref: Hirano, Moy, Heckman, Gut 2012.



What are potential advantages of an EoE endoscopic reference?

- Allows for uniform characterization of esophageal abnormalities that are present in most EoE patients
- Facilitates comparisons of endoscopic severity amongst clinicians and investigators
- Complements assessment of therapeutic outcomes in EoE that is currently based on symptoms and pathology
- Provides important information regarding fibrostenosis that is a major determinant of symptoms in EoE





Esophageal Dilatation in Eosinophilic Esophagitis: Effectiveness, Safety, and Impact on the Underlying Inflammation

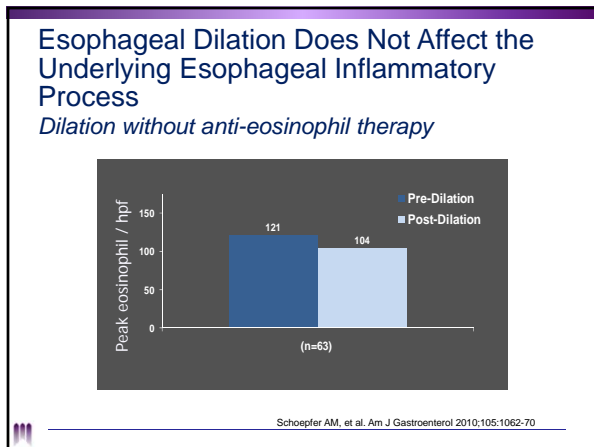
ORIGINAL CONTRIBUTIONS

ESOPHAGUS

Alain M. Schoepfer, MD¹, Niravda Gonsalves, MD², Christian Bissmann, MD³, Sebastian Cones, PhD⁴, Hans-Uwe Simon, MD, PhD⁵, Alex Strassburg, MD⁶ and Hans Hirano, MD⁷

- Retrospective study of 474 dilations in 207 adults
- 63 patients treated with dilation alone
- 93% of patients reported slight or no dysphagia after dilation
- Esophageal diameter increased from 11 mm pre to 16 mm post dilation
- 3 mm incremental dilation per session; median 2 sessions per patient (range 1-13)
- Median duration symptom improvement: 15 mos
- No perforations; post procedure pain 74%

Schoepfer AM, et al. Am J Gastroenterol 2010;105:1062-70



Esophageal Dilatation in EoE: To Do or Not to Do

Not to Do	To Do
<p>“Esophageal dilatation with or without concomitant medical or dietary therapy can provide relief of dysphagia in selected patients with EoE.</p> <p>In the absence of high-grade esophageal stenosis, a trial of medical or dietary therapy before esophageal dilatation is reasonable.”</p> <p>EoE Updated Consensus Recommendations. J Allergy Clin Immunol 2011</p>	
<p>Have been partial ruptures</p>	