Trans-nasal esophagoscopy

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Agenda
1. History of TNE
2. Why?
3. How?
4. When?
5. What to expect.
1. History of Trans-nasal esophagoscopy (TNE)

- Otolaryngologists performed all esophagoscopy until 1960’s (flexible scopes)
- Why now? Technology better- distal chip scopes or high quality fiber optics

Trans-nasal esophagoscopy (TNE)

- Outpatient procedure
- In clinic
- Uses ultra-thin scope (4-5 mm)
- Distal chip or high quality fiberoptics
- Only topical anesthetics
- Suction/air insufflation

2. Why TNE?
Advantages of TNE: Position Statement of American Bronchoesophagological Assoc (ABEA)

1. Safety - 67% of comps and 72% mortalities during sedated endoscopy due to sedation. TNE eliminates sedation.
2. Cost savings - difference in cost between TNE and conventional esophagoscopy - $2k

TNE vs. sedated transoral esophagoscopy (gold standard)

* TNE image quality and diagnostic capability are equivalent to transoral esophagoscopy

Advantages of TNE: Position Statement of American Bronchoesophagological Assoc (ABEA)

3. Patient preference - 91% of pts who had undergone EGD and TNE prefer TNE.
   * Gastrointest Endosc 2003;57(2):198-204

4. Head & Neck Cancer - high congruence with panendoscopy in OR
   * 5% rate of metachronous esophageal SCC in f/u pts
   * Laryngoscope 2002;112(12)

3. How?

References:

Otolaryngol Head Neck Surg 2008;138:411-14

Gastrointest Endosc 2003;56(4):472-8

Laryngoscope 2002;112(12)


Am J Gastroenterol 2006;101(12):2693-703

Endoscopy 2005;37(6):559-65

Gastrointest Endosc 2003;57(3):300-4

Gastrointest Endosc 2002;56(4):472-8
Technique of TNE

1. pt sits in clinic upright
2. Topical nasal decongestant/anesthesia
3. Cetacaine to oropharynx
4. Pt sips water to pass

4. When?

TNE scope

- Sheath used
- Suction/irrigation
- One assistant
- Video procedure

Indications of TNE

1. Esophageal
2. Extraesophageal
3. Procedure-related
Indications

- **Esophageal**
  - Dysphagia
  - Odynophagia
  - Barrett’s esophagus (screening/surv)
  - Caustic ingestion eval
  - GERD

- **Extra-esophageal**
  - Globus
  - Chronic cough
  - Head & Neck cancer-synchronous or metachronous
  - Severe LPR

Normal esophagus

Reflux esophagitis

Esophageal diverticula
Barrett’s Esophagus

- Dysplasia/metaplasia of distal esophagus
- Premalignant condition for adenocarcinoma
- Adenocarcinoma on the rise
- TEN equal or superior to esophagoscopy in dx of BE (Blair 2006)
- Earlier dx and improved survival?

Does literature support TEN for LPR?

- Largest series- Postma 2005
- 700 consecutive cases
- Indications- estraesophageal reflux without heartburn or indigestion
- Significant findings in 50%
- Take-away- literature supports LPR as firm indication

Is TEN enough? Should pts have EGD instead?

- Wildi in 2004
- 175 pts had EGD and findings were correlated with symptoms
- Pts without daily abd pain, nausea, or hx of ulcers unlikely to have major disease in stomach or duodenum
- Bottom line- esophagoscopy sufficient in routine Otolaryngology pts

TEN Procedures

- Biopsies through 2 mm working channel
- TE puncture
- Feeding tube insertion
- Tracheoscopy
- Laser fiber use
5. What to expect.

Complications
1. Epistaxis- less than 2%
2. Only 1 esoph perf
3. Unable to complete exam:
   - Small nasal vault (17/711)
   - Vasovagal response (2/711)

Financial impact
- Cost- system + scope- $40,733
- Annual supplies cost - $1350
- Average reimbursement $365.56
- Break-even point- 18 months
- Big picture- cost of rigid esophagoscopy $3,000

Laryngoscope 2005;115:321-3
Summary

1. History of TNE
   - the throat includes the esophagus
2. Why?
   - better visibility, safer, pt satisfaction
3. How?
   - clinic, no sedation, topical anesthesia
4. When?
   - dysphagia, LPR, procedures