ESOPHAGEAL ISSUES
BENIGN AND
PREMALIGNANT

GENERAL SURGERY GRAND ROUNDS
DEC 12, 2012
CASE I- WT

- 62 yo retired veteran; tx care to VHAMEM June 2012. Hx Barrett’s esophagus with high grade dysplasia.
- Beside GERD, had PTSD and some drug issues- marijuana, cocaine in past along with heroin in Viet Nam; alcohol and tobacco as well.
- In 2009, to center in Knoxville for mucosal resection. Satisfactory early result.
Had a repeat visit to Knoxville, again in 2009. At that point, had repeat mucosal resection. Transferred care to VAMC Memphis earlier this year.

EGD here- Aug 7, 2012- High grade dysplasia at 37 cm from introitus; at 31 cm still with low grade dysplasia in base of glands.

In short, 6 cms of Barrett’s esophagus with dysplasia in significant portions.
NOW WHAT?

- Are there alternate non resective measures?
- What is risk of developing adenocarcinoma of the esophagus in documented Barrett’s?
Some of the original MDs - theory if CA limited to submucosa, little chance of nodal involvement.

Limitation to mucosa - Well differentiated - 93%

Moderately diff - 74%; poorly diff - 23%

Mucosal resection (MS) Device on tip of scope; one suctions in the lesion and ligates.

Endoscopic Submucosal Dissection (ESD) Use of a cautery through scope channel to dissect out the muosa from within the muscularis
Options short of esophagectomy

- Techniques noted above. How reliable is margin if all cauterized? Suspect EUS and tumor morphology important.

- Mucosal ablation - photodynamic therapy. Active porphyrin derivative which is picked up in malignancy and then a fixed laser light beam produces necrosis. (Post op – worse than lung; out of sun for months)

- Cryotherapy; traditional laser, etc.
Endoscopic treatment currently mainstay of initial management.

Esophagectomy for treatment failure or high grade dysplasia not amenable to current Rx

Mucosal types- cardia, fundic, or intestinal. Intestinalization and high grade dysplasia- “buzz words”

Basement membrane – not clearcut structure.
Risk of Ca

- One series- 30 or 40% of esophagi resected for high grade dysplasia will have microscopic adenocarcinoma found.
- PTD study- 70 patients treated; 30% wound up with adenoca.
Our recommendation for this man

- He is a relatively young man with a long life expectancy. He essentially has treatment failure and also is rather symptomatic from the reflux. We recommend resection and should be able to be done “blunt”
- Only hooker- he also has bullema, and induces vomiting on around a weekly basis. We will study further!!
- On schedule, actually tomorrow.
LT- Our own misery

- AAM veteran- early 60s
- Long Heller myotomy done Jan 8, 2009 at VAMC Memphis following manometry which confirmed the dx of achalasia but also showed tertiary waves in body.
- We elected not to carry out partial wrap.
- Did well for around a year and gradually developed recurrent dysphagia.
- Some issues with reflux
Modified Heller

- Original Heller was a double myotomy done via a transabdominal approach.
- Modified is a single myotomy.
- Some controversy regarding addition of an antireflux procedure but predominance of folks are probably doing them.
- By far majority of these procedures are now done laparoscopically (and should be); this gentleman needed a long myotomy. hence original route.
Role of thoracic surgery and open procedures.

- Associated diverticulum or neuromuscular problem up in body of esophagus. (A long myotomy may be required up to the arch.)
- Sometimes a redo procedure will be needed and may be best done through an alternate and virgin field.
DIFFERENTIAL DIAGNOSIS OF DYSPHAGIA FOLLOWING MYOTOMY

1. Regrowth of the muscle or inadequate myotomy caused by avoiding antireflux procedure and hence not going far enough onto the stomach.

2. Reflux produced by no antireflux procedure or inadequate one, leading to peptic stricture.

3. In his case, probably due to the former as EGD allowed the scope to readily enter the stomach.
ANOTHER NEW ISSUE- WHEN SHOULD WE GIVE UP ON THE ESOPHAGUS

- ORRINGER recommends esophagectomy for sigmoidization of the esophagus or after a failed procedure.

- In 2001 (Ann Thorac Surg 2001;72:854-8, Michigan group reported 93 pts treated for achalasia-overlap in indications-63% for megaesophagus, 62% with failure of myotomy, and 7% due to associated strictures. 2% mortality, 95% good swallowing, but lot of morbidity. 94% transhiatal esophagectomy.
Pre initial Heller
Post Heller after recurrent dysphagia
Another view with barium tablet.
LT issues

• Totally unable to tolerate manometry. Lab and patient worked hard to no avail.

• One option- go in through R chest and carry out a new myotomy hence producing a “non modified Heller” plus a partial wrap.

• Currently working up a urologic issue- my feeling is that esophagectomy probably reasonable option.(Achalasia-pre malignant with squamous histology- not nearly as common as Barrett’s.)
76 year old patient with Parkinson’s disease, and good bit of kyphosis presented with severe dysphagia. Manometry showed decreased UES basal pressure and LES normal. Huge paraesophageal hernia. Patient did get up and about although required wheelchair to navigate the long halls of our institution. Cardiac clearance showed EF of 60 % and PFT great. (FEV1 over 3 liters; MVV 51% pred.)
Huge hernia on PA chest film
Note air collection on lateral.
Contrast shows most of stomach in chest.
Stomach all in chest with organo-axial rotation.
Suspect dysphagia due to the esophagus being distended.
Giant hiatal hernias

- Normally we prefer the term anti reflux procedure to “repair of hiatal hernia”. Hernias of this magnitude have strong propensity to cause complications and need repair much as the old view of inguinal hernias.
- Will define types on next slide; this lesion is one sometimes better repaired open. Addition of a gastrostomy is an old adjunct but I have learned to my sorrow that it is a good idea!
Hiatal hernia classification

I. Sliding hernia- ge junction up in the chest and portion of sac made up of stomach.

II. Mixed- ge junction up in chest but large portion of stomach up in paraesophageal area as well- most giant hernias are these.

III. True paraesophageal- presence justifies repair as can strangulate, etc.

IV. Other organs are up in chest through the hiatus- colon, spleen, small bowel, etc.

In general, giant hernias should be repaired.
Gastrostomy-to do or not to do

- My associate, Dr Weiman, was trained at the University of Chicago for GS plus extra year of esophageal work.
- Drs Skinner and Demeester full time; Mr Belsey emeritus and there 6 months a year.
- Their practice was to carry out gastrostomy to anchor the stomach to abdominal wall as a extra procedure.
- I generally have not adhered to that philosophy until had a couple of recurrences!!
Paraesophageal hernias

- Particularly the paraesophageal hernias are showing high recurrence rates following laparoscopic repair.
- One can make a case for transthoracic approach in these cases on front in- certainly after recurrence.
- I have moved to gastrostomy-laparoscopic approach should be considered.
- This man did amazingly well and did have gastrostomy no recurrence so far; eating well. I am cautiously optimistic.
Surgical approach to benign esophageal disease - humbling

- Need median followup of 5 to 10 years before you really know what you are doing.
- Beware reports of antireflux procedures or achalasia procedures with “success” measured in months- ie recurrence rate of 5% with median duration of 18 months.
- Generation of thoracic folks well versed in pitfalls of this surgery and salvage procedures is disappearing!
The esophagus is somewhat like the pancreas - it does not like to be the subject of surgery.

It will bite you in a bad place on many occasions, sometimes long after you and the patient think a cure has taken place.

Nothing applies more than a favorite saying of one of my retired colleagues - Dr Ken Sellers.

GOOD RESULTS COME FROM EXPERIENCE.

EXPERIENCE COMES FROM BAD RESULTS!!
PS- not just a case but a saga

- This gentleman in his mid 30’s had some psychiatric ailments and came into an outlying hospital with abdominal pain and evidently a physical examination suggestive of perforated ulcer.

- At exploratory laparotomy, had evidence of abdominal contamination but no sign of gastric perforation.

- Further dissection revealed that the leak was actually in the distal esophagus.
PS 2

- An editorial comment- perforated gastric or duodenal ulcer is definitely in the differential for Boerhaave’s syndrome- one can have distal esophageal fluid go directly into the abdomen either due to location or to walling off of the pleural spaces due to previous infection, etc.

- Boerhaave’s syndrome is a hydrostatic pressure tear rather than a “spontaneous” perforation and requires prompt repair. Another possible diagnosis is acute aortic dissection.
The means of acute surgical treatment of this entity is a thoracotomy with dissection of the injury, washing out of the mediastinum, closure of the tear, reinforcement with an intercostal muscle flap and securing a large tube not on the repair but close to it and in my hands secured by an absorbable stitch to allow hopefully drainage to the outside should the repair break down. This is followed by a limited lap for a feeding jejunostomy and a decompressing gastrostomy.
Hence, in the quite acceptable and understandable situation of finding the chest tear via the abdomen, one could simply call thoracic, place the appropriate feeding and decompressing tubes, and then reposition and carry out the thoracic portion of the case.

A second and very senior general surgeon was called and the decision was made to staple across the stomach with plans I believe for a followup thoracotomy.
There was some disagreement about chest portion with the prestapled stomach in place, and patient was transferred to Methodist University.

A repeat laparotomy showed that there was some gastric necrosis necessitating further resection; a limited L thoracotomy showed non contaminated pleura and chest tubes were placed.

Alimentation and aggressive care led to resolution of the acute issues and elective reconstruction was undertaken.
Patient recently had a bypass via substernal colon route- an end proximal colon to side cervical esophagus to avoid leaving a closed loop in the chest and abdomen.

Patient is doing well at present, but it does appear that he may well require an esophagectomy. This was not done at the reconstruction as the esophagus is totally adherent to the diaphragm at the hiatus and a small subdiaphragmatic portion may be left.
Purpose and major issue

- Purpose of bringing this case up is not to criticize or second guess anyone.
- In the case of massive near terminal sepsis and a long standing perforation, there is an Urschel exclusion procedure which involves dividing the esophagus- I have never had to do this.
- Almost always, the procedure outlined above will work and with a decompressing gastrostomy and the last resort being a usually loop diversion in the neck, one can avoid dividing the gi tract.
Boerhaave’s syndrome


- Most striking finding was that this was the only paper in which duration of greater than 24 hours did not prevent primary repair.

- In any case, with this and other esophageal issues, sometimes you get the bear and sometimes the bear gets you!!