

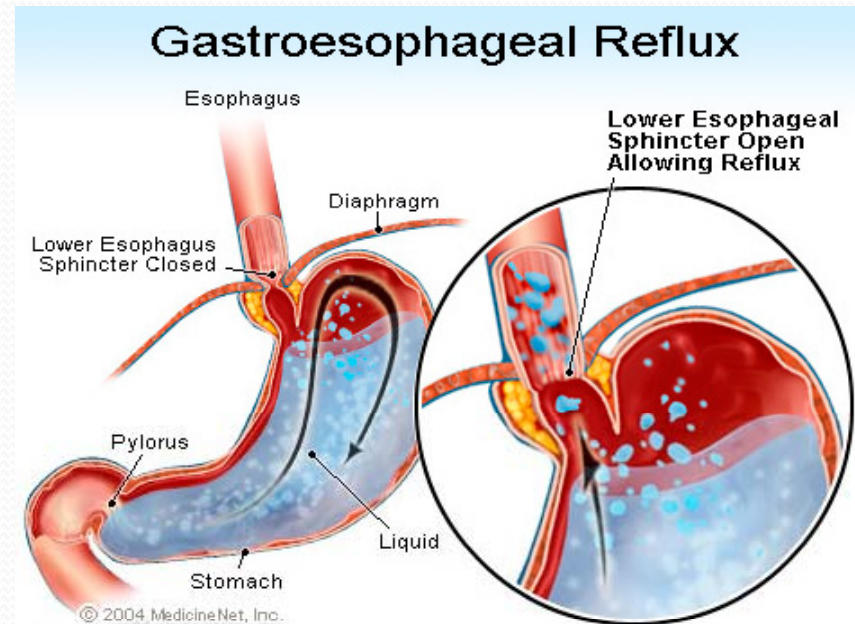
SEESHA – KRCH CME SERIES

**GASTROESOPHAGEAL REFLUX
DISEASE (GERD)**

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FARSI, FICS, FIAGES**

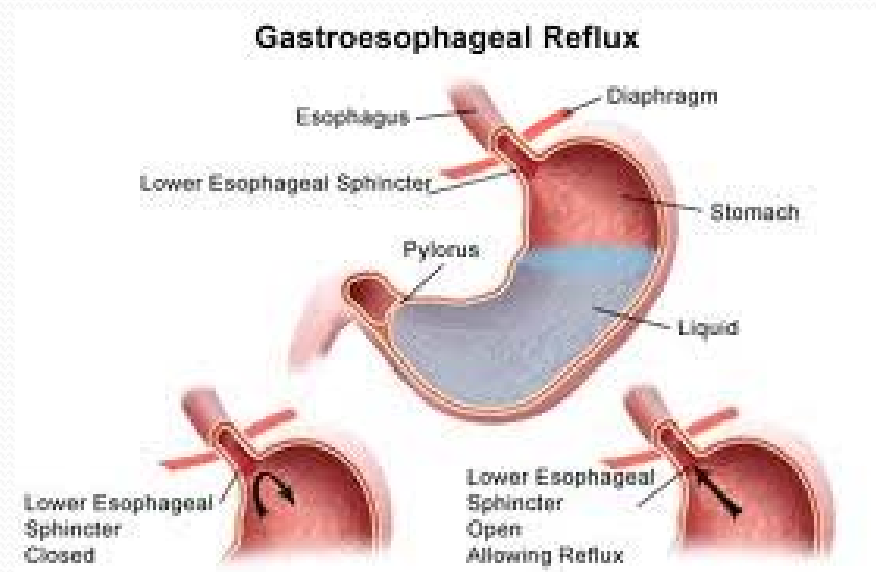
GERD: Introduction

- Stomach contents leak backwards into the esophagus
- Irritation of the mucosal covering of the esophagus causes the symptoms of GERD



GERD: Causes

- Changes in the barrier between the stomach and esophagus
- Abnormal relaxation of the Lower Esophageal sphincter, hiatus hernia and lax esophageal hiatus



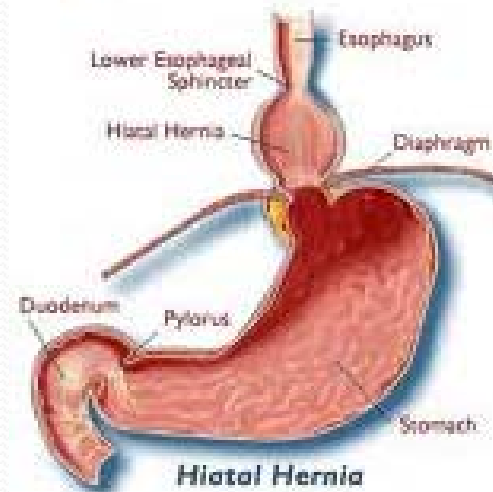
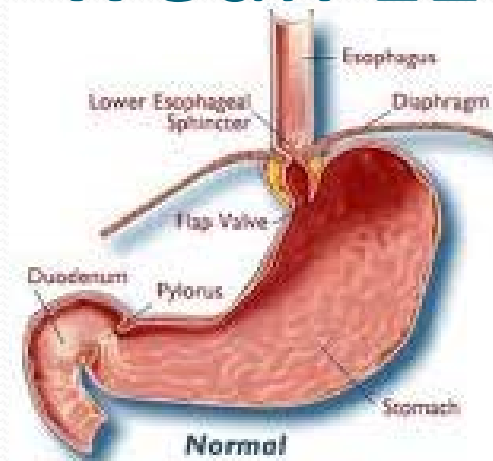
GERD: The problem

- The regurgitated fluid contains acid and pepsin that irritates and injures
- Saliva and bicarbonate in it to some extent neutralize the effect of acid and gravity helps the fluid get back to the stomach



GERD: Causes for weak LES

- Obesity, alcohol and cigarettes
- Coffee, garlic & onions, acid foods, large meals
- Hiatus hernia, obesity, diabetes and pregnancy



GERD: Common symptoms

- Heartburn {burning behind the chest after food lasting for 2 hrs.}
- Regurgitations and rumination
- Difficulty in swallowing



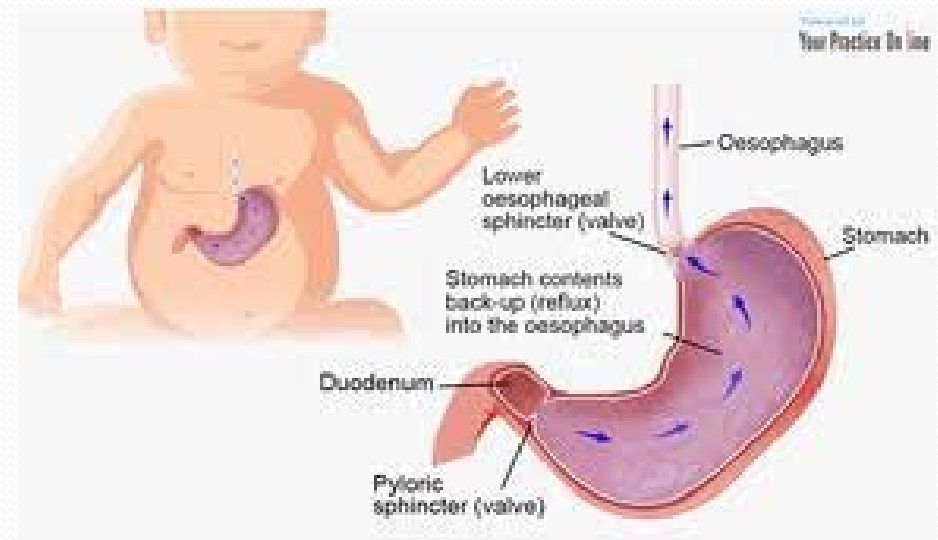
GERD: Other symptoms

- Chronic cough and wheezing
- Sleep disturbance
- Hiccups
- Sore throat



GERD: In children

- Coughing and vomiting
- Poor sleep
- Frequent Burping & respiratory infection
- Gagging choking and bad breath



GERD: Diagnosis

- Esophago-gastroduodenoscopy {EGD} – a rapid urease test could be carried out at that time
- Esophageal manometry
- 24 hour esophageal pH monitoring

b(i)



b(ii)



GERD: Diagnosis

- Short trial of treatment could predict diagnosis without the expensive tests {Sensitivity 80% specificity 55%}
- In a study at mission hospital patient's willingness for surgery predicted good results



GERD: Treatment

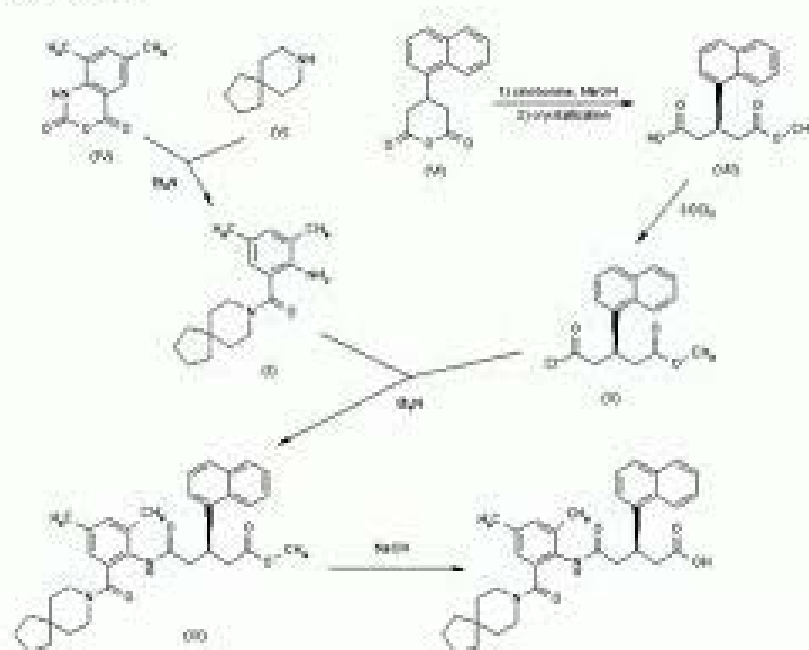
- Lifestyle modifications
 - Reduce weight
 - Quit smoking
 - Avoid acid food and large meals
 - Waiting for 3 hours before lying down
 - Elevate head end of bed by 8 inches



GERD: Treatment

- Proton pump inhibitors
{Omeperazole,
pantoparazole,
rabeprazole}
- Pro-motility agents
{Mosapride,
Metaclopramide}
- Alginic acid, sucralfate

Synthesis of CR-746



GERD: Treatment

- Laparoscopic fundoplication
 - Nissens
 - Anterior
- Narrows the hiatus and increases LES pressure



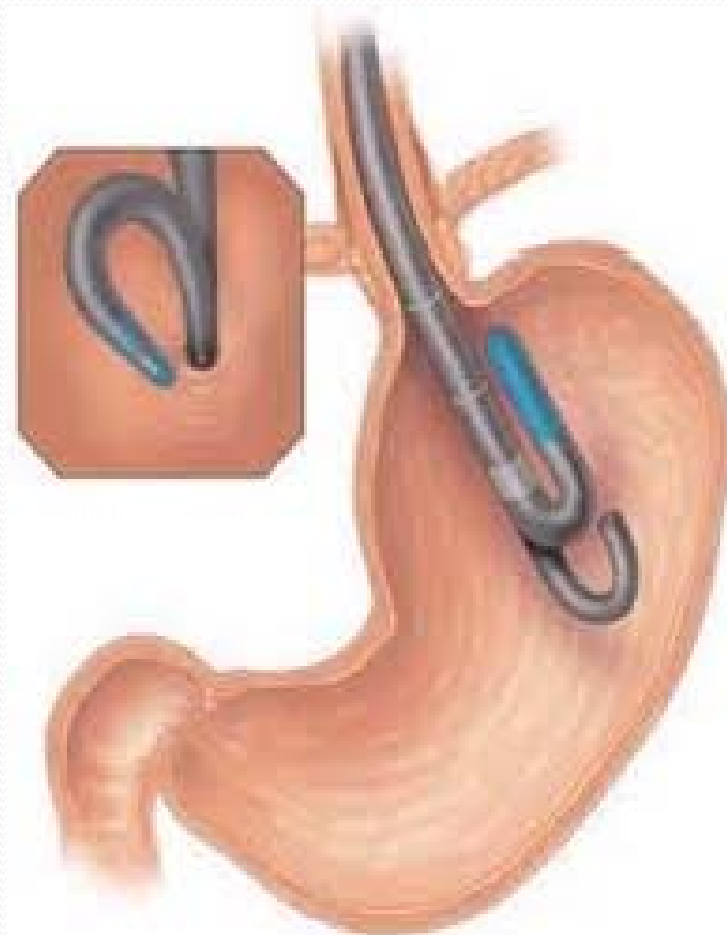
GERD: Results at BMCH

- Over 50 patients had laparoscopic surgery by Dr. J. Gnanaraj @ BMCH
- 95% of the patients benefitted from the surgery

Average number of preoperative visits	5.2
No. of patients available for follow up (< 6/12)	33
Average number of postoperative visits	1.6
Number of patients unhappy with the procedure	2 (5%)
No. patients > 1 year not on medication but happy	18 (44%)
No. of patients lost to follow up after 6 / 12	15
Small tear in the liver caused by needle	1
Suture going thorough the Nasogastric tube	1
Feeling of Bloating of abdomen post OP	3
Number of patients enrolled in prepaid scheme	39

GERD: Newer treatment

- Endoscopic surgeries {surgery is carried out with instrument passed through the mouth}
- Stretta procedure where radiofrequency energy is applied to the LES



GERD: Complications

- Barrette's esophagus is caused by long term GERD and is a pre-malignant condition
- Esophageal ulcer
- Esophageal stricture
- Dental problems



GERD: Clinical trials

- No significant difference between surgical or medical therapy in outcome
- No significant difference between Nissen's and anterior fundoplication
- Surgical treatment less expensive and one time treatment

Time trends of gastroesophageal reflux disease: Longitudinal US studies

- US National Ambulatory Medical Care Survey (~ 80,000 patients)
- Proportion of visits for GERD in US primary care¹
 - 1990-1993: 1.7%
 - 1998-2001: 4.7%
 - 2000-2001: 22.7%
- GERD-related visits increased by 46.5% in 3 years²
- Most GERD-related visits were by women (54.7%); average age 56 years
- The number of non-GERD-related visits increased by only 5.6% during this time period²

¹Altman et al, *Gastroenterology* 2005; 118: 1345
²Wentz et al, *Dig Dis Sci* 2005; 50: 2594
Summarized in: El-Serag, *Clin Gastroenterol Hepatol* 2007; 5: 17

GERD: CME videos

- <http://www.youtube.com/watch?v=5FpAStVjg2c>
- [http://www.youtube.com/watch?v= DfQOGEN1ss](http://www.youtube.com/watch?v=DfQOGEN1ss)
- <http://www.youtube.com/watch?v=LEQdobNHO2o>
- You could search for “jgnanaraj” in Youtube to view the GERD and other CME videos