

MANAGEMENT of GASTROESOPHAGEAL REFLUX in ELDERLY

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PENDAHULUAN

Gastroesophageal reflux (GER)

- Kandungan dalam lambung yang bergerak naik ke atas dari lambung ke esofagus
- Proses fisiologis yang normal terjadi

Gastroesophageal reflux disease (GERD)

- Gangguan gastrointestinal yang sering dijumpai
- Gejala : rasa terbakar di dada dan regurgitasi asam
- Adanya aliran balik dari asam lambung dan kandungan lainnya di dalam lambung ke esofagus

PENDAHULUAN

GERD is the most common upper GI disorder encountered in the elderly patients

GERD is highly prevalent worldwide : 10-20% in Western world

In US adult population, 10-20% of people have symptoms at least once weekly and 15-40% people have symptoms at least once monthly

No causal relationship between H.Pylory infection and GERD

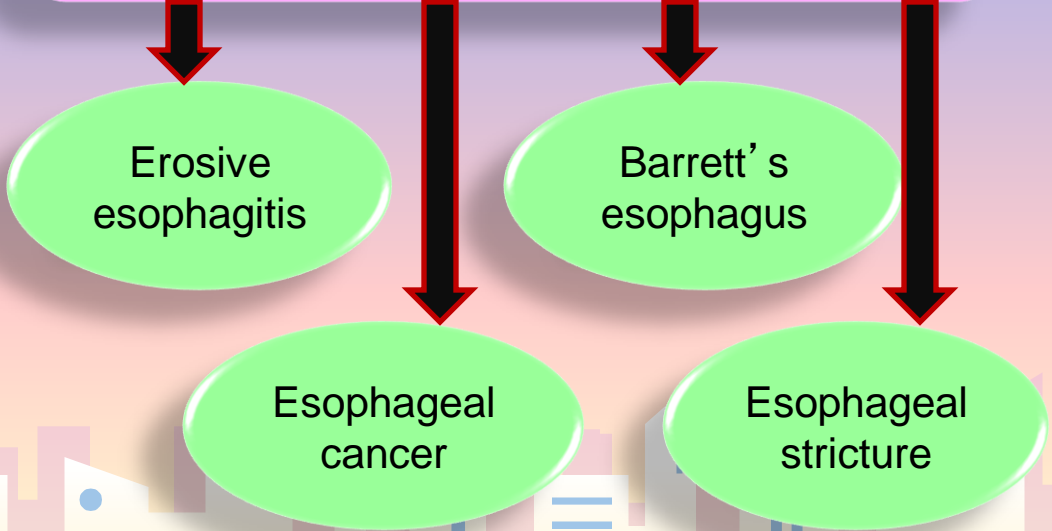
In fact, there is an inverse relationship of prevalence GERD to that H.pylory infection

PENDAHULUAN

Although there is a tendency to reduced symptom frequency of the usual complaints of heartburn and acid regurgitation in older patients



The frequency of GERD complications is significantly higher



PATOGENESIS

Patogenesis dari GERD adalah kompleks

Faktor pertahanan yang melindungi esofagus

- Tahanan anti refluks
- Pembersihan asam esofagus
- Pertahanan jaringan

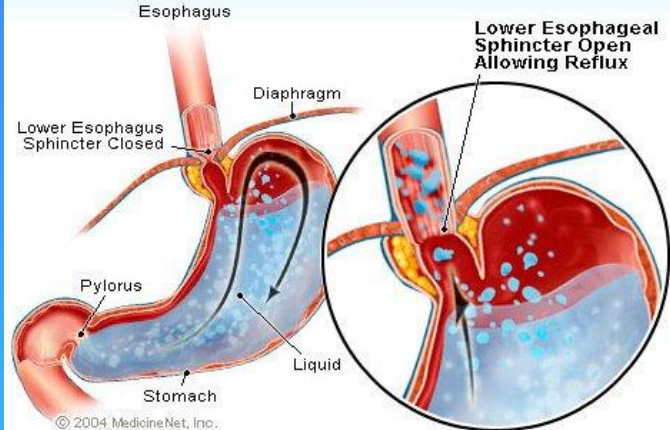
KETIDAKSEIMBANGAN

Faktor agresif dari lambung

- Sekresi asam lambung
- Reflux duodenogastik
- Pengosongan lambung yg terlambat

Multiple

Gastroesophageal Reflux



Hypertension
 Cardiovascular disease,
 Pulmonary disease
 Depressions



Decrease LES pressure

- Nitrates
- Calcium channel blockers
- Benzodiazepines
- Anticholinergic agents
- antidepressants

Esophageal acid clearance is impaired in the elderly due to disturbances of esophageal motility and saliva production

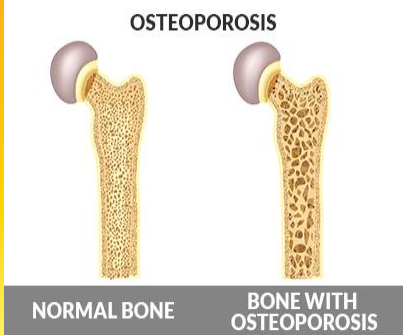
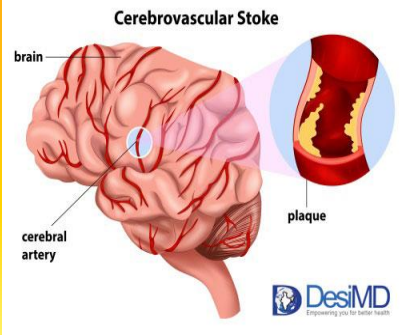
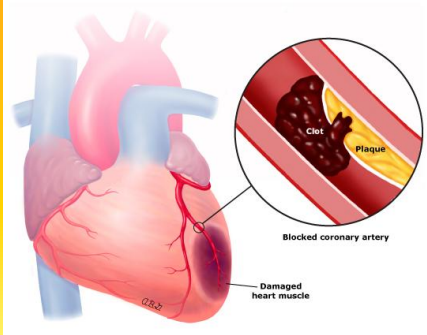
Gastric dysmotility with delayed gastric emptying and duodenogastric reflux of bile plays a significant role in GERD pathogenesis in elderly patients

Direct esophageal injury occurs more frequently in the elderly

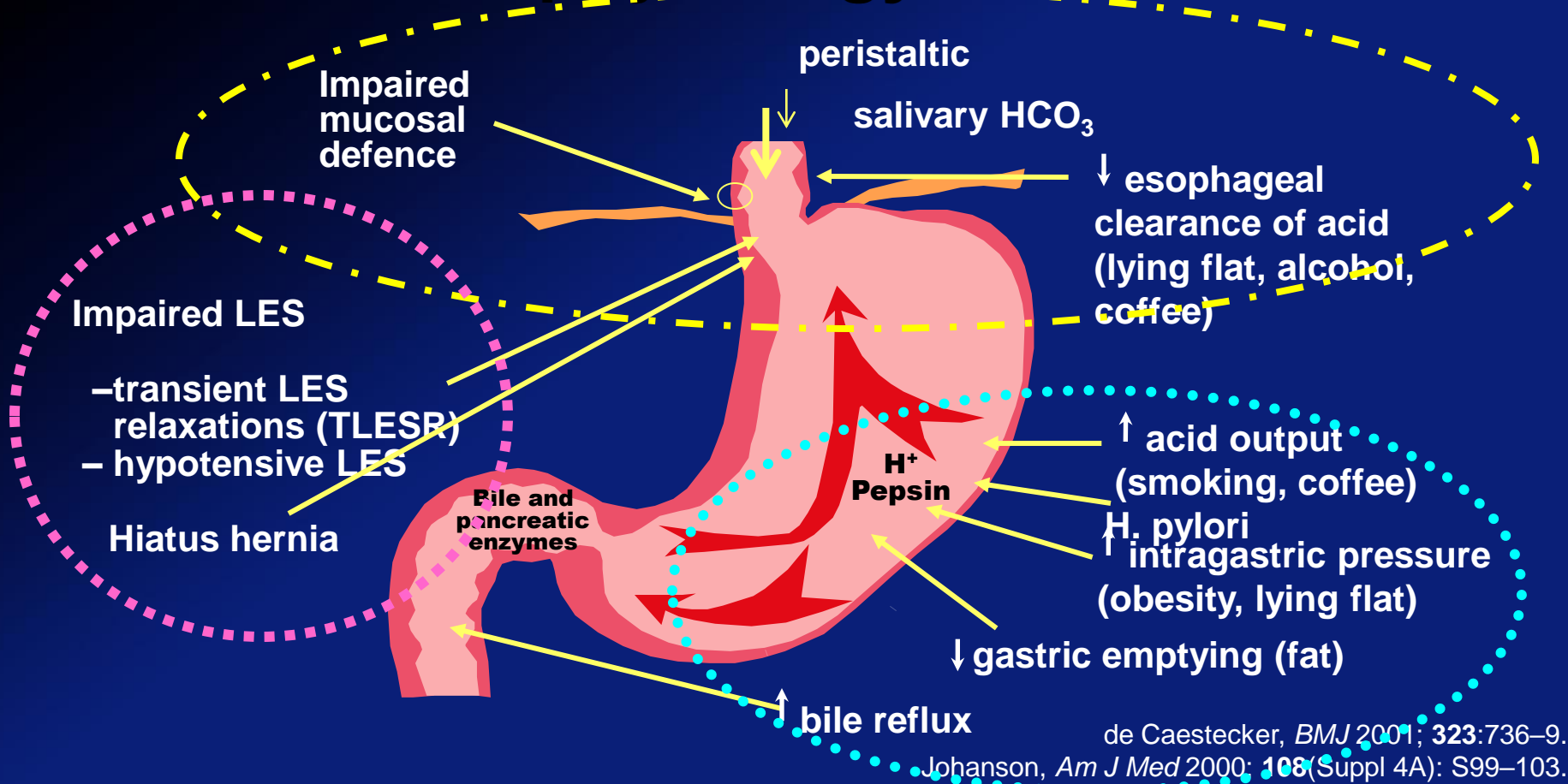
Because of medications given for comorbid illnesses

Cardiovascular disease, cerebrovascular disease, arthritis, osteoporosis

NSAIDs
Potassium tablets
Iron supplements
Biphosphonates



Pathophysiology of GERD



de Caestecker, *BMJ* 2001; 323:736-9.

Johanson, *Am J Med* 2000; 108(Suppl 4A): S99-103.

Environmental Risk Factors for Gastroesophageal Reflux Disease

Risk Factor	Mechanism of Risk
Smoking	Weakened LES? (small risk)
Alcohol	Mucosal damage ? (small risk)
Medications	Weakening of LES, mucosal damage
Meals and specific foods	Gastric distension, weakening of LES, irritation of esophageal mucosa
Helicobacter pylori	Beneficial influence as corpus gastritis reduces acid output
Naso-gastric tubes	Conduit for acid reflux in supine patients
Abdominal trauma	Disruption of diaphragm?

LES = lower esophageal sphincter

Medical Conditions Associated with Gastroesophageal Reflux Disease

Associated Condition	Mechanism of Risk
Obesity	Increased intra-abdominal pressure
Diabetes mellitus	Delayed gastric emptying
Zollinger-Ellison syndrome	Increased acid output
Pregnancy	Increased intra-abdominal pressure, weakened LES
Myotomy in achalasia	Destroyed LES
CRST syndrome	Impaired peristalsis
Sicca syndrome	Impaired esophageal clearance
Psychiatric disease	Impaired esophageal motility
Mental retardation of childhood	Impaired esophageal motility

LES = lower esophageal sphincter

GAMBARAN KLINIS

Gejala Refluks Klasik

Rasa seperti terbakar di dada

- Berawal dari daerah lambung / dada bagian bawah & menjalar ke arah leher, tengorokan dan kadang ke belakang
- Terjadi setelah makan, terutama setelah makan dalam jumlah banyak / setelah mengkonsumsi makanan pedas, asam, lemak, coklat dan alkohol

Regurgitasi asam

- Kebanyakan menderita gastroparesis dan esofagitis

Disfagia

- Disfagia dilaporkan oleh lebih dari 30% individu yang menderita GERD

Berat badan yang menurun

- Jarang dijumpai (penderita memiliki nafsu makan yg baik)
- Penyebab paling sering : *peptic stricture* atau cincin Schatzki
- Penyebab lainnya : inflamasi esofagus yang parah, gangguan peristaltik, kanker esofagus yang berawal dari esofagus Barrett

Gejala lain

- Odinofagia, bersendawa, cegukan, mual dan muntah

GAMBARAN KLINIS

Manifestasi Ekstraesofageal

Nyeri dada

- Menyerupai angina pectoris (rasa seperti tertekan / terbakar)
- Daerah substernal dan menjalar ke belakang, leher, rahang dan lengan
- Bisa ber...

GERD adalah penyebab ketiga terbanyak pada batuk kronis setelah masalah sinus dan asma.

Asma

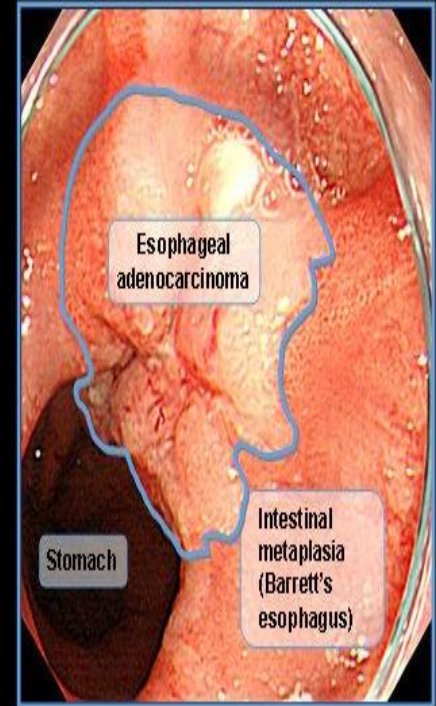
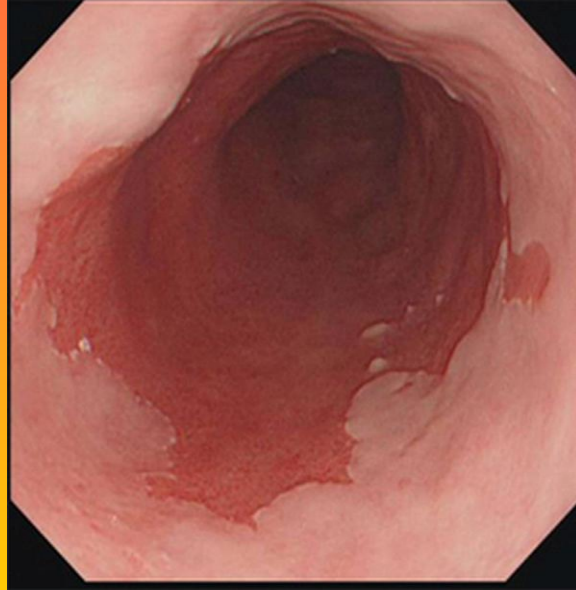
THT

- Paling sering adalah laryngitis refluks
- Penderita datang dengan keluhan suara serak, sensasi globus, sakit tenggorokan yang berulang
- PE : laringitis posterior yang edema dan merah, ulkus pada pita suara dan granuloma, leukoplakia dan karsinoma

KOMPLIKASI GERD

ESOPHAGEAL COMPLICATIONS

Erosive esophagitis
Esophageal stricture
Barrett's esophagus
Esophageal
adenocarcinoma



KOMPLIKASI GERD

ESOPHAGEAL COMPLICATIONS

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EXTRA ESOPHAGEAL COMPLICATIONS

Atypical noncardiac chest pain

ENT complications

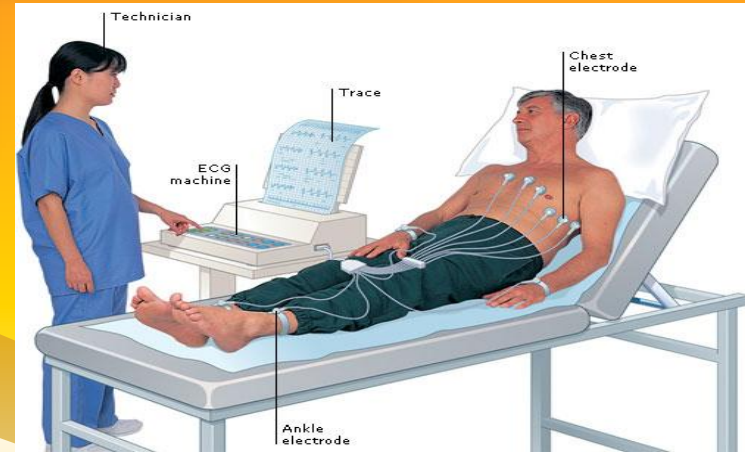
- Globus sensation
- Pharyngitis
- Sinusitis
- Otitis media
- Dental erosions
- Hoarseness
- Laryngitis
- Vocal cord granulomas
- Subglottic stenosis
- Laryngeal cancer

Pulmonary complications

- Chronic cough
- Asthma
- Chronic bronchitis
- Pulmonary fibrosis
- Aspiration pneumonia
- Sleep apnea

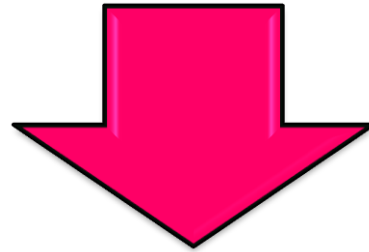
Atypical noncardiac chest pain due to GERD may often be indistinguishable from angina pectoris

Cardiac evaluation is indicated in these elderly patients before ascribing symptoms to GERD alone



DIAGNOSIS

Pada kebanyakan kasus, diagnosis ditegakkan berdasarkan anamnesis saja



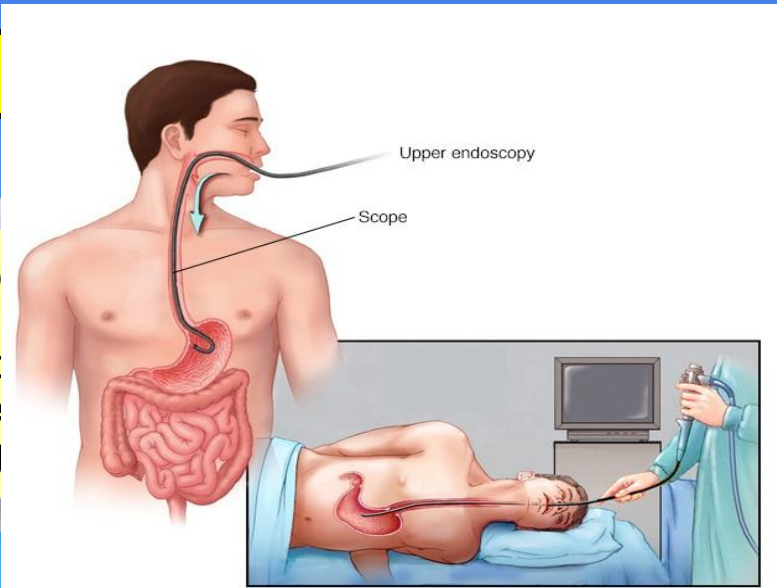
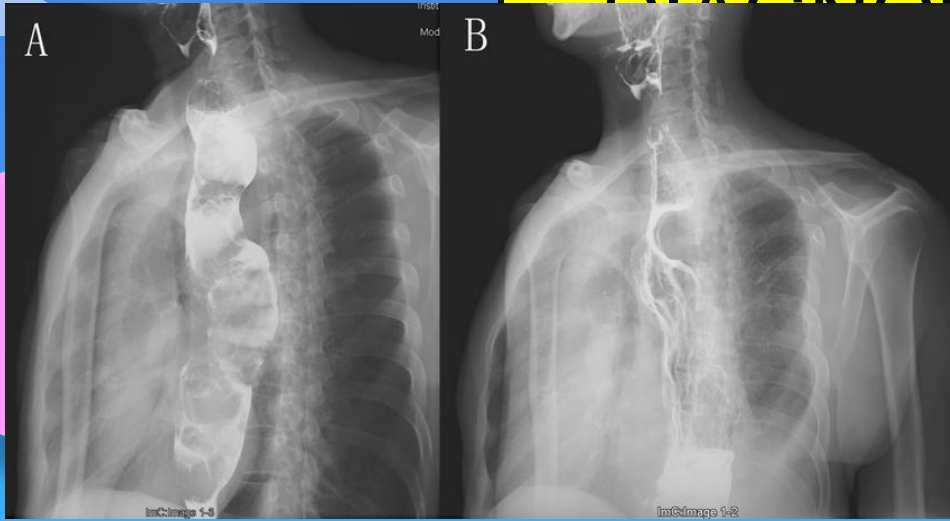
Pemeriksaan penunjang diperlukan pada penderita dengan gejala yang tidak menghilang walaupun sudah mendapatkan terapi atau pada penderita dengan komplikasi



GERD
GASTROESOPHAGEAL REFLUX DISEASE



DIAGNOSIS



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Barium swallow upper GI series and upper GI endoscopy are used to evaluate dysphagia and mucosal injury

Barium swallow upper GI series

- Used to evaluate dysphagia and mucosal injury

Upper GI endoscopy

- Used to evaluate dysphagia and mucosal injury
- Superior than barium swallow exam
- Must be used with caution in elderly frail patients

Capsule endoscopy

- It is less invasive than routine upper GI endoscopy
- May be an alternative in the elderly patients

Ambulatory pH monitoring

- In patients with atypical symptoms or when quantification of reflux is required
- Multichannel intraluminal impedance measurement with a pH sensor

Esophageal manometry

- Is often used in patients with markedly atypical symptoms
- For locating the LES for pH testing
- And in those whom surgery is contemplated

DIAGNOSTIC TESTING SHOULD BE PERFORMED IN :

Patients in whom the diagnosis remains uncertain

Patients with significant symptoms that are often associated with complications such as dysphagia, odynophagia, unexplained weight loss, GI hemorrhage and anemia

Patients with recurrent symptoms

Patients with atypical symptoms such as : chest pain, ENT problems, or pulmonary complications

Patients who have an inadequate response to therapy whether medical or surgical

Patients prior to consideration of antireflux surgery

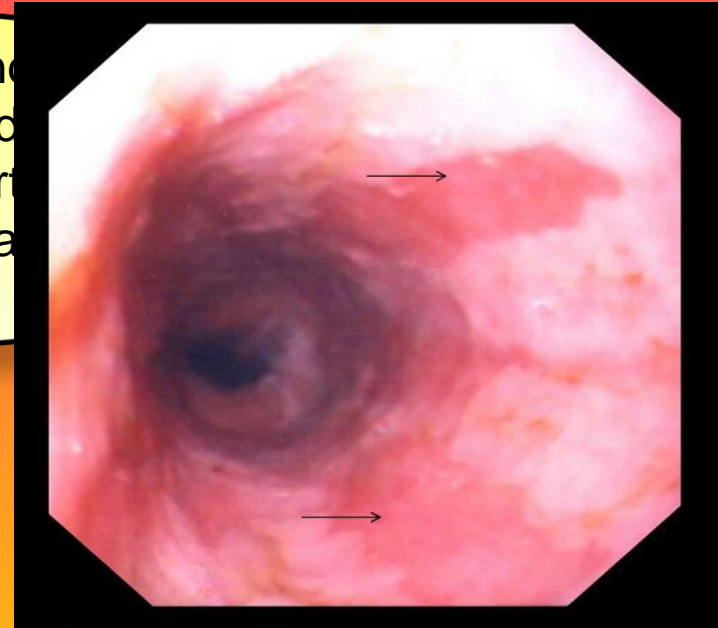
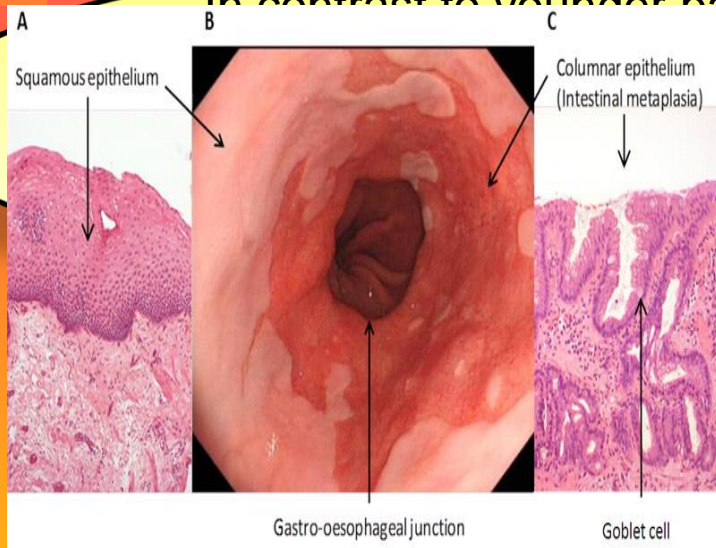
There are important considerations relating to diagnostic and treatment methods in elderly patients

Older patients are more likely to have pacemakers with or without defibrillators

Cardiology consultation may be often be indicated



The general principle of geriatric pharmacology of starting with low doses of medication and slowly advancing to larger doses is important dictum in conscious sedation of elderly patient during endoscopy



This aggressive approach is due to the higher incidence of adenocarcinoma over time and the high mortality and complications of Barrett's esophageal cancer.



TERAPI

Tujuan dari terapi pada penderita GERD

Menghilangkan
gejalanya

Menyembuhkan
esofagitis

Mencegah terjadinya
relaps esofagitis atau
terjadinya komplikasi
pada penderita
dengan esofagitis

Pada kebanyakan penderita, GERD merupakan suatu penyakit yang kronis dan sering kambuh.



Terapi pada setiap individu bervariasi :
Merubah gaya hidup ,
obat2an, pembedahan

TERAPI

Perubahan
gaya hidup

Dapat mengurangi jumlah material yang berasal dari lambung yang mengalami refluks ke esofagus

Menghindari makanan atau minuman yang dapat mencetuskan rasa seperti terbakar di dada

Harus berhenti merokok, karena rokok dapat menghambat pembentukan air liur yang merupakan *buffer* utama

Dianjurkan untuk tidak berbaring setidaknya 3 jam setelah makan dan tidak makan setidaknya 2 jam sebelum tidur di malam hari.

Pada saat penderita tidur, posisi kepala harus dalam keadaan lebih tinggi

Untuk penderita yang terlalu gemuk juga disarankan untuk mengurangi berat badan mereka

Menghindari obat-obat yg dapat mencetuskan GERD pada pasien-pasien usia lanjut (NSAIDs, beta blocker, CA channel blockers, potassium)

TERAPI

Obat-
obatan



memiliki peranan yang besar untuk mengurangi gejala rasa seperti terbakar di dada dan menghilangkan rasa yang tidak nyaman pada saluran cerna

H2 blocker

- Cimetidine
- Ranitidine
- Famotidine
- Nizatidine

Proton pump inhibitors

Semenjak bulan Maret 2000, FDA menyarankan *cisapride* untuk ditarik dari pasaran

- Deslanoprazole
- Pantoprazole

obat-obat prokinetik

thanechol (agonis kolinergik)

- metoklopramid
- *cisapride* (agonis reseptor serotonin)

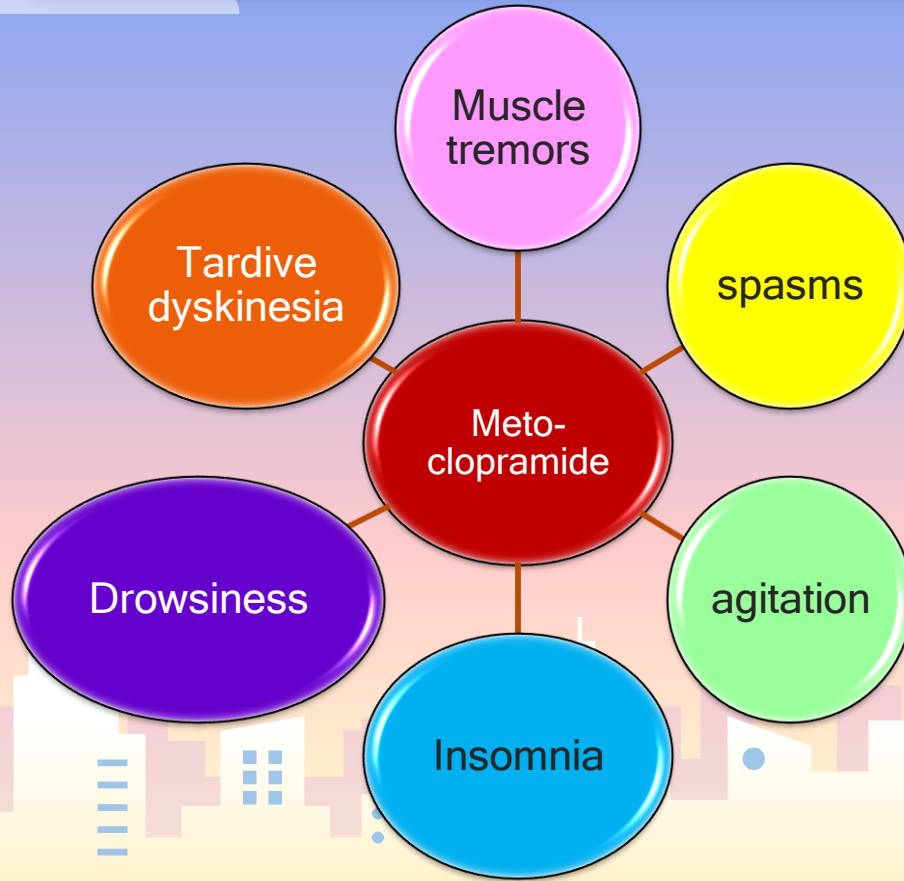
menghambat
pembentukan
asam

Adanya laporan efek samping : yaitu aritmia jantung


esofagitis

mencegah terjadinya
refluks asam,
mempercepat
pengosongan
lambung

Metoclopramide must be used with caution in the elderly



Up to 1/3 patients



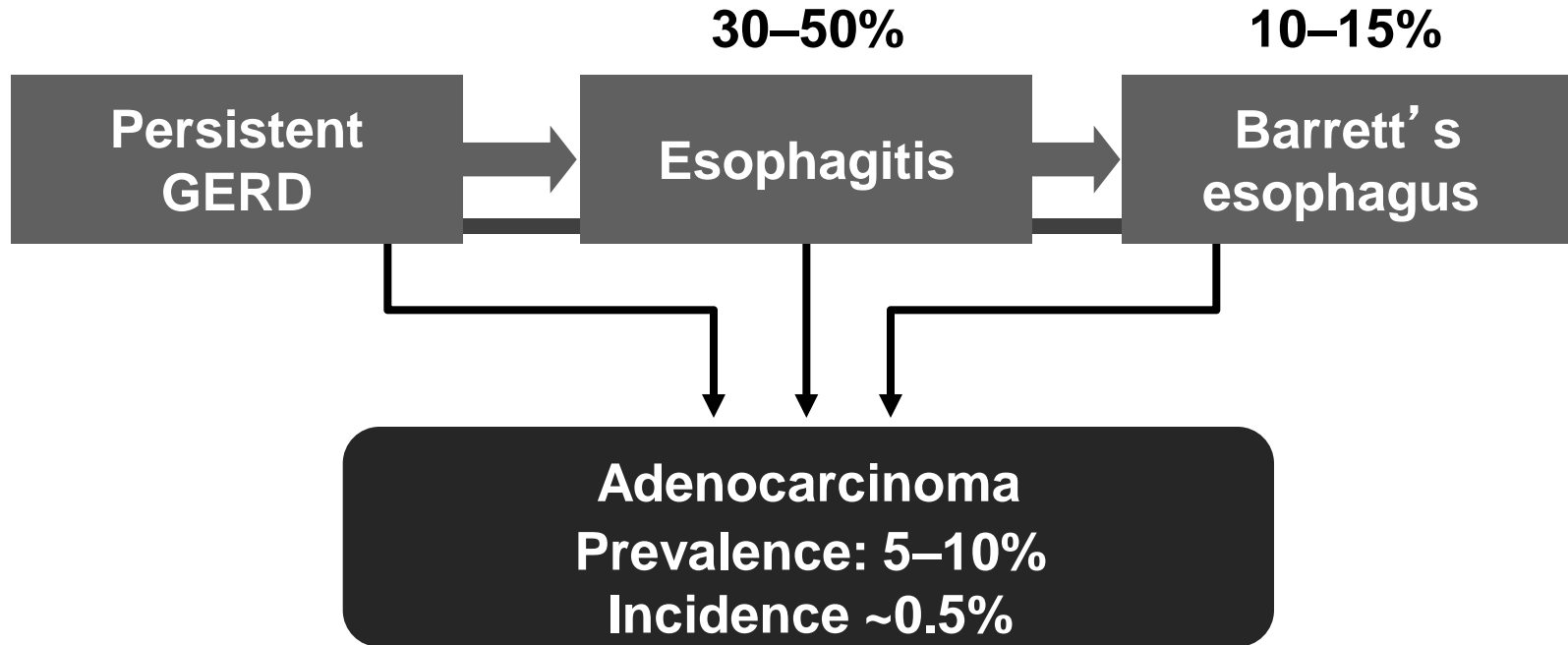
Maintaining **pH >4** is the key of point in the
management of GERD


Maintenance therapy is most often required, because relapses are common in elderly with GERD, especially those with associated complications

Long term treatment with adequate doses of medication is the key to effective care in the elderly



Patients with persistent GERD are at risk of esophageal complications





Prolonged acid suppression by Histamine H-2 receptor antagonists and PPI agents may potentially affect nutrient and calcium absorption, bacterial proliferation and drug metabolism in the older patient

With adequate monitoring, long term maintenance with PPI agents remains quite safe in the elderly patients

Reduction in bone density and increased incidence of hip fractures has been reported with both PPI agents and Histamine H-2 receptor antagonists

Monitor for osteoporosis and give adequate intake of calcium and vitamin D

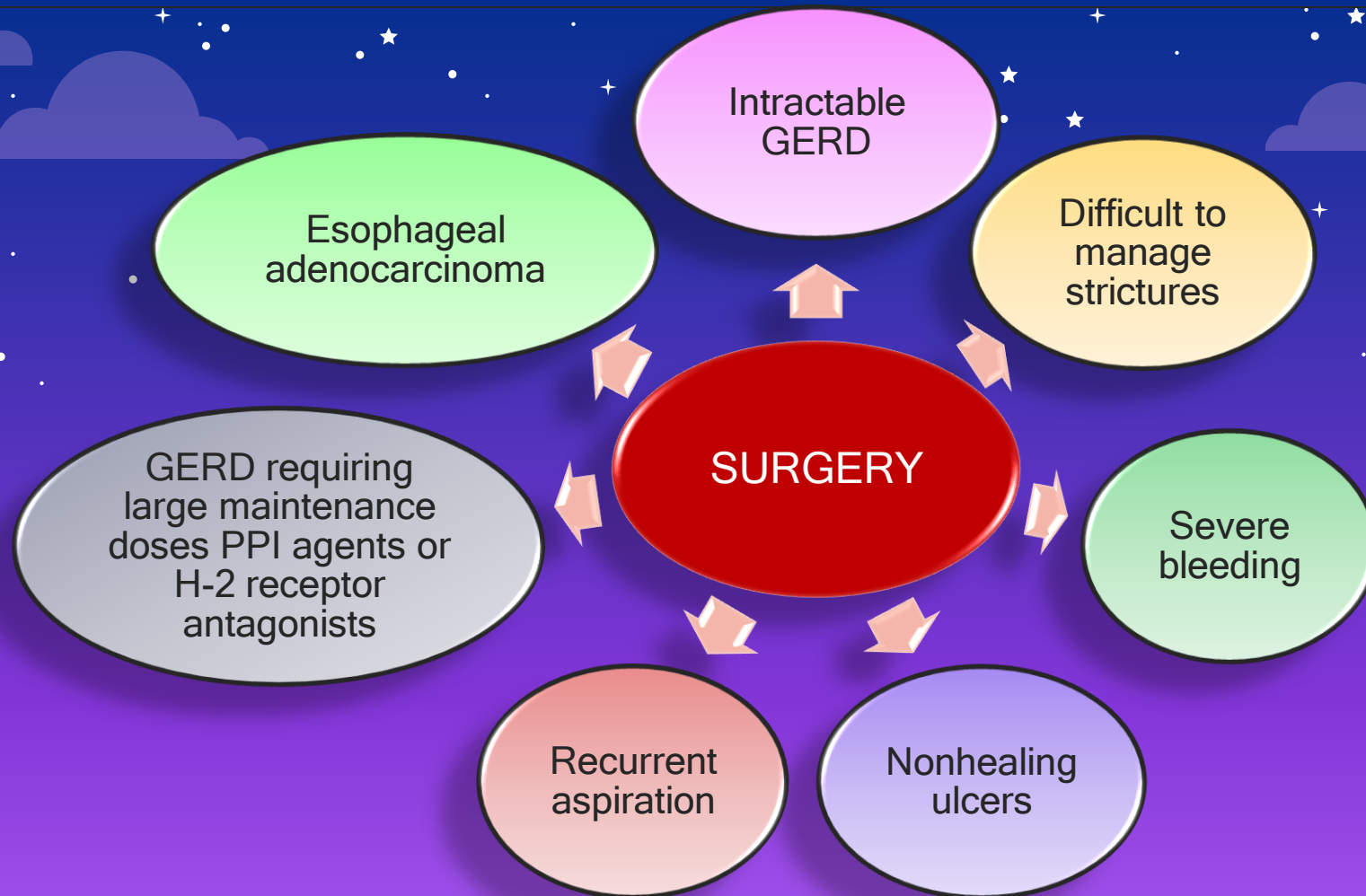
TERAPI

Pembedahan

Untuk mencegah terjadinya refluks

Hanya dilakukan jika terapi lainnya mengalami kegagalan atau pada saat komplikasi GERD sudah terjadi seperti perdarahan, striktur yang berulang atau adanya metaplasia.

Pembedahan antirefluks mengurangi GER dilakukan dengan cara mengurangi hernia hiatal pada abdomen, rekonstruksi hiatus diafragmatikus dan memperkuat LES



Careful patients selection



Complete preoperative evaluation



Upper GI endoscopy



Gastric emptying studies



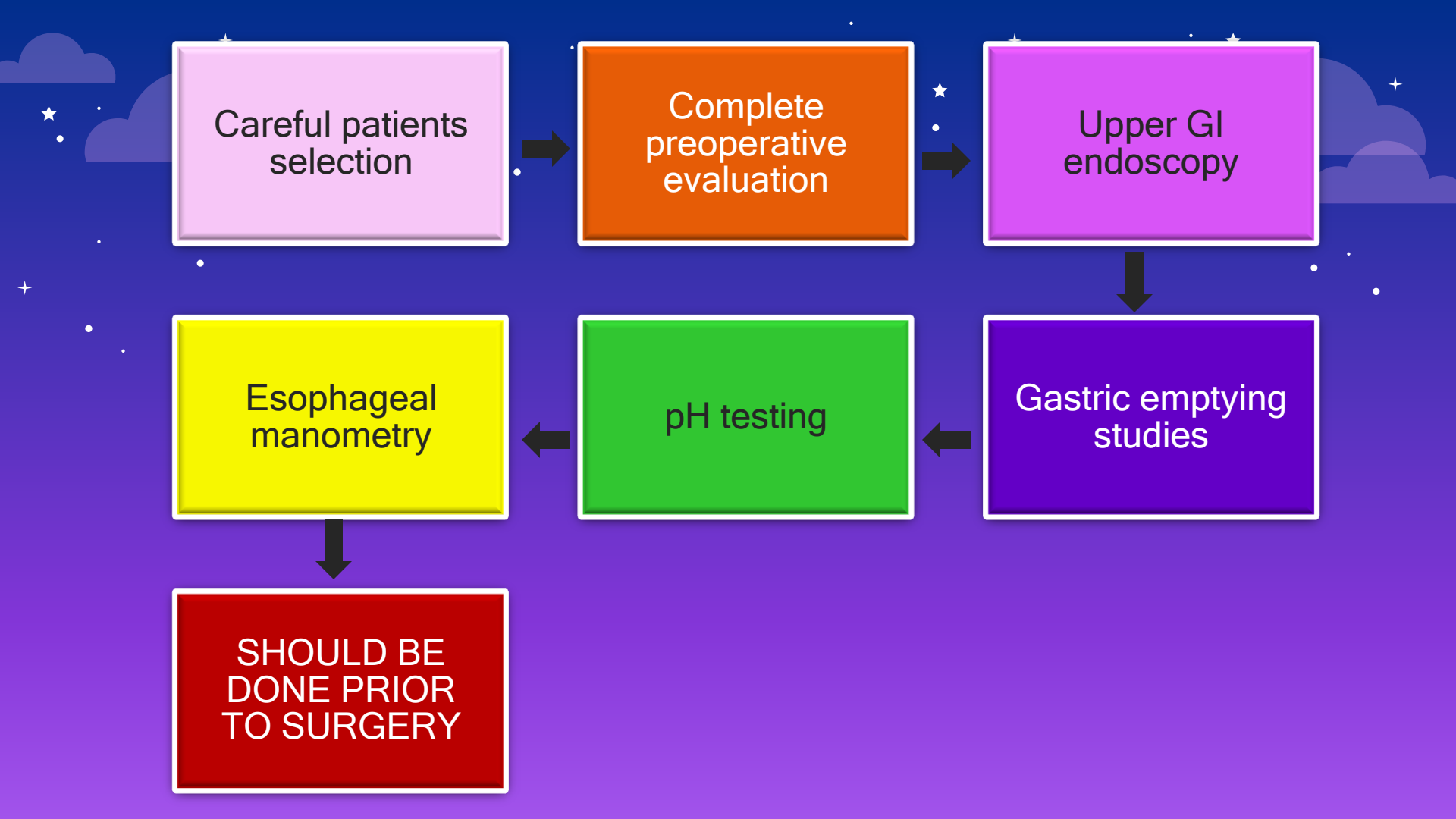
pH testing



Esophageal manometry



SHOULD BE DONE PRIOR TO SURGERY



INVASIVE TREATMENT OF GASTROESOPHAGEAL REFLUX DISEASE ENDOSCOPIC THERAPY

Evolving techniques

Non-biodegradable polymer

Radiofrequency treatment of the gastroesophageal junction

Endoscopic suturing

Implantable gastric electrodes

Botulinum injection of the pylorus

Ablative techniques for Barrett's esophagus

Endoscopic mucosal resection

Electrocautery fulguration

Laser photoablation

Photodynamic therapy

Surgery

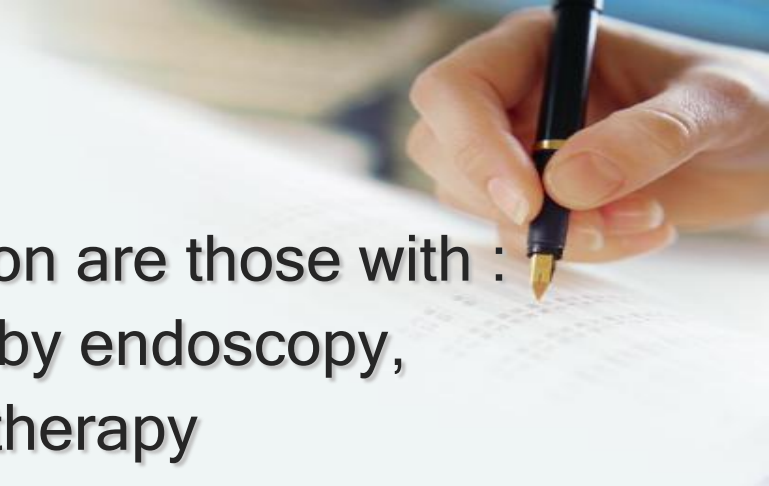
Laparoscopic fundoplication



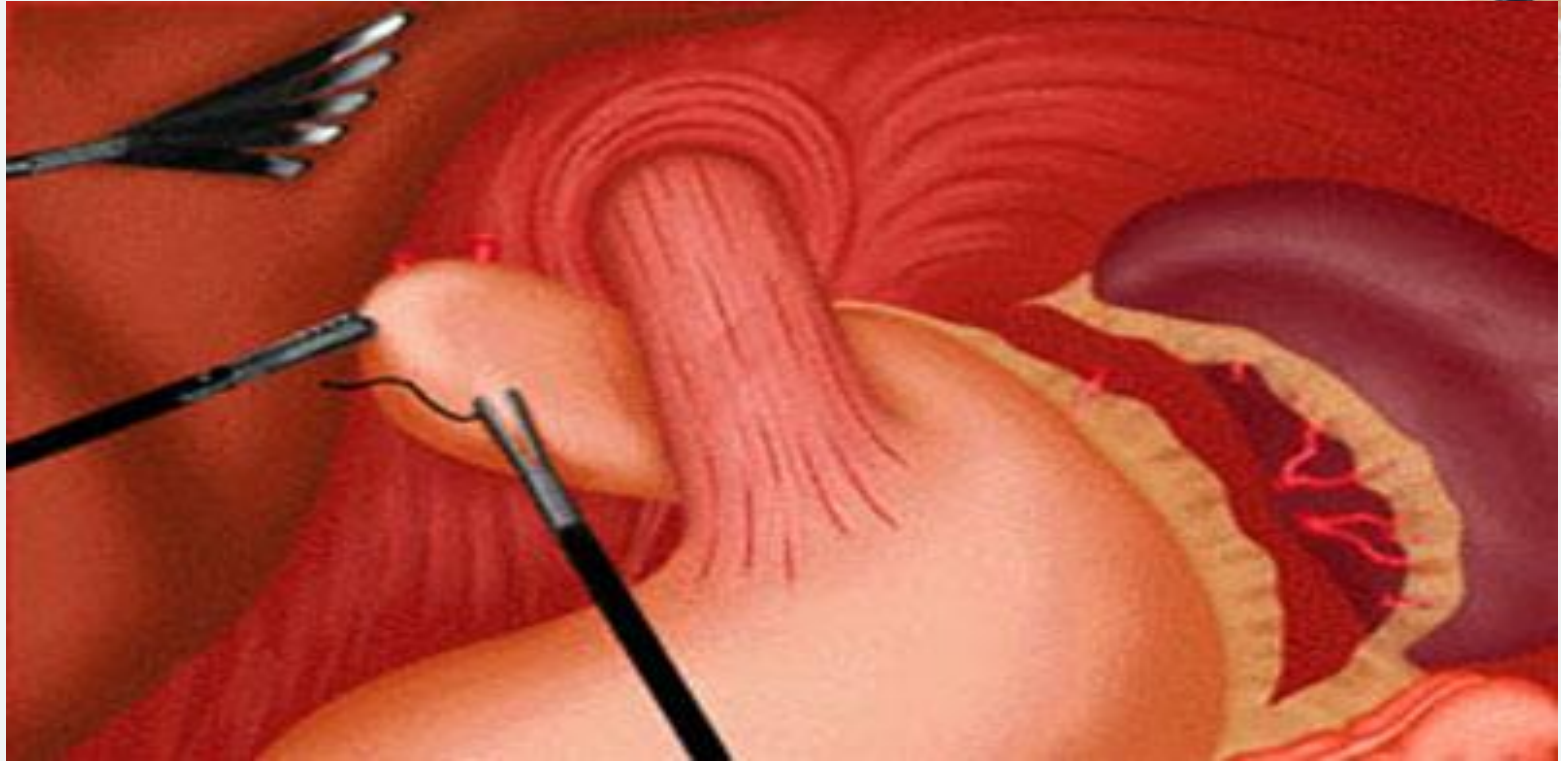
FUNDOPLICATION

The best candidates for fundoflication are those with :

- Esophagitis documented by endoscopy,
- Need for continuous PPI therapy
- Abnormal pH monitoring studies,
- Normal esophageal motility studies,
- Responders to PPI therapy with persistent volume regurgitation



Whats about antireflux surgery ?



KESIMPULAN

GERD is the most common upper GI disorder seen in elderly

The elderly tend to have fewer symptoms with more severe complications that may be life threatening

A more aggressive approach may be warranted in the elderly patients

There are important considerations regarding causation, evaluation and treatment in the older as compared to the younger patients

With appropriate management, GERD and its associated complications can be treated successfully in majority of elderly patients

