

Gastroesophageal reflux

Template:Infobox - disease **Esophageal reflux disease** is a disease caused by pathological gastroesophageal reflux. Its most common complication is damage to the lining of the esophagus (reflux esophagitis).

Gastroesophageal reflux (GER) is the backflow of stomach contents into the esophagus. Episodes of short-term GER occur commonly. It becomes pathological if it causes difficulties and/or inflammatory changes in the mucosa of the esophagus.^[1]

Pathological-anatomical picture

Due to the presence of HCl, the squamous epithelium is desquamated. This induces **increased proliferation of cells in the basement membrane. Immature cells are less resistant** to further action of the refluxate and also to infections. Over time, the cells begin to disappear and erosion and ulceration form. In the case of deeper changes, there is an overlap with cylindrical epithelium - metaplasia, the so-called *Barrett's esophagus* (Barrett's ulcer - it arises in an area with cylindrical epithelium, can bleed, sometimes even perforation).

Classification

1. Endoscopically positive reflux disease esophagus,
2. endoscopically negative reflux disease - clinical symptoms with negative endoscopy but positive biopsy,
3. extraesophageal (larynx, pharynx, bronchi, middle ear).

The cause of reflux disease is a disorder of esophageal motility, especially insufficiency of the lower esophageal sphincter (the mechanism of temporary relaxation of the lower sphincter, its hypotension or disruption of the gastroesophageal junction associated with hiatal hernia).^[2]

Clinical picture

Esophageal symptomatology

- 🚩 Pyrosis ("heartburn"; burning behind the sternum moving from the epigastrium to the manubrium sterna, most often after eating, in a horizontal position or when bending forward),
- 🚩 regurgitation (flow of stomach contents into the esophagus and mouth),
- 🚩 dysphagia (difficult swallowing), 🚩 odynophagia (pain when swallowing behind the sternum) - signs of severe involvement of the esophagus,
- paroxysmal salivation,
- 🚩 globus (feeling of a foreign body in the throat),
- 🚩 chest pain.

Extraesophageal symptomatology

- 🚩 Dry throat, 🚩 earache, 🚩 bad breath,
- 🚩 snoring, laryngitis, repeated lung infections,
- irritation of the vagus (bradycardia, bronchoconstriction).^[2]

Diagnosis

Endoscopic examination (esophagoscopy) with biopsy

The gold standard in diagnostics. The endoscopic finding of reflux esophagitis has 4 grades according to Savary-Miller (grade 4 is metaplasia by cylindrical epithelium (Barrett's esophagus), microscopically, esophagitis is mild, moderate or severe).

24-hour pHmetry of the esophagus

In other words, *esophageal pHmetry* is valid and reliable for determining acid or alkaline reflux, its temporal relationship with symptoms.

Examination description: introduction of a thin probe through the nose into the esophagus; connecting the probe to a device that can record the pH in the esophagus; within 24 hours, the patient performs normal activities, eats normal food, then the probe is removed and the recording is evaluated.^[3]

Esophageal manometry

Provides information on pressure conditions in the lower esophageal sphincter, does not diagnose GER. Suitable to rule out achalasia.

Examination description: a measuring probe is inserted through the nose into the esophagus and then into the area of the lower esophageal sphincter; the course of the act of swallowing is measured when swallowing "empty" and when swallowing 10 ml of water; it is performed on an empty stomach.^[4]

X-ray passage through the esophagus (esophagogram)

It is neither sensitive nor specific for the diagnosis of GER. Useful to rule out anatomical abnormalities of the upper digestive tract (malrotation, annular pancreas, esophageal stenosis/stricture, hiatal hernia, achalasia).

Other examinations carried out: **scintigraphy** with food labeled ^{99m}Tc, perfusion test, diagnostic therapeutic test (14 days of omeprazole administration, disappearance of symptoms confirms the diagnosis).

Differential diagnosis

AP, peptic ulcer, Ca esophagus.

Complications

- Esophageal stenosis - fibrosis in the area of ulceration,
- Barrett's esophagus with metaplasia (sometimes referred to as precancer),
- esophageal ulcer, ^[1]
- adenocarcinoma.

Course of the disease

The course is chronic relapsing (recurrences after the end of treatment).^[2]

Treatment

1. Regimen measures - reduction of body weight, limitation of intra-abdominal pressure increase, smoking ban, dietary restrictions (non-irritating diet excluding alcohol, fatty foods, sweet yeast bread, chocolate, coffee, peppermint; smaller portions; do not eat before going to bed),
2. pharmacotherapy - H₂-blockers (*ranitidine*Template:HVLP), proton pump inhibitors (*omeprazole*Template:HVLP) , prokinetics (*domperidone*Template:HVLP, *itopride*Template:HVLP), antacids,
3. surgical treatment - fundoplication according to Nissen.^[1]

Links

You can watch the osmosis video

Related Articles

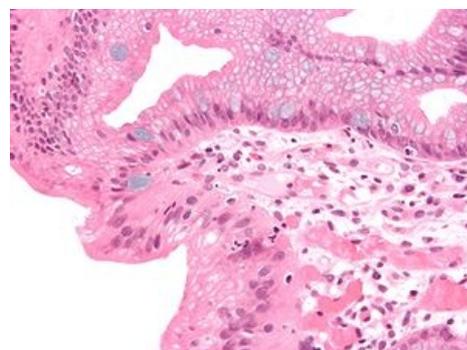
- Esophageal disease
- Gastroesophageal Reflux (Paediatrics)
- Barrett's Esophagus

References

1. KLENER, Pavel, et al. *Vnitřní lékařství*. 3. edition. Praha : Galén, 2006. pp. 558. ISBN 80-7262-430-X.
2. PASTOR, Jan. *Langenbeck's medical web page* [online]. [cit. 03-22-2010]. <<https://www.freewebs.com/langenbeck/GE.doc>>.
3. <http://www.nemcb.cz/cz/page/76/Vysetreni-hodinovou-phmetrii.html?detail=409>
4. <http://www.nemcb.cz/cz/page/76/Manometrie-jicnu.html?detail=408>



Barrett's esophagus - endoscopic image



Barrett's esophagus - microscopic image