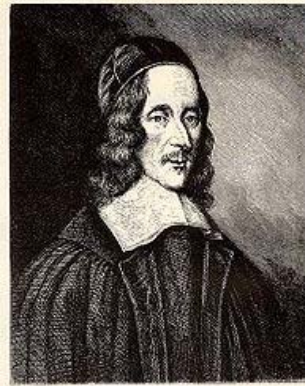


”A good digestion turneth all to health”

George Herbert (1593-1633)



Rikard Svernlöv, Dept of
Gastroenterology

Dyspepsia

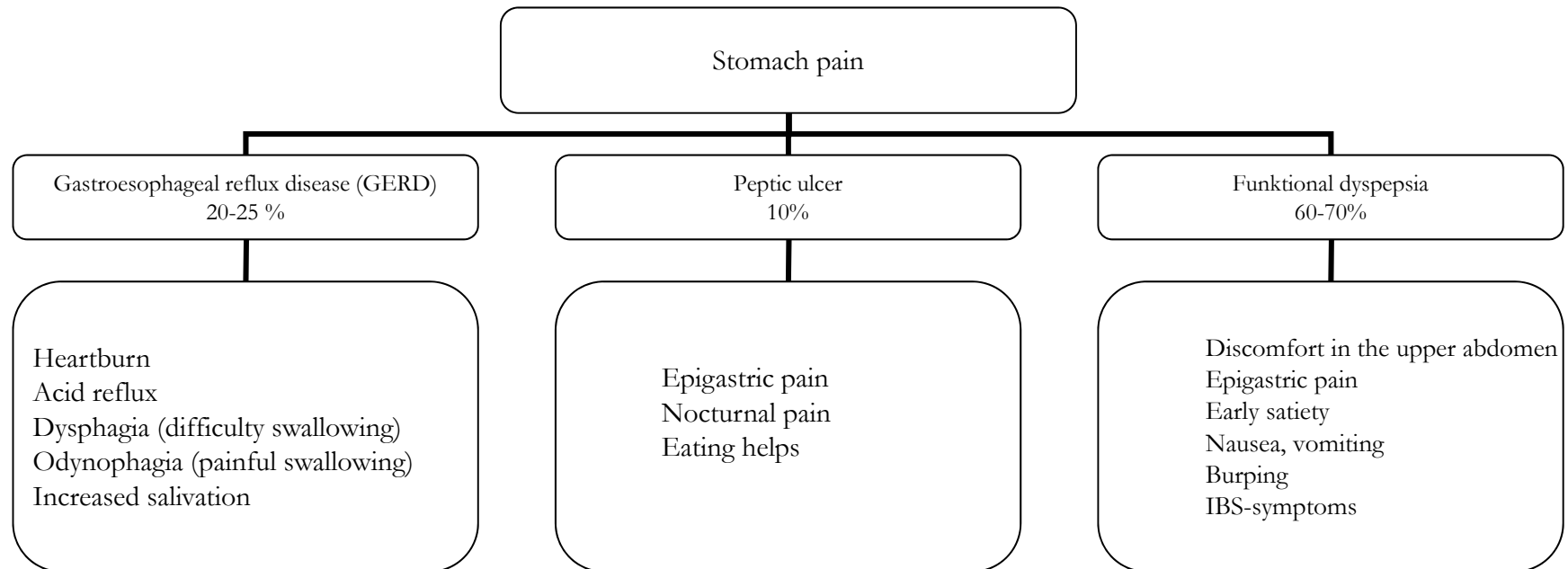
Organic och functional

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Definitions: dyspepsia

- Dyspepsia: derived from Greek, dys- meaning poor and –pepsia digestion
- The vast majority (50-70 %) of patients with dyspepsia do not have organic (structural) disease = functional dyspepsia

Dyspepsia



Epidemiology

- Dyspepsia costs an estimated 4 billion SEK per annum.
- Affects a quarter of the population each year
- A quarter of these patients seek healthcare per annum
- Factors influencing the propensity to seek health care are high age, symptom severity, low income, simultaneous psychiatric disorders and fear of serious disease.

Organic dyspepsia

- Differential diagnoses (excl. GERD & peptic ulcer)
 - Gastric cancer: asymptomatic early
 - Gallstones: medical history!
 - Pancreas: chronic pancreatitis or pancreatic cancer.
 - Intestinal ischemia: postprandial abdominal pain (within 30 minutes) and weight loss. Dependent on volume rather than content.
 - Diabetic gastropathy: nausea and vomiting (1-2 h. postprandially), weight loss, early satiety

Peptic ulcer

- Different explanations through the years:
 - Hereditary?
 - Diet?
 - Coffee?
 - Stress/depression?
 - Smoking?
 - Medicines?
 - Bacteria?

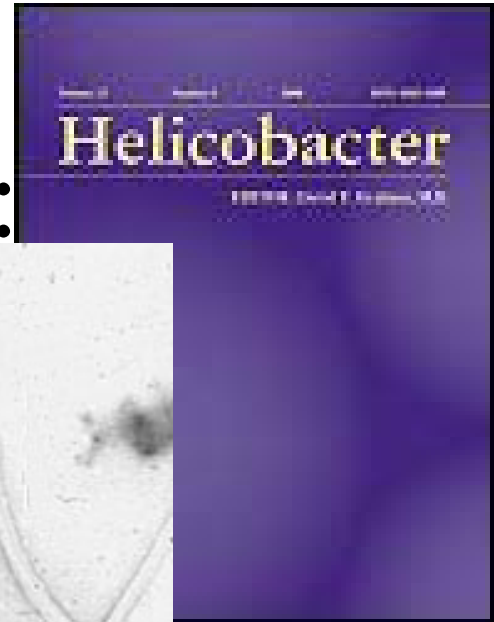
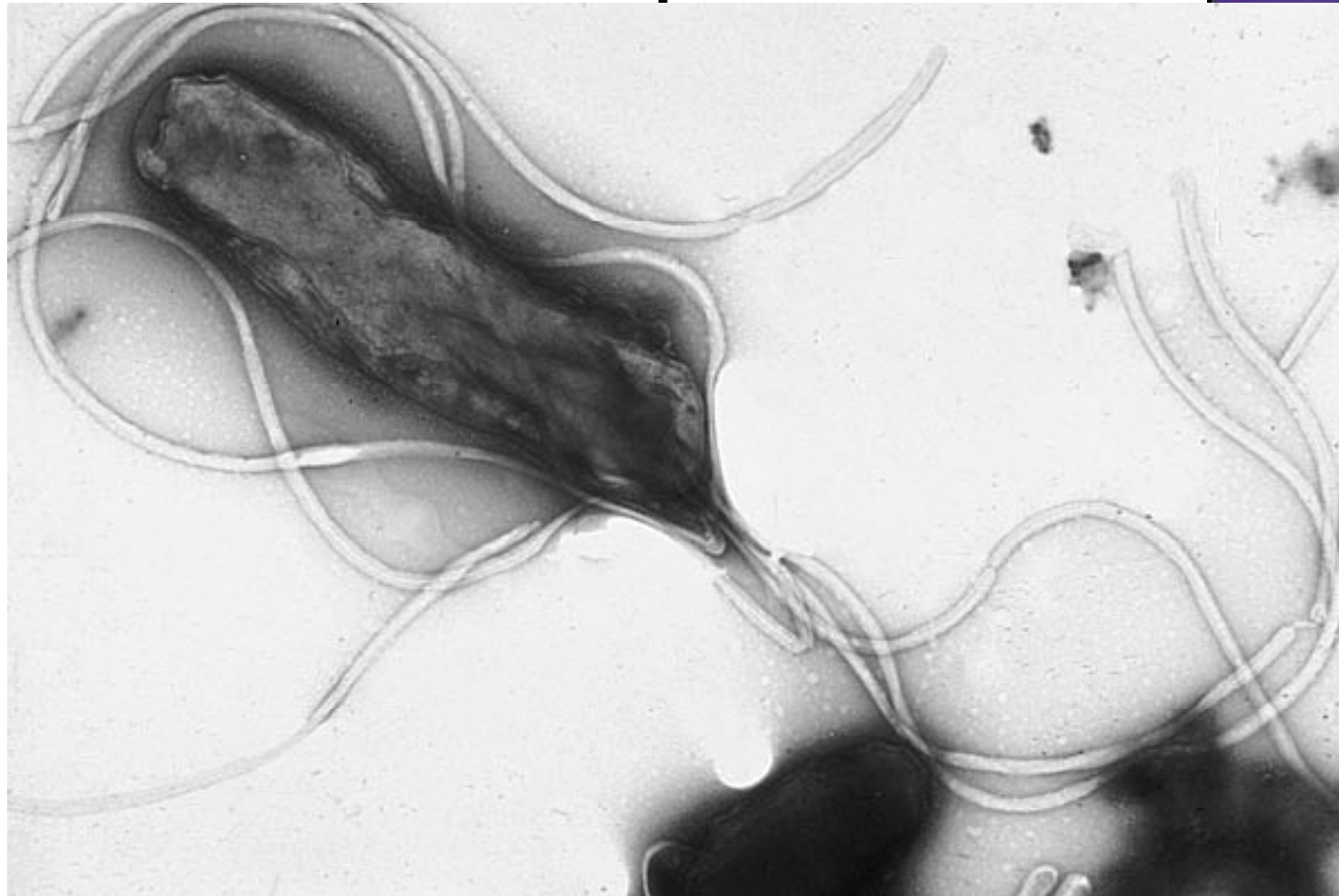
Causes of peptic ulcer

- Helicobacter pylori
- NSAIDs
- Zollinger-Ellison
- Hereditary factors
- Smoking (doubles the risk of ulcer)
- Stress? In patients with duodenal ulcers there was an increase in basal acid secretion.

Peptic ulcer

- Two epidemiological breakthroughs:
 - Helicobacter pylori, H.P.
 - ”Peptic ulcer disease is an infectious disease”
 - NSAIDs
- One diagnostic breakthrough: flexible endoscopy
 - For diagnosing and treating peptic ulcers
- One medical breakthrough: proton pump inhibitor (PPI)
 - From being a surgically treated disease for more than a hundred years, most peptic ulcers today are treated medically.
 - Surgery is reserved for those with perforating ulcers and those where medicines and endoscopical treatment is unable to stop bleeding

Nobel prize winner:



Impact factor:
2,47

Peptic ulcer

- What do we know today?
 - Helicobacter pylori, epidemiology:
 - 50% of the population of the world is infected making it the most widespread infection in the world
 - 20% of the population in Sweden is infected today
 - Infects/colonizes the child (8-10 year old in the western world. Earlier in the third world.). Usually passed on by the mother (or father).

Functional dyspepsia (FD)

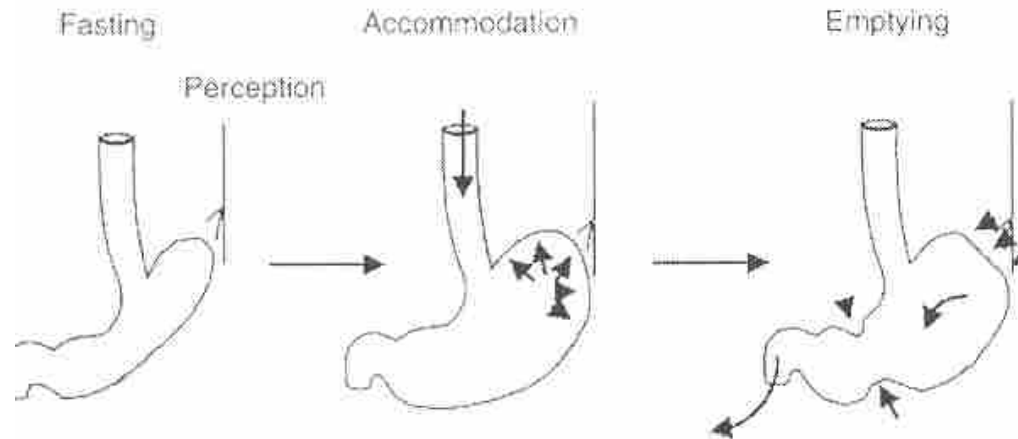
- Organic cause of the disease unknown
- Symptoms are influenced by social and psychological factors
- Smoking, alcohol and some medicines worsen the symptoms.

Definitions: Functional Dyspepsia

- Rome committee 2006:
 - ”the presence of symptoms thought to originate in the gastroduodenal region, in the absence of any organic, systemic, or metabolic disease that is likely to explain the symptoms”.
 - Subgroups
 - Postprandial Distress Syndrome (dysmotility-like)
 - Epigastric Pain Syndrome (peptic ulcer-like)

Functional dyspepsia

Normal gastric function:



Pathophysiological abnormalities in functional dyspepsia:

- *H. pylori* infection
- Hypersensitivity to gastric distention
- ANS/CNS disorder
- Impaired accommodation
- Unsuppressed phasic contractile activity
- Abnormalities of gastric electrical rhythm
- Delayed emptying
- Duodenal lipid or acid hypersensitivity
- Small intestinal dysmotility

Figure 2. Normal fasting and postprandial gastric function; pathophysiological mechanisms putatively involved in functional dyspepsia.

FD potential mechanisms

- Delayed gastric emptying?
- Impaired accommodation of the proximal stomach?
- Antral distension?
- Duodenal dysmotility or hypersensitivity to acid or lipids?

Functional dyspepsia

- Accommodation
 - Impaired accommodation: relaxation of the proximal stomach should occur during a meal. Up to 40% of patients with FD show a impaired accommodation.
 - Impaired accommodation leads to increased intra-gastric pressure and increased signals in mechanoreceptors in the gastric wall.
 - Medicines that increase contractility in the stomach e.g. Erythromycine gives rise to early satiety a key symptom in FD.

Functional dyspepsia

- Emptying
 - Up to 40% of FD patients have delayed gastric emptying. Associated symptoms are nausea, vomiting and epigastric fullness.
 - Duodenal lipid or acid hypersensitivity: infusion of fat or acid into the duodenum will give rise to symptoms in some patients.

Functional dyspepsia

- Treatment:
 - Life-style changes:
 - Less stress
 - Eat slowly, chew properly, etc
 - Eat better food: less fat, 1/3 each of veggies, carbs, and proteins

Functional dyspepsia

- Pharmacological treatment (the optimist)?
 - Antacids or PPI (2 weeks to 3 months) primarily in Epigastric Pain Syndrome (pepticulcer-like FD)
 - Metoclopramide (a pro-kinetic) 10 mg 3 times daily with meals primarily in Postprandial Distress Syndrome (dysmotility-like FD)
 - Spontaneous remissions (on average 50% in 6 years)
 - High placeboeffect (40-50%)

Functional dyspepsia

- Pharmacological treatment (the pessimist = Cochranereview)?
 - (Prokinetics)
 - PPI:s (effect on GERD?) in a minority of patients
 - Simultaneous IBS predicts failure to therapy
 - H. Pylori-eradication? Conflicting results. In the short term (12 months) small benefit.

Functional dyspepsia

Inform the patient!

- Explain possible mechanisms that may cause the symptoms
- Explain that psychological and social factors greatly influence symptoms.
- Not dangerous (“it doesn’t shorten your life”, “it’s not cancer”)
- Often spontaneous remission
- Very common (“I have several patients with the same problem”)
- Advise the patient to avoid some medicines or foods that may aggravate the symptoms
- Let symptoms steer the treatment