

PHARMACOTHERAPY OF ULCER DISEASE

This study material is recommended specifically for practical courses from Pharmacology II for students of general medicine and stomatology. These brief notes could be used to prepare for the lesson and as a base for own notes during courses.

Additional explanations and information are given in single lessons.

Gastroduodenal ulcer disease

Introduction

- definition:
- anatomy of stomach and duodenum and most often ulcer localization:
- physiology of gastric acid production:

Gastroduodenal ulcer disease

Epidemiology and etiopatogenesis

- with focus on aggressive and protective factors of gastroduodenal mucosa (endogenous / exogenous):

Gastroduodenal ulcer disease

a) aggressive factors:

- HCl
- pepsine
- Helicobacter pylori
- drugs

Gastroduodenal ulcer disease

b) protective factors:

- prostaglandines
- mucus
- HCO_3^-
- mucosal perfusion

Gastroduodenal ulcer disease

- clinical picture and diagnostic possibilities:
- regime and dietary precautions:
 - a) suitable food:
 - b) unsuitable food:

PHARMACOTHERAPY OF GASTRODUODENAL ULCER DISEASE

Antacids

- NaHCO_3
- CaCO_3
- magnesium and aluminium salts
- MgO
- Al_2O_3
- AlPO_4
- aluminium-magnesium hydroxide
- magnesium trisilicate

PHARMACOTHERAPY OF GASTRODUODENAL ULCER DISEASE

Acid secretion inhibitors

- proton pump inhibitors

- omeprazole
- pantoprazole
- lansoprazole
- rabeprazole

PHARMACOTHERAPY OF GASTRODUODENAL ULCER DISEASE

Acid secretion inhibitors

H2 receptor antagonists

- (cimetidine)
- ranitidine
- famotidine
- (nizatidine)
- (roxatidine)

PHARMACOTHERAPY OF GASTRODUODENAL ULCER DISEASE

Acid secretion inhibitors

selektivní parasymptolytika
(antagonisté M-receptorů)

např. pirenzepin = obsoletní

PHARMACOTHERAPY OF GASTRODUODENAL ULCER DISEASE

Cytoprotective substances

- sucralfate
- alginic acid

- bismuth compounds
- liquorice derived substances
e.g. carbenoxolone = obsolete

PHARMACOTHERAPY OF GASTRODUODENAL ULCER DISEASE

Cytoprotective secretion ionhbitors

- prostagladins synthetic analogues

- misoprostol
- rioprostil
- enprostil

PHARMACOTHERAPY OF GASTRODUODENAL ULCER DISEASE

Helicobacter pylori eradication

- antimicrobial drugs in combination with secretion inhibitors or bismuth compounds
- amoxiciline
- tetracycline
- claritromycine
- metronidazole

PHARMACOTHERAPY OF GASTRODUODENAL ULCER DISEASE

**Other drugs,
treatment of complications:**

- Prokinetics
- Psychotropics

PHARMACOTHERAPY OF NAUSEA AND VOMITING

ANTIEMETICS

- drugs influencing nausea and vomiting

Introduction

- vomiting regulation
- chemoreceptor trigger zone in area postrema
- vomit-inducing center in the reticular formation of medulla oblongata

ANTIEMETICS

Introduction

- etiopathogenesis of vomiting
- neurotransmitters involved
- emetogens
 - apomorphine
 - emetine

ANTIEMETICS

- **anticholinergics**

- scopolamine

- **antihistamines**

- dimenhydrinate
- emramin theoclate
- moxastin theoclate
- promethazine hydrochloride

ANTIEMETICS

- **D2 antagonists (neuroleptics),
phenothiazines**
 - chlorpromazine
 - (perphenazine, prochlorperazine)
 - thiethylperazine

ANTIEMETICS

- **D2 antagonists (neuroleptics), butyrophenones**
 - domperidone
 - metoclopramide
 - haloperidol
 - (droperidol)

ANTIEMETICS

- **5-HT3 antagonists**
 - ondansetron
 - granisetron
 - palonosetron
 - (tropisetron, dolasetron)

ANTIEMETICS

- **synthetic cannabinoids**
 - nabilone
 - dronabinol

ANTIEMETICS

- prokinetics

- metoclopramide
- domperidone
- itopride, prukalopride, (alizapride, cisapride)
- (trimethobenzamide and other substituted benzamides..)
- hormone motilin