• **Gastric and duodenal ulcers**

• The monitoring of patients with gastric and duodenal ulcers is the responsibility of the family doctor, who will have to collaborate with the gastroenterologist.
• The diagnosis of ulcer should be established following paraclinical investigations , specifying the type of ulcer and the presence or absence of Helicobacter pylori infection.
• In the case of the presence of Hp, treatment should be carried out until it is eradicated in the selected cases.
• In the follow-up and treatment of the patient with ulcer will be taken into account his compliance, his lifestyle, the frequency of recurrences and the appearance of complications.

Gastric ulcer
• Pain located in the epigastric region, with irradiation to the left hypochondrium
• Early postprandial, 30-60 min after meals
• Acidic vomiting and food

Duodenal ulcer
• Pain in the lower epigastric with irradiation to the right hypochondrium
• Painful hunger
• Late symptoms, 2-3 h after meal
• Improves with food or antacids
• Vomiting, pyrosis

Endoscopic examination
• In the gastric ulcer
- required
- biopsy collection from the base of the ulcer crater

• In duodenal ulcer - indications
- Recurrent ulcer
- Diagnosis of Hp infection
- Specifying the cause of a digestive bleeding
- Iron deficiency anemia
- Epigastric tumor palpable or on x-ray

Radiological examination
• When endoscopy cannot be performed
• Patients at high risk for endoscopy:
• Heart disease
• Chronic obstructive pulmonary disease

Diagnosis of Helicobacter pylori infection
• Invasive methods
- Endoscopy
- Quick test with urease
- Histopathological examination
- Culture in special microaerobic environments and determination of antibiotic sensitivity (for treatment resistant cases)

• Non-invasive methods
- Serological tests
- Anti-Hp IgG in the blood - remain at elevated levels 6-18 months after treating the infection
- Urea respiratory test
- Highlighting Hp antigen in the stool (6 months after the end of the treatment - it is used to control the efficiency of the treatment)

Treatment

• Dietary hygiene regime
- meal times,
- avoids the consumption of hot or cold foods,
- Avoid dry spices, alcohol, coffee abuse, concentrated sweets, cakes, sausages and smokes,
- quitting smoking,
- avoiding steroidal and non-steroidal anti-inflammatory drugs;

• Medical treatment of the ulcer:
- negative Hp ulcer
- antisecretory 4-6 weeks,
- positive Hp ulcer
- antihelicobacter treatment 7-14 days, followed by antisecretory treatment for another 3 weeks;
- endoscopically check the healing of the niche and eradication of Hp

• In the case of ulcer resistant to treatment, we look for possible causes:
- smoking,
- anti - inflammatory,
- Hp resistance to antibiotics,
- reduced compliance to treatment,
- hypersecretory states.

• Preventing recurrences
- administration of antisecretory medication on demand (self-administered by the patient when needed),
- intermittent administration during relapses
- continuous treatment as directed by the doctor

• **Irritable bowel syndrome**

• The family doctor will inform the patient about his / her disease, but will continue to monitor it, in order to detect various changes in the symptoms.
• The occurrence of an alarm signal or other changes during the monitoring will require the referral to a specialist and further investigations.

• Hygiene-dietary treatment is essential, together with psychotherapy.
• It should be individualized for each patient according to his digestive tolerance.
• The patient will be advised to exclude from the diet any foods that aggravate the symptoms.

Symptoms

• Symptoms (permanent or recurrent):
- abdominal pain or discomfort, worsened by food, gives in to defecation, never wakes the patient from sleep, urgent feeling of going to the toilet;
- Pain localization is common in the left iliac fossa, but can be localized in other areas.
- the pain occurs frequently in the morning and post-enlargement and can be diminished during the activity;
- changes in the frequency and / or consistency of the seat
- more than three chairs per day;
- less than three seats per week;
- alteration of the seat shape,
- feeling of incomplete defecation.

• Psychic symptoms (anxiety, depression) are common.
• Extradigestive symptoms: headache, frequent urination, unpleasant taste.

• Depending on the predominance of symptoms, there are 3 clinical forms of irritable bowel:
- with the predominance of constipation,
- with the prevalence of diarrhea,
- with the predominance of distension and abdominal pain.

Alarms that require investigations:
• rectal bleeding,
• recent onset of symptomatology,
• transit changes that persist over 6 months,
• age over 50,
• affecting the general state,
• weight loss,
• fever,
• history of intestinal polyposis, colon neoplasm, family history of colon or ovarian cancer.

Diagnostic

• exclusion diagnosis (first of all neoplasm, ulcerative hemorrhagic rectocolitis).

Differential diagnosis
• colon neoplasm
• inflammatory colonic diseases
• diverticulosis of the colon
• Lactase deficiency

• Patients with persistent symptomatology for more than 6 months will be evaluated
- CBC
- ESR,
- CRP,
- testing for antibodies to celiac disease,
- biochemistry profile,
- liver tests,
- summary of urine,
- thyroid hormones

• If alarms appear:
- ultrasound,
- colonoscopy or irigography, sigmoidoscopy,
- the co-parasitological examination,
- blood test;
- investigation of malabsorption syndrome
- detection of lactase intolerance,

• Fecal markers (calprotectin, lactoferin) are used for differential diagnosis with inflammatory bowel disease
• Tissue and anti-gliadin anti-transglutaminase antibodies aid in the diagnosis of celiac disease (confirmed by intestinal mucosa biopsy)

Treatment

1. Hygiene-dietary treatment.
• In the form of diarrhea avoid milk and dairy products, concentrated sweets, foods high in fiber foods, foods high in fat, foods that produce gas (beans, cabbage, broccoli), spicy foods. Avoid artificial sweeteners based on sorbitol (candies and chewing gum without sugar, juices without sugar).

• In the form with constipation it is recommended to consume food fiber, black bread, graham, wheat bran; increased fluid consumption.

• Physical activity (walking, cycling, swimming) and other leisure activities are encouraged.

• It is proposed to keep a diary in which the daily menus and symptoms appear, the meals should be taken in a quiet and relaxing environment, to avoid long breaks between meals.

• The patient will be advised to consume liquids (water), avoid caffeine drinks (coffee, black tea, cola, chocolate) alcohol, sour drinks, smoking.

• Sometimes it is necessary to reduce the consumption of foods high in fiber (bran) and processed starch, or even limit the consumption of fresh fruits;

2. Combating stress and mental disorders
• education of the patient regarding the functional and non-dangerous character of his condition.
• antidepressants
• psychotherapy

3. Medication treatment
• It is reserved for the severe forms of irritable bowel for the control of the symptoms that cause the deterioration of the daily activity and in which the hygienic-dietary treatment and the psychotherapy did not give results.

• spasmolytics (papaverine, drotaverine)
• mebeverine 300 mg / day (colospasmin, duspatalin)
• trimebutinum 300 mg / day (debridat, ibutine),

• Control of bloating: prokinetic - metoclopramide, domperidonum (motilium).
• Combating constipation: osmotic laxatives, avoiding laxatives, have lactulose composition.
• Diarrhea control: loperamide (imodium) 2 mg x 3 / day, diosmectitis.

• Probiotics (Lactobacillus, Bifidobacteria) may be an adjuvant alternative to irritable bowel

• Gastro-oesophageal reflux disease

The family doctor must
• recognizes GERD,
• monitor,
• send the patient to the gastroenterologist for
- investigations in case of alarm symptoms,
- in the case of forms that do not respond to PPI therapy
- in the case of frequent relapses.

symptoms:
• pyrosis,
• regurgitation,
• sensations of retrosternal or epigastric burn,
• feeling of early satiety.

Frequently the symptoms appear during the night and cause disturbances of sleep.

Factors favoring GERD
• obesity
• pregnancy
• oral contraceptives
• hiatal hernia
• consumption of fatty foods
• fizzy drinks
• caffeine
• alcohol
• Smoked
• drugs that lower the pressure in the cardia (anticholinergics, tricyclic antidepressants, antihistamines, calcium channel blockers, progesterone, nitrates, theophylline)
• consumption of NSAIDs
• bisphosphonates
• Helicobacter Pylori infection

GerdQ questionnaire for assessment of GERD

• How often do you get a burning sensation in the chest (pyrosis)?
• How often do you feel gastric contents in the oral cavity (regurgitation)?
• How often do you suffer from epigastric pain?
• How often do you accuse nausea?
• How often does your symptomology affect your sleep?
• How often do you use antacid medication?

• Points are awarded depending on the frequency of symptoms (0 days; 1 day; 2-3 days; 4-7 days / week)
• Score 0-7: Low probability of GERD
• Score above 8: GERD with symptoms and / or discomfort

• If the symptoms are characteristic for GERD, in the first stage empirical treatment with PPI (one week) associated with the clinical follow-up of the patient through anamnesis and questionnaires can be done.
• Improvement of symptoms after one week is a predictor of good disease progression.

Alarm signs that require superior digestive endoscopy
• The presence of atypical and isolated symptoms
• Difficulty and / or swallowing pain
• Weight loss
• Anemia
• Upper digestive bleeding
• Resistance to PPI / relapse to discontinuation of treatment
• Complications (Barrett's esophagitis, pyloric stenosis)
• Age over 50 years
• Long evolution over 5 years
• Family history of upper digestive tract neoplasms

Treatment
• lifestyle changing
• antisecretory medication,
• Prokinetics,
• removal of causes if possible (eradication of HP infection)

Lifestyle change
• Stopping smoking
• Avoid copious meals, avoid the post-enlargement posture, avoid large meals in the evening, before bedtime
• Avoid caffeine, alcohol, carbonated drinks, spices, fatty foods
• Sleeping in an elevated position
• Weight reduction
• Avoid medications that may increase reflux or cause injury to the esophageal mucosa

Proton pump inhibitors
• omeprazole, lansoprazole, pantoprazole, esomeprazole
• are the drugs of choice in GERD
• is used as a therapeutic test in the first week, afterwards as therapy until the healing of the esophagitis lesions and the disappearance of the symptoms.
• Helicobacter Pylori therapy: triple therapy (PPI + amoxicillin 2 x 1,000 mg / day + clarithromycin 2 x 500 mg / day) 10-14 days.

RH2 antagonists (ranitidine, nizatidine, famotidine)
• indicated only in mild forms of disease.

Antacids
• only short periods, to reduce the symptomatology.
• does not constitute the election medication in GERD

• Biliary lithiasis

• Biliary lithiasis is most commonly asymptomatic, being discovered by chance in an ultrasound examination.
• It becomes manifest when a calculus migrates into the bile ducts and causes obstruction and inflammation, symptoms ranging from biliary colic (56%) to cholecystitis (36%), cholangitis, pancreatitis, which can endanger life.

• In the case of diabetics and young people with small calculations, surgical treatment is indicated even in the absence of symptoms

Abdominal ultrasound
• it is the main diagnostic investigation, having a sensitivity of 95-98% in bladder lithiasis and 25-63% in choledochian lithiasis;
• observes hyperecogenic gallstones, with posterior shadow cone,
• thickening of the wall of the gallbladder,
• dilation of the bile ducts
• very small calculations may not show ultrasound

Complications
• infectious (acute cholecystitis, localized / generalized peritonitis by perforating the bladder wall),
• biliobiliary or bilodigestive fistulas, external fistulas,
• biliary ileus,
• chronic cholecystitis,
• gall bladder cancer,
• mechanical complications:
- migration of a calculation - vesicular hydrops (including the calculation in the infundibulocystic area),
- Choledochian lithiasis,
- intrahepatic lithiasis,
- acute biliary pancreatitis

Treatment

1. Primary prophylaxis
• normal or low calorie diet,
• low consumption of fats and refined carbohydrates;
• influence of the factors that predispose to biliary lithiasis

2. Biliary colic:
• liquid diet (tea, soups);
• antispastic (papaverine, scobutil);
• painkillers (paracetamol, algocalmin, piafen, opioids);
• antiemetics (metoclopramide).

• In case of suspected cholecystitis, treatment with broad spectrum antibiotics is added;

3. In patients with symptomatic biliary lithiasis
• recomandation: open laparoscopic or surgical cholecystectomy.
• contraindications of cholecystectomy:
- recent myocardial infarction (under 3 months),
- organ failure,
- liver cirrhosis,
- concomitant neoplasm.
- erderly and obesity are relative contraindications

4. Calculation dissolution therapy
• for cholesterol calculations, radiotransparent, with a diameter below 5 mm, which floats in a functional gall bladder, when the patients are symptomatic, but present a major surgical risk or refuse the intervention.
• ursodezoxycholic acid (ursofalk) 250 mg x 3 / day for 9-18 months

5. Extracorporeal biliary lithotripsy:
• for solitary calculations with dimensions below 30 mm or 2-4 calculations whose total dimensions are below 30 mm;
• conditions:

- functional gall bladder,
- permeable cystic canal,
• absence of acute complications

Acute cholecystitis
a) Lithic form (90%)
• gallstones included in the cystic canal, which determines the biliary stasis;
b) Non-lytic form (10%)
• congenital anatomical obstacles (malformations) or acquired (neoplasms) of the gallstones or dysfunctions of the cholecyst,
• abdominal surgery,
• burns,
• trauma,
• serious illness,
• infectious diseases,
• extended parenteral nutrition

Clinical
• pain in the right hypochondriac and / or epigastric, acutely installed, usually after a high fat meal, which lasts 12-48 hours and does not give up on symptomatic medication,
• nausea, vomiting, which can improve the symptoms,
• fever 39-40 ° C,
• tachycardia,
• anxiety,
• icter
• sensitivity to palpation and diffuse setting in the right hypochondrium,
• muscular defense, contracture.

Differential diagnosis
• acute pancreatitis
• perforated gastroduodenal ulcer
• Highly located acute appendicitis
• hepatic abscess
• Postero-inferior acute myocardial infarction
• pleuropulmonary disorders
• kidney disease

Treatment
• Acute cholecystitis is a medical-surgical emergency,
- early cholecystectomy within the first 24-48 hours (by election)
- late cholecystectomy at 4-8 weeks (in the elderly with severe concomitant conditions or who refuse the intervention).

Pharmaceutical treatment
• broad spectrum parenteral antibiotics: ampicillin, clindamycin, cephalosporins, quinolones, metronidazole
• symptomatic treatment with antispastic, anti-allergic (avoiding opiates), anti-emetic.

Complications (25-35%):
1. bladder hydrops: the gall bladder becomes loose and palpable;
2. piocolecist - overinfection of the biliary content;
3. gallbladder gangrene;
4. perforation of the cholecyst localized (pericolecistic abscess) or free (generalized peritonitis, with high risk of death);
5. bilodigestive fistula (in the duodenum or colon);
6. biliary ileus (blocking of the ileocecal valve by a gallstone greater than 2.5 cm);
7. cholangitis;
8. chronic cholecystitis.

Chronic cholecystitis
• Treatment
• dietary hygiene regime,
• anti-spastic, anti-algal,
• cholecystectomy in patients with symptomatic biliary lithiasis

• **Chronic hepatitis**

Chronic hepatitis:
1. Autoimmune hepatitis;
2. Post-infectious hepatitis:
• chronic hepatitis with hepatic B virus;
• chronic hepatitis with hepatic D virus;
• chronic hepatitis with hepatic C virus;
• chronic drug hepatitis;
• chronic hepatitis not classifiable as autoimmune or viral;
3. Chronic biliary liver disease:
• primitive biliary cirrhosis
• primitive sclerosing cholangitis;
4. Chronic liver disease with genetic metabolic etiology:
• Wilson's disease
• congenital alpha-1 antitrypsin deficiency

Diagnostic criteria in chronic hepatitis
• positive anamnesis for viral exposure;
• variable clinical manifestations
- symptomatic,
- asthenia syndrome,
- dyspeptic syndrome,
- hepatosplenomegalic syndrome,
- jaundice,
- bleeding syndrome,
- systemic manifestations

• biochemical manifestations
- increased aminotransferases
- alkaline phosphatases,
- hypoalbuminemia,
- coagulation tests,
- GT range
• positive serology
- for HBV (Ag HBs, AgHbe, Ac HBc, B virus DNA),
- for HCV (HCV needle, RNA virus C),
- for virus D (Ag HBs + HVD);
• variable histological changes (portal or periportal inflammation, piece-meal necrosis, bridging-necrosis, spoty necrosis, hepatocytes in matte glass - graund glass hepatocytes);

• imaging events (ultrasound, CT, MRI, scintigraphy, endoscopy, etc.)
• Virological studies (for antiviral therapy).
• evaluation of liver fibrosis (the main factor correlated with prognosis and response to antiviral therapy) - Fibroscan

Objective examination:
• hepatomegaly
• splenomegaly
• erythema palmo-plantar, facial;
• icter
• Hemorrhagic syndrome
• purple, bruises, blood, mucous membranes
• systemic manifestations - vasculitis, arthritis, nephritis

Paraclinically

• Transaminases: they are indicators of hepatocellular injury;
- 3-4 fold increase (> 100 µl) means chronic hepatitis
- GPT / GOT ratio (Ritis coefficient)
• ratio> 1.33- signs of evolution.
• ratio <1.33- sign of stability in evolution.
• Reverse ratio - chronic alcoholic hepatitis.

• Serum bilirubin
- can be increased by the indirect component to 3-10 mg% in exacerbation forms

• Low serum albumin
- expresses an exacerbation of hepatic impairment

• Prothrombin activity
- falls in exacerbations

• Electrophoresis:
• gamaglobulins
- moderately elevated in active forms of chronic hepatitis B virus
- significantly increased in chronic autoimmune hepatitis

• Serum supplement
- is low in chronic autoimmune hepatitis.

• Serum cryoglobulins.
- They are present in chronic hepatitis with HCV and autoimmune chronic hepatitis

• Autoantibodies.
- They are characteristic in autoimmune chronic hepatitis but can also be present in HC with HBV and HCV

Markers of HBV infection and their significance

• AgHBs:
- HDV carrier is not always infectious

• HGH:
- HBV in replicative state - infectivity

• AgHBc in tissue:
- HBV in replicative state - infectivity

• DNA polymerase:
- HBV in replicative state - infectivity

• Anti-HBc needle type lgM:
- Active infection or reinfection.
- Risk of chronic infection with HBV

• Ac anti HBc type lgG:
- Highly expresses the persistence of the infection
- In small title associated with anti-HBs Ac expresses the installation of immunity (healing)

• Anti-HBs Ac:
- Immunity (healing)

• Anti-Hbe needle:
- Disappearance of infectivity

Serological markers for HCV

• Test screening
- Detecting anti-HCV Ac

• Confirmation test
- detection of HCV RNA (immune gap, immunodepressed)

• Genotyping
- determination of genotype 1 a, b, 2 a, b, etc. (useful for assessing prognosis and response to treatment).
- Type 1b is the most aggressive HCV.

Serological markers for HDV

• Ag HBs present
• Ag HD present
• Anti-HD Ac - total
• Anti-HD needle type Ig M- acute infection with HDV
• Anti-HD needle type Ig G- chronic HDV infection
• RNA-HDV detection

Histological aspects
• It is the most valuable criterion for the assessment of the chronicity and the clinical form of CH and is indispensable for the initiation of the treatment with interferon

• HAI (Histologycal Activity Index):
a. necrosis from the periphery of the lobe - piece-meal necrosis, 0-4 pct;
b. Confluent necrosis - bridging necrosis: 0-6 pct .;
c. lithic necrosis- spoty necrosis: 0-4 pct .;
d. portal inflammation: 0-4 pct.

• The morphological diagnosis should include elements of necro-inflammation (grading) and fibrosis (staging).

Appreciation of necro-inflammation by Ishak score
• HAI 1-3: Minimum chronic hepatitis
• HAI 4-8: Chronic hepatitis with mild activity
• HAI 9-12: Moderate CH
• HAI 13-18: Severe CH

Staging of fibrosis in chronic hepatitis
• 0 - without fibrosis
• 1 - portal fibrosis
• 2 - fibrosis periportal fibrosis
• 3 - septal fibrosis
• 4 - cirrhosis

The components of the Knodell score (maximum total score 22)

• Periportal and bridge necrosis: 0-10
• Intralobular degenerative changes and focal necrosis: 0-4
• Portal inflammation: 0-4
• Fibrosis: 0-4

Chronic viral hepatitis B

• 30% risk of chronicization,
• evolution towards cirrhosis 10%, half of patients developing hepatocarcinoma

Extrahepatic clinical manifestations:
• motor-sensitive neuropathy,
• myalgia,
• arthralgia,
• Sjogren's syndrome,
• glomerulonephritis,
• Raynaud's syndrome,
• psoriasis
• itching

4 phases:

a) Immunotolerance phase:
• Ag HBs and Ag HBe positive;
• High HBV DNA (1 mil-10 thousand copies / ml - reflects active replication);
• Normal ALT;
• liver biopsy - minimal injuries;

b) Immune clearance phase:
• Ag HBs positive,
• Ag Hbe positive or negative (seroconversion for Ag Hbe represents a partial remission indicator);
• HBV DNA> 100,000 copies / ml;
• Elevated ALT (reflects an efficient immune response mediated by cytotoxic T cells);
• PHB- with typical histological lesions;

c) Low replication phase:
• Ag HBs positive or negative;
• The appearance of Ac anti Ag HBs;
• Ag Hbe negative; HBV DNA <100,000 copies / ml;
• Normal ALT;

d) Reactivation phase:
• intermittent growth of HBV DNA> 100,000 copies / ml;
• High ALT;
• AgHBs positive;
• Pre-core or core mutations may occur - leading to negative HBe Ag.

Classification according to the presence or absence of Ag HBe:

a) Chronic hepatitis B with positive HBe Ag
• high viral replication with HBV DNA> 1 million -10 million

b) Chronic hepatitis B with negative HBe Ag
• Low levels of replication with HBV DNA <100,000 copies / ml
• Normal or moderately intermittently elevated ALT

Risk of developing hepatocellular carcinoma
• presence of Ag HBe: 6 times higher risk
• HBV DNA> 700,000 copies / ml: 4 times higher risk

Chronic viral hepatitis B Ag HBe positive - Criteria for Inclusion in Treatment:

• biochemistry:
- ALT <: 2xN
• virological:
- AgHBs positive;
- positive HBBe and negative HBe;
- negative anti-HVD lgG;
- HBV DNA ≥ 20,000 Ul / ml (for chronic HBV with HBV-positive HBV)
- DNA - HBV ≥ 2,000 Ul / ml (for chronic HBV with HBV-negative HBV)
• assessment of fibrosis and necro-inflammatory activity

Therapeutic indications according to age:
• <50 years: entecavir, adefovir or pegylated interferon (pegylated interferon is recommended in young patients with moderate ALT and viremia)
• 50-65 years: lamivudine or pegylated interferon
• > 65 years: lamivudine

Excluded from interferon therapy are patients with:
- Neurological diseases
- Mental illness (dementia, etc.)
- Decompensated diabetes
- Autoimmune diseases
- Coronary ischemic disease or severe uncontrolled heart failure
- Severe, uncontrolled respiratory conditions
- Hb <11 g / dl
- Number of leukocytes <5000 / mm3
- PMN number <1500 / mm3

Evaluation of response to entecavir, adefovir or lamivudine treatment is initially done at 6 months of therapy by determining:
- ALT
- HBV DNA

Later they will be checked periodically, every 6 months:
• ALT;
• Seroconversion on HBs;
• Seroconversion on HBe;
• HBV DNA
• depending on the biochemical and virological response, the treatment will stop or continue for up to 5 years
- The emergence of anti-HBs Ac requires stopping therapy
- The increase of transaminases during treatment requires viremia, and the increase of viremia under treatment is considered to be resistance and lack of therapeutic response.

Response types:
Complete:
• disappearance of HBV DNA and P-DNA;
• disappearance of Ag HBe and / or seroconversion "e";
• disappearance of Ag HBs and / or seroconversion "s";
• normalization of ALT;
• histological improvement

b. Partly:
• disappearance of DNA-HBV and DNA-P;
• disappearance of Ag HBe and / or seroconversion "e";
• persistent Ag HBs;
• normalization of ALT;
• possible histological improvement

c. Lack of response:
• the absence of any biochemical / serological / histological changes

d. Sustained answer (complete / partial)
• when the beneficial results are maintained> 6 months after the discontinuation of the treatment

e. Temporary response
• it is maintained <6 months after discontinuation of treatment

f. Reactivation:
• increasing ALT,
• the reappearance of Ag HBe and HBV DNA after a negative growth

Favorable prognostic factors:
• recent viral infection;
• infection contracted vertically in adulthood;
• the elderly population;
• increased level of ALT;
• more aggressive histology;

• low level of HBV DNA;
• absence of co-infection with HDV or HIV;
• heterosexual behavior.

Prognostic factors for non-response:
• infection contracted at birth or in childhood;
• long-term infection;
• histology with minor lesions;
• increased level of HBV DNA;
• male;
• homosexuality;
• HIV or HDV co-infection.

Prevention of transmission of infection
• changing the lifestyle
• immunoprophylaxis active by vaccination in Ag HBs negative persons, with Ac anti HBs levels below 10UI / l
• passive immunoprophylaxis with immunoglobulin
- newborn with mother Ag HBs +
- exposure through sexual contact
- transplant

• tips for positive AgHBs
- to use methods of protection to avoid sexual transmission to unimmunized partners or who do not have documentation of vaccination or immunization;
- covering the wounds and skin lesions to prevent the transmission of the infection through the blood,
- not donate blood or organs;
- to strictly use household items at risk of infection such as: manicure kit, pedicure, toothbrush, shaving devices, epilation, equipment for injecting treatments - which may contain traces of blood.
- limiting the consumption of alcohol;
- use of some hepato-protective drugs including herbal medicines;
- vaccination against hepatitis A

Preventing the transmission of AgHBs infection in newborn babies from AgHBs positive mothers
• In addition to the mandatory vaccination against hepatitis B (first dose in the first 24 hours postnatal) and immunoglobulin anti-hepatitis B during the first 12 hours postnatal, it will be administered.
• breastfeeding is encouraged in mothers with viral hepatitis B, given that the transmission of the virus through breast milk has not been reported; it is recommended to protect the nipples against cracks and cracks

Chronic hepatitis C virus

• Extrahepatic manifestations in CHV infection
- Autoimmune thyroiditis
- B-cell non-Hodgkin's lymphoma
- Diabetes
- Mixed cryoglobulinemia
- Monoclonal gamapathy
- Late skin porphyria
- Chronic arthritis
- Idiopathic pulmonary fibrosis
- Non-cryoglobulinemic nephropathies
- Sicca syndrome
- Thyroid cancer
- Renal cell carcinoma
- Vitiligo
- Atherosclerosis

Evolution
• most infections develop subclinically;
• 80% chronicling;
• chronic infection
- evolves predominantly asymptomatic;
- the progression to chronic hepatitis (at least periportal) is slow> 10 years,
- evolution towards cirrhosis> 15 years is the rule;
- cirrhosis occurs in 15-38% of those with chronic infection

Criteria for inclusion in treatment (naive patients):
• Biochemistry:
- Normal or elevated ALT
• Virusologic:
- Detected RNA-CHV
• Histological:
- Fibroscan liver biopsy score> 1
• Age
- ≤ 65 years
-> 65 years will evaluate the therapeutic risk according to comorbidities (contraindications of interferon therapy)

Treatment
• pegylated interferon + ribavirin

Evaluation of response to treatment

• RVR (Rapid Virology Response)
- CHV RNA negative after 4 weeks of therapy

• EVR (Early Virology Response / Early Viral Response)
- negative or decreased ≥2 log10 of CHV RNA after 12 weeks of therapy

• Non Response
- decrease of CHV RNA by <2 log10 at 12 weeks of treatment

• Slow Response
- CHV RNA negative at 24 weeks of treatment

• EOT (End of Treatment Response)
- RNA - CHV not detectable at the end of treatment

• SVR (Sustained Virology Response)
- RNA - CHV undetectable at 24 weeks after completion of therapy

• Breakthrough
- CHV RNA detectable during treatment, after obtaining EVR

• Relapse
- RNA-CHV positivity after obtaining the viral response at the end of the treatment

The initial response to therapy is appreciated:
• biochemical: normal ALT
• Virological: decrease of CHV RNA by ≥ 2 log or below detection limit at 4, 12 or 24 weeks

CHV RNA is determined by:
• at the beginning of therapy;
• at 4 weeks of therapy;
• at 12 weeks of therapy if CHV RNA was detectable at 4 weeks;
• at 24 weeks of therapy if no negativity was obtained but a ≥ 2 log10 decrease of CHV RNA was obtained after 12 weeks of therapy;
• at the end of therapy (48 weeks of therapy from the time of CHV RNA negation);
• 24 weeks after completion of therapy.

Duration of treatment
• 24-72 weeks depending on genotype, baseline values and dynamics of CHV RNA reduction

Monitoring of treatment

• At the beginning of the treatment:
- complete liver balance (including histological)
- exclusion of other liver or extrahepatic diseases.

• During treatment:
- monthly performance - ALT, GT range; CBC

- CHV RNA (PCR) qualitatively expressed as (+) or (-) resumed after 3 months by a preferential quantitative test;
- TSH will be dosed at 3-month intervals.

• In the post-therapeutic period:
- the balances will be made at 2 months in the first semester;
- thereafter every 3 months until the end of a year;
- then annual balance for 3-5 years.

Response types:
• complete:
- normalization of ALT;
- CHV RNA negation (3 months after discontinuation of treatment);
• incomplete:
- diminution;
- persistence of CHV-RNA positivity;
• supported:
- complete response> 6 months after the end of the treatment;
• unsupported:
- complete response <6 months after the end of treatment;
- lack of response:
- no ALT modification

Favorable prognostic factors
• recent infection;
• young / adult infection;
• non-transfusion infection;
• female;
• normoponderality;
• increased level of pre-therapeutic ALT;
• reduced viremia;
• genotype no 1-b;
• histological - paternal lobular hepatitis and follicular portal inflammatory infiltrate

Factors associated with fibrosis progression in CHV infection
• Proven:
- Age> 40 years
- Alcohol consumption
- HBV coinfection
- HIV co-infection
- immunosuppression
- Insulin resistance
- marijuana use
- obesity
- schistosomiasis
- severe hepatic necroinflammatory lesions
- Smoker status
- white race
- viral genotype
- transmission mode

• Possible:
- increased intrahepatic iron deposits
- Male
- The ALT series level

Adjuvant medication for antiviral therapy is targeted
• treatment of secondary anemia
• treatment of secondary neutropenia

• **Liver cirrhosis**

• Clinical diagnosis is assessed by the presence of clinical signs of parenchymal decompensation and vascular decompensation.

Manifestations of parenchinematic decompensation:
• malnutrition,
• jaundice,
• fever,
• haemorrhagic syndrome,
• feminization,
• parotidial hypertrophy,
• trophic nail disorders,
• digital hipocracy,
• Dupytren contracture
• hyperkinetic syndrome
• the phenomena of hepatic encephalopathy

Vascular decompensation
• Portal hypertension manifests when the portal pressure exceeds 10 mmHg.
• Compensator appears:
- splenomegaly,
- abdominal collateral circulation,
- esophageal varicose veins,
- portal hypertensive gastropathy,
- Ano-rectal and colonic varicose veins.
- Ascites is the main sign of vascular decompensation.
• Increased portal hypertension increases nitric oxide levels and causes vasodilation.
• As the vasodilation condition worsens, renal function deteriorates and ascites fluid is formed.

Hepatic encephalopathy
• reversible neuropsychiatric manifestations,
• from slight changes in consciousness to deep coma

Hepatorenal syndrome

mechanisms
(1) arterial vasodilation in the splanchnic territory and systemic circulation;
(2) renal vasoconstriction
(3) cardiac dysfunction.

Diagnostic criteria
1. cirrhosis with ascites;
2. the serum creatinine level greater than 1.5 mg / dl
3. lack of improvement of serum creatinine level after at least two days after stopping the diuretic and volume expansion with albumin;
4. absence of shock,
5. lack of current or recent treatment with nephrotoxic drugs;
6. absence of parenchymal kidney disease (proteinuria, microhematuria or imaging of normal renal ultrasound).

Forms of manifestation

• type 1, acute form
- renal failure occurs spontaneously in patients with severe liver disease and is rapidly progressive
- serum creatinine reaches> 2.5 mg / dl and creatinine clearance <20 ml / min in less than 2 weeks
- the prognosis is severe, with mortality over 80% in 2 weeks and 90% at 3 months due to liver and renal failure or bleeding from esophageal varices

• type 2: it appears in patients with ascites resistant to diuretics.
- kidney failure appears slowly, in a few months, is moderate
- the prognosis is severe
- evolution: approx. 4-6 months

Hepatopulmonary syndrome
• Defective arterial oxygenation caused by vascular dilatations from corneal liver disease
• should be suspected in patients with exertional dyspnea
• clinically, patients present with digital hypocracy, cyanosis
• paraclinic, reduced Pa02, hypocapnia, respiratory alkalosis.

Hepatopulmonary hypertension
• appears in patients with hepatic impairment and portal hypertension
• manifests through dyspnea on exertion, palpitations, orthopnea, syncope
• the enlarged pulmonary threads and cardiomegaly are highlighted on the cord-lung radiography

Laboratory exams
• Transaminases
- slightly raised or normal in pure liver cirrhosis
- in alcoholic cirrhosis: TGO / TGP ratio = 2 (TGO> TGP)
• Alkaline phosphatases
- are raised 2 times more than normal, especially in cirrhosis associated with biliary obstruction.
• Serum bilirubin
- can be normal,
- the increase of the mixed bilirubin evokes the exacerbation of the hepatic insufficiency or it can be due to the cholestatic component

Serum gamaglobulins
• values over 3g / 100 ml (35% electrophoresis)
• values over 40% occur only in liver cirrhosis and multiple myeloma hypergammaglobulinemia
• usually polyclonal and rarely monoclonal (especially IgG).
Markers to accentuate liver failure
• decreased serum albumin
• increased time of prothrombin

Liver ultrasound can highlight
• liver steatosis,
• fibrosis,
• the diameter of the portal vein (> 14 mm),
• the flow velocity in the portal circulation,
• the hepatopoietic or hepatofugal meaning of portal blood flow,
• liver size: the caudate lobe is enlarged to the right lobe
• splenomegaly
• ascites
• hepatocarcinoma

Fibroscan uses low-frequency ultrasound to measure noninvasive hepatic stiffness.
Fibroscan is used to identify advanced fibrosis in patients with
• chronic hepatitis C,
• primitive biliary cirrhosis,
• hemochromatosis,
• non-alcoholic liver steatosis
• chronic recurrent hepatitis

Upper digestive endoscopy
• esophageal varicose veins
• portal hypertensive gastropathy,
• assessment of the risk of bleeding by assessing the degree of development of varicose veins.

Patients with cirrhosis associated with hepatic B and C infection are monitored at 6 months for risk of hepatocellular carcinoma by
• determination of alpha-fetoprotein
• ultrasound

Evolution and prognosis
• Stopping alcohol intake prolongs survival.
• In the decompensated liver cirrhosis, over 75% of the patients die in the first 6 years, and the patients who have malnutrition, jaundice, ecchymoses and refractory ascites die in the first 3-4 years
• In general, patients with ascites have a low chance of survival over 2 years.

Complications of cirrhosis

1 Portal hypertension
• Ascites
• Esophageal varices at risk of bleeding

2 Malignancy
• Cholangiocarcinoma
• Hepatocellular carcinoma

3 Bacterial infections
• Bacteremia
• Clostridium difficile
• Cellulite
• Pneumonia
• Spontaneous bacterial peritonitis

4 Cardio-respiratory impairment
• Cardiomyopathy
• Hidrotorax
• Hepatopulmonary syndrome
• Portopulmonary hypertension

5 Gastrointestinal impairment
• Variceal bleeding
• Non-variceal bleeding
• Enteropathy with loss of protein
• Vein thrombosis (portal vein)

6 Renal impairment
• Liver-renal syndrome
• Acute renal injury

7 Metabolic impairment
• adrenal insufficiency
• Hypogonadism
• Malnutrition
• Osteoporosis

8 Neuropsychiatric disorders
• Depression
• Liver encephalopathy

9 Hematological impairment
• Anemia
• Hypercoagulability
• Hypersplenism

10 Other conditions with unclear etiology
• Erectile dysfunction
• Fatigue
• Muscle cramps

• **Colorectal cancer**

Risk factors and conditions:
• Age - over 50 years;
• Male- male (B / F ratio = 1.5-2 / 1);
• Family history (genetically) - increased risk 2-3 times if there is an affected 1st degree relative;
• Hereditary syndromes of familial polyposis - autosomal dominant transmission;
• Personal history of neoplasm

• Predisposing states - colorectal polyps;
- Polyps can appear anywhere in the colon, but in 70% of cases they are located in the descending and sigmoid colon, rectosigmoidoscopy remaining the main method of identification.
• Inflammatory bowel disease:
- a) Haemorrhagic rectocolitis - risk increased 30 times compared to the general population, manifests itself after 10 years from onset
- b) Crohn's disease - 4-20 times increased risk of cancer
• Environmental agents:
- smoking, increased alcohol consumption,
- increased consumption of animal fats, red meat, refined carbohydrates,
- obesity;
- poor nutrition in fiber, fruits and vegetables;
- insufficient calcium intake;
- excessive caloric intake.

• Protective role
- vitamins: A, C, E, D,
- non-steroidal anti-inflammatory drugs (aspirin),
- microbial flora (certain types of clostridia that dehydrogenate bile acids),
- physical exercise.

Clinical manifestation
1. Abdominal pain - on the path of the colon; posterior irradiation, when the tumor invades the peritoneum; cramps, colicative balances, hydropower noises, calmed by the emission of gases, feces;
2. Transient disorders - diarrhea, constipation (rectal cancer), alternation of constipation-diarrhea, false diarrhea, rectal tenesmus, embarrassment to defecation;
3. Lower digestive haemorrhages - occult bleeding, with hypochromic microchrome anemia, rectification with red blood mixed with faeces or at the beginning of the stool (distal and rectal colon), hematocytosis, melena (check, ascending);
4. Incomplete intestinal occlusion - abdominal pain, swaying, hydraulic noise;
5. Palpable tumor mass - appears late;
6. General signs - asthenia, anorexia, weight loss (appear in advanced stages); pallor; fever (necrosis, infections);
7. Rectal cough is important in rectal tumors (5-10% of accessible tumors).

Biological:
• microchipital hypochromic anemia - as a result of blood loss through the stool;
• less frequently - macrocytic anemia, by consumption of B12 and folic acid;
• normochromic normochromic anemia - by medullary hypoproduction, due to carcinomatous invasion;
• leukocytosis - when infectious complications occur;
• increased ESR;
• acute phase reactants with high values (CRP, fibrinogen, alpha 2 globulins);
• signs of liver damage - increased transaminases, alkaline phosphatase and GT range

• Immunological tests:
- ACE (carcinoembryonic antigen) can be increased in 70% of cases,
• non-specific
• Can be raised in other conditions: inflammatory bowel disease, alcoholic liver, pancreatic cancer, breast, liver, endometrium.
• useful in monitoring the postoperative development of colon cancer and the occurrence of recurrences.
- other tumor markers: CA 19-9 and CA 125;

• Detection of occult bleeding in the chair
- can be false positive or false negative if the patient is not following a proper diet.
- the positive test raises the suspicion of a digestive neoplasm.

Colonoscopy
• the most sensitive method of diagnosis;
• can explore the whole colic framework,
• allows tumor diagnosis, biopsy sampling, polyp resection
• cannot appreciate the intra-parietal extension of the tumor.