Federal State Budgetary Educational Institution of Higher Education

«North-Ossetia State Medical Academy»

of the Ministry of Healthcare of the Russian Federation

Department of Internal Diseases No. 4.
Head of the Department Doctor of Medical Sciences Professor

ASTAKHOVA Z.T.

Guidelines for conducting a practical lesson with 6th year students of the Faculty of Medicine on the topic:

DIFFERENTIAL DIAGNOSIS FOR JAUNDICE

(the second lesson is 4 hours)

Vladikavkaz 2022

Guidelines for conducting a practical lesson with 6th year students of the Faculty of Medicine on the topic:
DIFFERENTIAL DIAGNOSIS FOR JAUNDICE

The purpose of the lesson: in the process of clinical analysis of the patient to increase the level (quality) of knowledge and skills of students in the diagnosis (differential diagnosis) of pathological conditions accompanied by jaundice.

Motivation for the relevance of the topic:

Jaundices were known in the ancient world. In the first half of the 19th century, acute painless jaundices that arose were considered as diseases close to gastrointestinal catarrhs, and they then received the name catarrhal. In the second half of the 19th century, there were suggestions about the infectious nature of jaundice.

Since the 1930s, jaundices of medicinal origin have become known. In 1940, P.G. Sergiev, E.M. Tareev and others proved the viral nature of the former catarrhal jaundices, or parenchymal hepatitis, and designated them as “viral jaundices”. In the same year, acute fatty liver of pregnancy was described.

Recent years have been marked by great successes in world medical science, and ideas about the etiology and pathogenesis of diseases of internal organs have changed significantly. Since the beginning of the 1990s, evidence began to accumulate that allowed a new assessment of hepatobiliary transport and the role of active proteins associated with ATP in it. The production and function of the bulk of these proteins are genetically determined, but undergo changes under the influence, in particular, of viruses and alcohol. The mechanism of genetically determined rare cholestatic (progressive familial cholestasis - ASC B1) and non-cholestatic (Dubin-Johnson syndrome - ASC B2) jaundice is becoming clear.

Successful clinical diagnosis of jaundice is greatly facilitated by knowledge of the causes and mechanisms of development of icteric conditions.

Determining the level of preparation of students:

The second level of knowledge: methods of control - a written survey (20 min). The student must know the essence of the disease, the definition and classification of jaundice syndrome, the etiology and pathogenesis of jaundice, the main risk factors, clinical manifestations - color (lemon with hemolytic jaundice, orange-red - with hepatic, green-yellow - with subhepatic), skin itching, pain in the right hypochondrium, fever, color of urine and feces, hepato- and / or splenomegaly, "small" hepatic signs - telangiectasia, vascular "asterisks", "crimson" tongue, palmar erythema, ascites; the student must be able to - possess propaedeutic skills, make a preliminary diagnosis according to the accepted classification, determine the required amount of research and be able to interpret the data of additional research methods (general blood count, b / x blood test, coprogram, fecal occult blood test, analysis of osmotic resistance of erythrocytes , Coombs test, ultrasound of internal organs, FGDS, rectomanoscopy, FCS, ERCP, etc.).

Report of student curators in the ward: when reporting a patient, students should pay special attention to the following:

Subhepatic (mechanical) jaundice. The basis of subhepatic (mechanical) jaundice is a violation of the outflow of bile through the extrahepatic bile ducts due to a violation of their patency. Therefore, there is a violation of the release of bound (conjugated) bilirubin through the extrahepatic bile ducts and its regurgitation (back entry into the blood). Bile regurgitation occurs at the beginning at the level of the intrahepatic bile ducts due to an increase in pressure in the biliary tree, and then at the level of hepatocytes.

Causes of subhepatic jaundice:

- obstruction of the hepatic and common bile ducts (stones, tumor, parasites, inflammation of the mucous duct with subsequent sclerosis);
- compression of the hepatic and common bile ducts from the outside (tumor of the head of the pancreas, gallbladder, enlarged lymph nodes, pancreatic cysts, sclerosing chronic pancreatitis);
- compression of the common bile duct by postoperative scars, adhesions;
- atresia (hypoplasia) of the biliary tract;
- obturation of large intrahepatic bile ducts (with liver echinococcosis, primary and metastatic liver cancer, congenital cysts).

The main features of subhepatic (mechanical) jaundice:

- most common in people over 40 years old, as a rule, most often it is jaundice of tumor origin (» 40%) and due to cholelithiasis (» 30-40%);
- the development of jaundice is preceded by pain. In cholelithiasis, the pain is acute, paroxysmal, localized in the right hypochondrium, radiating to the region of the right half of the neck, shoulder, arm, shoulder blade. Often, pains of a similar nature are noted repeatedly, after which jaundice appears.

With jaundice of tumor origin, pain occurs long before jaundice, is localized mainly in the epigastrium, in the hypochondrium, may be less intense, quite often has a permanent character. In 20% of patients, pain may be absent;
- characterized by the presence of dyspeptic disorders.

Dyspeptic disorders (nausea, vomiting) are short-term in benign jaundice, i.e. occur shortly before the onset of jaundice; with jaundice caused by a malignant tumor, they exist for a long time in the preicteric period.
Lack of appetite with benign obstructive jaundice appears shortly before jaundice, with malignant - long-term lack of appetite, occurs long before jaundice;
- weight loss is more characteristic of malignant subhepatic jaundice and is less characteristic of benign;
- body temperature is increased; with benign jaundice due to infection of the biliary tract, with malignant - due to the tumor process itself;
- pronounced pruritus;
- there is a pronounced jaundice of a greenish hue;
- with severe prolonged cholestasis, there is a significant increase in the liver;
- the spleen is not enlarged;
- subhepatic jaundice caused by a tumor of the pancreatoduodenal zone is accompanied by an increase in the gallbladder (Courvoisier's symptom), less often this symptom also occurs with benign jaundice (a stone in the ductus choledochus);
- hyperbilirubinemia is pronounced due to direct (conjugated) bilirubin;
- Urobilin is absent in the urine;
- stercobilin is absent in feces (fecal acholia);
- bilirubin is determined in the urine;
- cytolysis syndrome (increase in the blood of ALT, hepatic-specific enzymes, aldolase) at the beginning of jaundice may be absent, but then it may appear, but in a less pronounced form than with hepatic jaundice;
- laboratory signs of cholestasis are recorded: an increase in the blood levels of alkaline phosphatase, g-GTP, cholesterol, bile acids, α, 5-nucleotidase, leucine aminopeptidase;
- Ultrasound reveals stones in the biliary tract or a tumor in the pancreatoduodenal zone. With cholestasis, signs of the echographic syndrome of biliary hypertension are revealed - expansion of the common bile duct (more than 8 mm) with extrahepatic cholestasis; expansion of the intrahepatic bile ducts in the form of star-shaped "bile lakes".
Additional research:
Survey program
1. General analysis of blood, urine.
2. Urinalysis for bilirubin, urobilin.
3. Analysis of feces for stercobilin.
4. Determination of blood levels of bilirubin and its fractions, alanine and aspartic aminotransferases, alkaline phosphatase, organ-specific liver enzymes (fructose-1-phosphate aldolase, ornithinecarbamoyltransferase, arginase), total protein and protein fractions, cholesterol, triglycerides, lipoproteins, copper, iron, g-glutamyl transpeptidase, urea, prothrombin.
5. Determination of serological markers of hepatitis B, C, D viruses in the blood.
6. Ultrasound of the liver, biliary tract, pancreas, kidneys.
7. FEGDS with a biopsy of the gastric mucosa and duodenal papilla in case of suspected cancer.
8. Computed tomography of the liver, pancreas.
9. Endoscopic retrograde cholangiopancreatography, if FEGDS did not reveal any pathology.
10. If pancreatic cancer is suspected, selective angiography is recommended.
11. Laparoscopy in cases where the above measures did not allow a diagnosis.

The color of urine and feces is an important diagnostic feature. Dark color of urine and light color of feces is observed in intrahepatic and subhepatic forms of jaundice.

In most cases, ultrasound can detect gallstones, hepatomegaly with diffuse or focal changes, and dilation of the bile ducts. Examination of the pancreas makes it possible to establish or suspect any pathology. In such cases, it is necessary to conduct a second ultrasound with more thorough preparation.

Expanded intrahepatic ducts are visualized as a stellate structure, as if converging in the area of the gate of the liver; they have a tortuous course, and on the periphery of the organ their number significantly exceeds the number of vascular formations. An early sign of dilatation of the bile ducts is a doubling of their lumen; while the diameter of the common bile duct can reach the diameter of the lumen of the portal vein. The expansion of the intrahepatic ducts indicates intrahepatic biliary hypertension and indicates the mechanical nature of jaundice. Subsequent examination of the common bile duct allows you to determine the level of obstruction: high - in the region of the gate of the liver; low - at the confluence of the duct into the duodenum. In most cases, with a low level of blockage of the duct, it is possible to determine the nature of the alleged pathology: choledocholithiasis, tumor of the pancreatic head, tumor or stricture of the duct itself. At a high level of obstruction, the expansion of the intrahepatic bile ducts is not accompanied by the expansion of the common bile duct. In these cases, ultrasound can identify the most likely cause of the block - gallbladder cancer or perivesical abscess.

Computed tomography (CT) has great diagnostic capabilities in distinguishing between subhepatic and hepatic forms of jaundice. Unaltered intrahepatic bile ducts without intravenous administration of contrast agents are not visualized

using this method. In violation of the outflow of bile due to CT, an expansion of the intra- and extrahepatic bile ducts is revealed. Moreover, the changes are recorded without the introduction of a contrast agent, which is especially important for obstructive jaundice. CT in most cases allows to determine the level of obturation, and in some patients to determine its cause - choledocholithiasis, tumor of the head of the pancreas, enlargement of the lymph nodes of the liver, etc. . Puncture biopsy of the liver is important in determining the causes of hepatic jaundice.

Laparoscopy plays an important role in the differential diagnosis of hepatic and subhepatic forms of jaundice. In some cases, only with the help of laparoscopy it is possible to determine the level and nature of obturation. To address this issue, visualization of changes in the gallbladder is of great importance. Difficulties in diagnosis lie in the interpretation of changes detected during laparoscopy. The efficiency of laparoscopic diagnosis can be improved by using radiopaque methods such as laparoscopic cholecystocholangiography.

Endoscopic retrograde cholangiopancreatography (filling the pancreatic and common bile ducts with a contrast agent through a vinyl chloride probe) plays an important role in the differential diagnosis of hepatic and subhepatic forms of jaundice and is decisive in identifying the causes of subhepatic jaundice. The study makes it possible to determine the level and causes of obstruction of the biliary tract and the degree of expansion of the common bile duct, to establish the nature of the lesion of the major duodenal papilla (MSD) and the pancreas. Using this method, choledocholithiasis, stenosis of the terminal part of the choledochus and BSDK, cancer of the head of the pancreas, extra- and intrahepatic ducts, cancer of the BSDK, pericholedochal lymphadenitis are diagnosed.

In therapeutic practice, retrograde cholangiopancreatography is the method of choice for examining the biliary system in patients with jaundice.

Percutaneous hepatocholangiography is used for intense and prolonged jaundice, when mechanical obstruction of the biliary tract is reasonably expected. The study makes it possible to obtain an x-ray picture of the "biliary tree", to establish the level and, if possible, the cause of obturation. A dangerous complication is the flow of bile into the abdominal cavity and bleeding. In view of this, percutaneous cholangiography is performed at the final stage of the preoperative examination with the transition, if necessary, from examination to surgery. The study is easier to conduct with a sharp expansion of the ducts, which is usually characteristic of tumor obstruction of the extrahepatic biliary tract. Of particular importance is percutaneous hepatocholangiography in surgery of cicatricial strictures of the main bile ducts.

Preliminary diagnosis: on the basis of leading complaints and clinical manifestations, as well as indicators of additional studies, establish the presence of subhepatic jaundice.

Differential Diagnosis:

It is necessary to master the differential diagnosis and be able to timely prescribe an additional examination according to the recommended standards, which allows you to reliably confirm or exclude the diagnosis of diseases accompanied by subhepatic jaundice.

Clinical diagnosis: according to the accepted classification, indicating the etiological, pathogenetic characteristics and clinical manifestations.

Conducting a lesson in a thematic classroom: Analysis of the features of risk factors, pathogenesis, jaundice clinic in a particular patient.

The final part of the lesson: control of acquired knowledge - test control.

Summary.