

Modern interpretation of anatomical differences of liver, gallbladder and bile ducts of the children of different age groups.

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Annotation : This article discusses gall bladder and liver diseases that are common in young children and adults. In addition, the anatomical differences of the liver, gall bladder and bile ducts were discussed.

Key words : doctors , symptoms , pathology , gallbladder



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In recent years, doctors are increasingly diagnosing anomalies in the form of the gallbladder in children. In many cases, the distortion of the shape of the gallbladder and its channels, against the background of active development of the organism, as a result of long-term stagnation of bile, acute inflammatory processes begin - dyskinesia of the processes of the gallbladder, and in the gallbladder and its diagnosed as a result of the appearance of sand or even stones in the channels. This article is devoted to this problem. In it, we will talk about the deformation of the gallbladder (in newborns and older children), what are the symptoms of deformation of the gallbladder and how to treat it.

Deformation of the gallbladder: causes

Official medicine distinguishes two main categories of causes of anomalies in the form of gall bladder and biliary tract: congenital and acquired anomalies.

The causes of congenital pathology in the form can have a negative effect on the mother's body in the first three months of pregnancy (in that case, the digestive organs are placed). This can be a chronic or infectious disease, for example, during pregnancy (including passive smoking), taking certain medications, drinking alcohol or smoking.

The most common causes of the form of the gallbladder are inflammatory processes of the gastrointestinal tract or the gallbladder (or its ducts) from various sources. As a result of inflammation, the shape of the bile ducts changes, which leads to difficulties in the outflow and

stagnation of bile. Stagnant events, in turn, cause inflammatory processes in the gallbladder and the development of cholelithiasis.

The gallbladder is a hollow organ that collects bile in humans and most vertebrates. Gallbladder in humans. 10-14 cm, width 3.5-4 cm, capacity 30-70 cm³, pear-shaped. The expanded part of the gallbladder - the bottom, the middle part - the body and the narrowed neck part are distinguished. Located on the surface of the lower part of the liver. The fundus of the gallbladder protrudes a little below the right lobe of the liver. Its neck becomes thinner and becomes the Gallbladder tube. This duct merges with the hepatic bile duct formed at the portal of the liver to form the common bile duct. At the junction of the bile duct with the duodenum, there is a smooth muscle clamp that regulates the flow of bile and pancreatic juice into the intestine. Only the lower part of the gallbladder is surrounded by peritoneum, and the rest is attached to the liver by connective tissue. The wall of the gallbladder consists of a serous membrane, a mucous membrane that forms many folds, and a muscular layer. Inflammation of the gallbladder is called cholecystitis.

Gallstone disease is a common disease in people over 40 years of age. Morbidity is 30-40 percent in cases over 70 years old. Most women get sick. The morphological substrate of gallstone disease is a cyst and stones in the bile ducts. Gallstones are composed of the usual components of bile - bilirubin, cholesterol, calcium. Gallstones are mainly formed in the gallbladder, stones rarely appear in the bile ducts. There are 3 main reasons for the formation of gallstones: metabolic disorders, inflammatory changes in the epithelium of the gallbladder, and biliary obstruction. Gallstone disease can pass without symptoms, and stones in the gall bladder are detected incidentally during examination of the patient for another disease, during surgery of the abdominal organs or during an autopsy. From the clinical point of view, gallstone disease is often manifested in the form of liver (gallbladder) colic. Pain usually occurs when the diet is broken, during physical exertion. A pain attack is caused by a stone getting stuck in the path of the bladder at the neck of the gallbladder. If the pain is located under the right ribs and in the epigastric region, it is given to the lumbar region and the right scapula. Often, an attack of liver colic passes with nausea and vomiting of bile mixed several times, but the patient does not get relief. Anatomical and physiological data. The right and left hepatic ducts come out of the lobes of the same name and form the common hepatic duct. The width of the liver varies from 0.4 to 1 cm, and on average it is 0.5 cm. The length of the bile duct is about 2.5-3.5 cm. The common hepatic duct merges with the gallbladder duct to form the common bile duct. In the common bile duct, four sections are distinguished: supraduodenal located above the duodenum, duodenal, retroduodenal, which passes through the arch of the upper-horizontal network of the intestine, retropancreatic (pancreatic in the back of the head) and intramural sections in the wall of the vertical network of the duodenum.

The distal section of the common bile duct consists of the duodenum, a large duodenal pusher (Fater pusher) located in the cavity under the mucous membrane of the intestine. The large duodenal sphincter has an autonomous muscle system consisting of longitudinal, circular and loop fibers - the sphincter of Oddi, which is independent of the duodenum. The pancreatic duct approaches the large duodenal duct and forms the ampulla of the duodenal duct together with the terminal section of the common bile duct. When performing an operation on a large duodenal valve, various options for the interaction of the biliary tract and pancreatic ducts should be taken into account. The gallbladder is located in a small depression on the lower surface of the liver. The capacity of the gallbladder is approximately 50-70 ml. The shape and dimensions of the bile duct can change during its inflammatory and scarring processes. The bottom, body, and neck of the gallbladder are differentiated, and the neck passes into the gallbladder. Most gall bladders have an

axillary bulge - Hartmann's pocket. The path of the bladder often descends at an acute angle to the right hemisphere of the choledox. Gallbladder wall consists of three membranes: mucous, muscular and fibrous membranes. The mucous membrane of the cyst forms a large

number of folds. In the branch of the bladder neck and in the initial part of the bladder tract, they are called Geister's valves, and in some distal parts of the bladder tract together with bundles of smooth muscle fibers form the Lutkins sphincter. The mucous membrane forms a large number of folds between muscle bundles - Rokitansky - Aschoff sinuses.

The gallbladder is supplied with blood by one or two branches of the hepatic artery from the neck of the gallbladder, or by the cystic artery from its right branch. The flow of lymph to the lymph nodes occurs from the portal of the liver and the lymphatic system of the liver itself. Innervation of the gallbladder is carried out by the hepatic network, which consists of the abdominal plexus, the left vagus nerve and the right diaphragmatic nerve. Bile fluid (bile), which is processed by the liver and enters the bile ducts outside the liver, consists of water (97%), bile salts (1-2%), pigments, cholesterol and gall cysts (about 1%). . The average output of bile secretion of the liver is 40 ml per minute. The concentration of bile fluid occurs due to the pushing of water and electrolytes in the gallbladder. In this case, the concentration of the main components of the herb will be 5-10 times higher than their original amount in the liver herb.

Diagnosis of gall bladder and biliary tract is based on the study of patients' complaints, anamnesis and the results of physical examination of the body.

The most common complaints of patients are: pain, dyspepsia, fever, nausea, skin itching, jaundice. When determining the anamnesis, it is necessary to pay attention to whether the patient has previously had jaundice and acute diseases of the liver and gall bladder, colic attacks, which caused this disease of these organs (Chronic cholecystitis, cholangitis and gallstone disease). Examination of the patient, palpation, percussion, auscultation are used as physical examination methods. They allow to create an understanding of anatomical and functional changes and are often considered as the main methods for assessing the dynamics of the patient's condition during treatment. Functional examination of the liver reflects the specific activity of this organ, such as pigment, detoxification, protein production, and pharmacometabolism.

In the diagnosis of biliary diseases, X-ray examination is of decisive importance in many cases. A photo taken when the patient is lying on his stomach can provide information about the size, shape and location of the liver and major structural changes in it.

Holography. The method of cholegraphy is based on the ability of the organ to release iodine-storing substances when they enter the bile ducts of the liver, and allows to take an X-ray contrast image of them. Intravenous cholecystocholangiography helps to obtain an X-ray contrast image of the bile ducts, regardless of the state of the gallbladder, when its contractile function is disturbed, when the cystic duct is blocked, and when the cyst is removed after cholecystectomy.

Percutaneous cholecystography. An enlarged gallbladder consists of X-ray examination after puncture and administration of contrast material. Operative cholangiography consists of X-ray contrast examination of bile ducts during surgical operations. In current conditions, this examination is considered a necessary step in biliary tract operations, as it increases the quality of diagnostics, reduces the number of complications and improves the results of surgical treatment.

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