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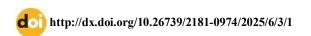
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СОВРЕМЕННЫЕ ВЗГЛЯДЫ, ВАРИАНТЫ ЛЕЧЕНИЯ И ПРОФИЛАКТИКА ЗАБОЛЕВАНИЙ ЖЕЛЧНОЙ СИСТЕМЫ У ДЕТЕЙ

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АННОТАЦИЯ

Заболевания желчной системы (ЗЖС) играют значительную роль в структуре детской патологии. По данным различных авторов, их частота составляет от 55 до 80% среди детей с патологией желудочно-кишечного тракта (ЖКТ) [1, 2, 5, 6]. В последние годы подходы к диагностике и лечению заболеваний ЗЖС у детей существенно изменились. Это в первую очередь связано с появлением новых медицинских технологий, позволяющих диагностировать заболевания на ранних стадиях. В структуре заболеваний ЗЖС у детей, несомненно, приоритет имеют функциональные расстройства. Среди заболеваний органического происхождения все более важное значение приобретает желчнокаменная болезнь (ЖКБ), частота которой в детском возрасте с каждым годом увеличивается. К сожалению, знания педиатров и врачей первичного звена здравоохранения по данной теме в ряде случаев недостаточны, поэтому основная цель данной статьи — в определённой степени компенсировать дефицит информации по заявленной теме. Особую актуальность, на наш взгляд, представляет проблема выбора приоритетных направлений лечебной тактики, а также разработка комплекса профилактических мероприятий для пациентов из группы риска.

Ключевые слова: желчная система, дети, функциональные расстройства, желчнокаменная болезнь, диагностика, лечение, профилактика, заболевания желудочно-кишечного тракта.

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MODERN VIEWS, TREATMENT OPTIONS AND PREVENTIVE MEDICINE IN CHILDREN WITH BILIARY SYSTEM DISEASE

ANNOTATION

Biliary system diseases (BSD) play a significant role in the structure of childhood pathology. According to various authors, their frequency ranges from 55 to 80% among children with gastrointestinal tract (GIT) pathology [1, 2, 5, 6]. In recent years, approaches to the diagnosis and treatment of BID diseases in children have changed significantly. This is primarily due to the emergence of new medical technologies that allow diagnosing diseases at early stages. In the structure of BID diseases in children, functional disorders undoubtedly have priority. Among diseases of organic origin, cholelithiasis (CSD) is becoming increasingly important, the incidence of which in childhood increases from year to year. Unfortunately, the knowledge of pediatricians and primary health care physicians on this topic is insufficient in a number of cases, so the main objective of this article is to compensate for the information deficit on the stated topic to a certain extent. Particularly relevant, in our opinion, is the problem of choosing priority areas of treatment tactics, as well as developing a set of preventive measures for patients at risk.

Keywords: biliary system, children, functional disorders, gallstone disease, diagnosis, treatment, prevention, gastrointestinal diseases.

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BOLALARDA OʻT YOʻLLARI TIZIMI KASALLIKLARIDA ZAMONAVIY QARASHLAR, DAVOLASH USULLARI VA PROFILAKTIKA

ANNOTATSIYA

Oʻt yoʻllari tizimi kasalliklari (OʻYTK) bolalar patologiyasi tuzilmasida muhim oʻrin egallaydi. Turli mualliflarning fikriga koʻra, ular bolalar orasida me'da-ichak tizimi (GIT) kasalliklari bilan ogʻriganlar orasida 55–80% ni tashkil etadi [1, 2, 5, 6]. Soʻnggi yillarda bolalarda OʻYTK kasalliklarini tashxislash va davolash yondashuvlari sezilarli darajada oʻzgardi. Bu birinchi navbatda kasalliklarni erta bosqichda aniqlash imkonini beruvchi yangi tibbiy texnologiyalarning paydo boʻlishi bilan bogʻliq. Bolalarda OʻYTK kasalliklari tuzilmasida funksional buzilishlar shubhasiz ustunlik qiladi. Organik kelib chiqadigan kasalliklar orasida soʻnggi yillarda bolalar orasida uchrash tezligi ortib borayotgan hoʻl safro tosh kasalligi (JCB) tobora dolzarb boʻlib bormoqda. Afsuski, pediatrlar va birlamchi tibbiy yordam shifokorlarining bu boradagi bilimlari ayrim hollarda yetarli emas. Shu bois, mazkur maqolaning asosiy maqsadi — koʻrsatilgan mavzu boʻyicha ma'lumotlar tanqisligini qisman boʻlsa-da qoplashdan iborat. Bizningcha, davolash taktikasining ustuvor yoʻnalishlarini tanlash hamda xavf guruhiga kiruvchi bemorlar uchun profilaktik choralar majmuasini ishlab chiqish muammosi ayniqsa dolzarb hisoblanadi.

Kalit soʻzlar: oʻt tizimi, bolalar, funksional buzilishlar, oʻt-tosh kasalligi, diagnostika, davolash, profilaktika, oshqozon-ichak kasalliklari.

Epidemiology

Gallstone disease is a fairly common pathology in both adults and children, accounting for approximately 10-20% of the general population (in Japan and Great Britain - up to 10%, in some regions of Chile – up to 80%). As a rule, women get sick 2–3 times more often than men. There is a specific formula for predisposition to gallstone disease, the so-called "risk situation 5F": female, fair, forty (over 40), fat, fertile (having given birth many times). Among the diseases of the digestive system, the share of cholelithiasis in children of our country is more than 1%. The last 10-15 years are characterized not only by a tenfold increase in the frequency of this pathology, but also by its obvious rejuvenation. Cholelithiasis is increasingly diagnosed in children of the first three years of life, and in some cases even in infants and newborns. In the younger age group (up to 7 years), boys are more often ill than girls. By the age of 10-12, the frequency levels out, and in puberty and adolescence, the incidence of cholelithiasis in girls exceeds that of boys by 2 times [1, 6, 8].

Etiology

Today, cholelithiasis is considered a liver disease characterized by a defect in the mechanism of synthesis or transfer of bile lipids with the formation of stones in the gallbladder and/or bile ducts. The etiological structure of cholelithiasis in children is multifaceted, and several main factors are distinguished:

- hereditary predisposition (HLA: B12, B18, A9, A11, A26, Cw3, Cw4);
 - diseases (conditions) accompanied by prolonged hemolysis;
 - congenital anomalies of the biliary tract;
 - pathology of the duodenum, duodenostasis;
 - violations lipid exchange (excess weight, dysli pyedemia);
 - endocrine diseases, dyshormonal violations;
 - long-term parenteral nutrition;
- resection of the colon (especially in the area of the ileocecal angle), Crohn's disease (ileitis);
 - chronic constipation;
 - cystic fibrosis, celiac disease;
 - sharp loss of mass bodies.
 - IN quality additional factors discussed:
- consumption of large amounts of refined carbohydrates, fats, easily digestible proteins, preservatives along With deficit V diet vegetables, fruits, vitamins, dietary fiber;
- early translation children on artificial feeding, V result what They Not receive V sufficient quantity certain substances (for example, taurine) that prevent development of hyperlipidemia , hyperinsulinemia , obesity;
 - ecological ill-being;
 - violation regime days And nutrition;
 - Hypodynamia (playing gadgets);

· alcoholism, smoking, substance abuse.

Pathogenesis

Stones formed in the gallbladder are traditionally divided into "cholesterol" and "pigment" stones. The latter, in turn, are subdivided into "black" and "brown".

1. Pathogenesis of cholesterol stone formation.

In normal bile, cholesterol is in a dissolved state. This is facilitated by bile acids (cholic, deoxycholic and chenodeoxycholic), as well as phospholipids (lecithin), which form special complexes with cholesterol called micelles. In recent years, the presence of "lipid bubbles" in bile, capable of binding large amounts of cholesterol, has been proven [1, 3, 4, 6, 7, 8].

In case of decrease in concentration of these components in bile, conditions are created for precipitation of cholesterol and its crystallization. A certain significance in formation of stones has initially increased concentration of cholesterol in bile, which occurs in obesity, diabetes mellitus, early pregnancy. Congenital variants of hypercholesterolemia have also been described [2].

The infectious factor plays a significant role in the process of stone formation. Thus, when infectious agents enter the bile ducts, for example, with pancreatic juice, the enzyme phospholipase A is activated, breaking down lecithin. The resulting lysolecithin is not able to sufficiently bind cholesterol. Cholestasis, in which the absorption of water in the gallbladder (GB) increases and the concentration of salts increases, is of great importance in the process of lithogenesis. Inflammation of the GB and bile ducts significantly increases the risk of cholelithiasis. At the same time, the concentration of bile acids in the bile sharply decreases as a result of their absorption. In addition, the inflamed mucosa secretes a lot of protein and calcium salts. Protein can become the basis of a stone, and calcium salts - a kind of "crust".

2. Pathogenesis of the formation of pigment (bilirubin) stones.

"Black" stones are formed mainly in the gallbladder due to an increase in the concentration of calcium bilirubinate in it . This occurs as a result of hydrolysis of unconjugated bilirubin in the gallbladder by endogenous β - glucuronidase . There are two main causes of excessive release of conjugated bilirubin: intravascular hemolysis and intrahepatic circulation of bilirubin (in Crohn's disease, gallbladder fibrosis, etc.).

"Brown" stones can form anywhere in the biliary tract, most often due to infection with anaerobic bacteria. The mechanism of their formation is quite complex. It is important to note that such stones often have a mixed structure and consist of both bilirubin and cholesterol [1, 3, 4, 6].

Pathological anatomy

It is no secret that the most common diagnosis in adults in case of detection of stones in the gallbladder is "calculous cholecystitis". In pediatric practice, the diagnosis of "gallstone disease" is encountered with overwhelming frequency. In the latter case, it is implied that there is a stone, and the gallbladder as such is intact. Morphological studies

of recent years have dispelled this illusion, proving that in most cases of stone formation in children there is cholecystitis of varying degrees of severity [1, 2].

of the gallbladder in children is the activation of organ sclerosis processes against the background of a decrease in fibroblast proliferation and the formation of mature forms of collagen. Dystrophic processes are also intensified both in the proper plate of the mucous membrane and in the muscular wall. Microcirculation disorders are of great importance in maintaining inflammation .

Classification

In 2002, a new classification of cholelithiasis was proposed, developed at the Russian Institute of Gastroenterology [6]. In our opinion, the authors, the classification reflects the level of modern knowledge about the mechanisms of cholelithiasis and the features of the clinical picture of cholelithiasis.

Stage I – initial, or pre-stone : A) thick, heterogeneous bile;

B) formation of biliary sludge (microliths, putty-like bile and their combination).

Stage II – formation of gallstones:

A) by localization (in the gallbladder, common bile duct, hepatic ducts):

B) by the number of stones (single, multiple); C) by composition (cholesterol, pigment, mixed); D) by clinical course:

- a) latent.
- b) with the presence of clinical symptoms:
- painful form with typical biliary colic,
- dyspeptic form,
- under the guise of other diseases.

Stage III – chronic recurrent calculous cholecystitis.

Stage IV – complications.

Clinical painting

Current data indicate that more than half of cholelithiasis cases in children (up to 65%) are in stages I and II. stages diseases, those stones at this are "silent" and are diagnosed by chance during ultrasound.

The stage of clinical manifestation is characterized by the appearance of acute or dull abdominal pain of varying intensity. In terms of localization, the predominant pains are in the epigastrium, pyloroduodenal zone, in the navel area, and right hypochondrium. With a detailed collection of anamnesis, it is possible to identify some agerelated patterns of pain syndrome.

In particular, preschool and primary school children often complain of pain around the navel or throughout the abdomen. Middle school children periodically complain of pain in the epigastrium and pyloroduodenal zone. Pain in the right hypochondrium, typical for adults with cholelithiasis, is detected mainly in children of pubertal age

The nature of the pain syndrome is largely determined by the localization of the stone in the gallbladder. It is known that the area of the bottom of the bladder is the least sensitive ("silent zone"), and therefore stones located in this place most often do not cause pain. When the stones are localized in the body of the bladder, the pain syndrome is moderate. The neck of the gallbladder, the cystic duct and the common bile duct have the greatest sensitivity, therefore stones located in these areas often give a typical clinical picture of biliary colic.

The mobility of stones in the gallbladder cavity is of particular importance in the development of the clinical picture of cholelithiasis in children. In particular, children with large immobile stones more often complain of aching pain in the right upper quadrant of the abdomen. Mobile (floating) stones can cause acute pain of uncertain localization.

It should be remembered that purely "glandular" complaints are not so common in clinical practice. Many school-age children and adolescents may experience a kind of "interference" of symptoms due to the addition of signs of damage to the esophagus, stomach, and duodenum.

Diagnostics

Firstly: a correctly collected anamnesis is of great importance, in particular, the features of hereditary predisposition to chole- and urolithiasis. During an objective examination, no specific findings

should be expected in most children. Palpation of the abdomen often reveals pain in the epigastrium , right hypochondrium, positive gallbladder symptoms; an increase in the liver by $1-2~\rm cm$ is possible. The severity of these signs largely depends on the degree of bile outflow disorder .

Secondly: Laboratory diagnostic methods are not decisive in diagnosing cholelithiasis in children. Determining elevated levels of cholestasis markers and triglyceride levels in the blood (the level of total lipids may decrease somewhat) may be of some importance. In order to clarify the genesis of calculus formation, it is advisable to determine markers of latent hemolysis.

Thirdly: ultrasound is rightfully considered a screening method in the diagnosis of cholelithiasis in both children and adults. Its sensitivity in localizing stones in the gallbladder exceeds 97%, and in the case of the presence of an acoustic shadow, it reaches 99% [1, 6, 7].

On echograms, gallstones appear as clearly visible hyperechoic inclusions of various shapes and sizes. Usually, due to their weight, the stone is located at the back wall of the bladder, but it can also "float" if it contains a large amount of cholesterol or gas.

The brightness of the ultrasound signal from the stone depends on its chemical composition. Soft cholesterol stones practically do not produce an acoustic shadow, unlike stones containing calcium in their composition, in which case there is always a bright acoustic signal of the track.

When the gallbladder is completely filled with stones, neither the bladder nor the stones can often be visualized due to significant signal reflection. In such cases, only the presence of a wide ultrasound shadow allows one to assume the presence of multiple stones.

When the body position changes, the concrement moves freely in the lumen of the bladder. Displacement does not occur in the case of a "driven" stone in the neck of the bladder or when it is very small, when it "sticks" to the wall. This happens especially often in the presence of "dirty" bile, when the sediment looks like putty.

In children, a calculus is very rarely fixed to the wall of the gallbladder. When a hyperechoic formation is detected on the wall of the gallbladder, it is necessary to conduct differential diagnostics between a stone and a polyp. The latter may be the result of hyperplastic cholesterolosis of the gallbladder, the cause of which is excessive accumulation of triglycerides and cholesterol in the wall of the organ [6, 7]. A polyp is usually visualized as a single small formation (2–5 mm), does not give acoustic shadow, has clear contours and is firmly fixed to the wall. In very rare cases, the polyp may contain calcifications, resulting in the formation of a light acoustic path. The combination of a polyp and a gallstone is quite rare in children, but usually requires surgical intervention.

Fourthly: Among the radiological methods for detecting radiopaque stones in the right hypochondrium, the most frequently used is a survey radiograph of the abdominal cavity. It is believed that the greater or lesser contrast of a stone depends on its calcium content. Predominantly, cholesterol stones are either not visible at all on a survey image or are visualized as a blurred, indistinct shadow. Stones containing calcium bilirubinate and stones of mixed (cholesterol pigment-calcium) composition, on the contrary, are clearly visible on a radiograph.

Fifthly: computed tomography allows visualization of even small stones (mainly calcium stones) up to 1–2 mm in diameter. However, "soft" stones that do not contain calcium are visualized only after the introduction of a contrast agent. If the stone size is more than 5 mm, its structure can be described. More informative examination methods, especially for assessing the patency of the extrahepatic bile ducts, are spiral computed tomography and magnetic resonance cholegraphy [3, 4].

Sixth: The "gold standard" for diagnosing choledocholithiasis is considered to be endoscopic retrograde cholangiopancreatography (ERCP), which, however, has a high risk of complications [3].

Treatment

Before starting active treatment, a pediatrician or general practitioner must answer the question: "What to do: treat conservatively or refer to a surgeon - operate?" There are no clear recommendations on this matter, but there is an unspoken rule: do not operate on a child

with an accidentally detected gallstone until the development of a characteristic clinical picture of gallstone disease. The author of this concept is unknown, and it has no strict scientific basis. Rather, such tactics are a product of the general wariness of all pediatricians, general practitioners and pediatric gastroenterologists towards surgical treatment in general.

The arguments of supporters of conservative management of patients with cholelithiasis can be summarized as follows:

- there is a certain risk of intra- and postoperative complications during surgical treatment;
- the possibility of intraductal formation cannot be excluded lithiasis after cholecystectomy;
- as a result of cholecystectomy, a violation of the neurohumoral regulation of the processes of bile formation and bile secretion is possible due to a violation of the regulation of pressure in the hepatobiliary system;
- there is a high probability of developing postcholecytectomy syndrome (PCS);
- there is a certain risk of an unfavorable course of the postoperative period when performing cholecystectomy in puberty;
- cholecystectomy does not eliminate the very cause of stone formation (synthesis of lithogenic bile by hepatocytes) [1, 2]. If a decision is made on conservative treatment of a child, the primary task is to develop an adequate dietary correction program. As a rule, table No. 5 is prescribed with additives in the form of vegetables, fruits and other functional food products (dietary fiber), including for the purpose of constipation prevention. Of great importance is the inclusion in the child's diet of products that have a beneficial effect on the state of the colon microbiocenosis fermented milk products with dietary supplements (Bifidok, Bifilife, Acidophilus, etc.), biologically active additives (BAA) with a prebiotic effect (Eubikor).

Among the general regimen aspects, it is necessary to note regular meals without long breaks, limitation (but not complete prohibition) of physical activity, the need to adhere to a daily routine with adequate sleep in accordance with the child's age, a protective regimen in terms of psycho-emotional influences, etc.

When developing a drug treatment program, the pediatrician needs to answer one more question: "Should we carry out litholytic therapy or not?"

A positive answer to this question is possible only if the following conditions are met: 1) detection of "soft", radiolucent stones (calculi) in the child; 2) their diameter should not exceed 10 mm; 3) bladder localization of stones; 4) if small stones are present, they should not occupy more than half of the volume of the gallbladder; 5) contractility of the gallbladder and patency of the bile ducts are preserved; 6) desire and capabilities of the parents, since treatment can be lengthy and expensive. Looking at the problem from the opposite direction, we can list the main contraindications to medicinal dissolution of stones: 1) "dense", radiopaque stones; 2) their diameter is more than 20 mm; 3) "disconnected" gallbladder; 4) acute cholecystocholangitis; 5) chronic pancreatitis; 6) chronic hepatitis; 7) ulcer of the duodenum, etc.

The most promising time for conservative treatment is to detect the disease at the biliary stage. sludge (BS). According to literature, dietary correction and timely administration of specific litholytic therapy, as well as antispasmodics and choleretic drugs, leads to the complete disappearance of sludge in more than 70% of cases. However, in such situations, the pediatrician inevitably faces the need to diagnose cholelithiasis at a virtually "pre-stone" stage, which can cause certain organizational difficulties.

The list of litholytic drugs is small and includes derivatives of ursodeoxycholic acid (UDCA), of which the most widely known is the drug " Ursofalk ". The therapeutic effects of UDCA are as follows:

- anticholestatic eliminates all types of intrahepatic cholestasis both intralobular and ductal ;
- litholytic dissolves cholesterol stones in the gallbladder and prevents the formation of new stones;
- hypocholesterolemic reduces cholesterol levels in the blood;
- hepatoprotective and antioxidant protects liver cells from hepatotoxic factors;

- membrane stabilizing due to the formation of non-polar dimers and inclusion in cell membranes;
- cytoprotective protects the cells of the bile ducts and epithelial cells of the gastric and intestinal mucosa from aggressive factors, reduces the cytotoxic effect of lipophilic bile acids due to the formation of mixed micelles;
 - antifibrotic prevents the development of liver fibrosis;
- immunomodulatory reduces autoimmune reactions against liver cells and bile ducts, suppresses autoimmune inflammation;
- antioxidant prevents oxidative damage to liver cells and bile ducts [1, 3, 4].

Ursofalk is usually prescribed in a daily dose of 10 mg/kg of the child's body weight (less often - 15 mg/kg, for example, in cystic fibrosis or neonatal cholestasis syndrome). The course of continuous treatment is from 6 to 24 months. A feature of the use of this drug is the need to take the main part (or all) of the daily dose at night. This is due to the known fact that the concentration of cholesterol in bile increases precisely at night. A standard capsule of Ursofalk contains 250 mg of the active substance.

During the first 3 months of treatment, it is necessary to monitor the level of aminotransferases and cholestasis markers in the blood once a month, then once every 3 months. Ultrasound monitoring is performed every 6 months. A certain tactical stage is the period of 1 year from the start of treatment. If no positive dynamics are noted during this time, then the treatment should be stopped. In case of dissolution of stones, treatment with UDCA preparations should be continued for another 3 months.

Usually, in addition to UDCA preparations at the pre-stone stage of cholelithiasis, combined drugs with a mild choleretic , antispasmodic and hepatoprotective effect are prescribed. Among the most popular at present are Galstena , Hofitol , Odeston , Gepabene . They are prescribed in pulse courses of 3-4 weeks 2-3 times a year.

The use of choleretic drugs (especially the cholekinetic group) cannot be considered appropriate at the stage of formed stones due to the high risk of the latter moving into the cervical area of the gallbladder and the occurrence of an intense pain attack, as well as into the bile ducts (including the common bile duct) with the formation of obstruction and the need for emergency surgical intervention As additional therapy, biopreparations are prescribed to correct the intestinal microbiocenosis, dietary fiber preparations to prevent constipation, antispasmodics of various groups (especially in case of recurrent pain syndrome), and, according to indications, pancreatic enzyme preparations. In the presence of signs of an active inflammatory process in the gallbladder or in the preoperative period, antibacterial therapy is indicated. According to L.A. Kharitonova (2002), the effectiveness of litholytic therapy usually does not exceed 15%. However, if all recommendations for the use of ursofalk are followed, the effectiveness of treatment increases.

If radiopaque, mainly bilirubin stones are detected, litholytic therapy is ineffective. The attending physician should be aware that the only radical method of treating cholelithiasis in this case is surgical. The same applies to situations of unsuccessful litholytic therapy.

The arguments of supporters of surgical treatment of cholelithiasis boil down to the following provisions:

- with prolonged existence of the stone, inflammatorydystrophic changes in the wall of the gallbladder occur, pericholecystitis develops, which complicates surgical treatment in the future:
- children with cholelithiasis have a high incidence of congenital anomalies of the gallbladder and ducts with impaired bile rheology, which makes conservative tactics ineffective;
- patients may have situations that limit the use of conservative litholytic therapy;
- when litholytic therapy is prescribed, partial or complete litholysis is observed only in a small proportion of patients;
 - there is a high risk of complicated cholelithiasis;
- after cholecystectomy, there is a decrease in the lithogenicity index of bile due to the acceleration of enterohepatic circulation of bile poids.

Thus, in each specific situation all the " pro et contra » for an

informed choice of the optimal treatment program.

Among the known surgical techniques, laparoscopic is the most frequently used cholecystectomy, which is characterized by minimal trauma. Laparoscopic surgery, proposed by some authors, cholelithotomy is practically not used in pediatric practice due to the large number of side effects and frequent relapses of the disease. According to most clinics with experience in surgical treatment of cholelithiasis, any negative consequences (recurrence of stones, pancreatitis) develop in no more than 5% of children who have undergone laparoscopic cholecystectomy.

According to A.M. Zaprudnov and L.A. Kharitonova (2002), surgical treatment of cholelithiasis is a priority in children under 12 years of age. After its implementation, long-term therapy with litholytic drugs is recommended (up to 2 years).

In children over 12 years of age, conservative therapy is considered the method of choice, and surgical intervention is performed only in the case of biliary colic. Such age differences are due to a slightly higher number of postoperative complications in children of pubertal age.

Exercise therapy, physical therapy, and spa treatment are of particular importance in the treatment of children with cholelithiasis.

The aim of our study was to evaluate the results of conservative and surgical methods of therapy for cholelithiasis and to develop a set of preventive and therapeutic measures in children at risk for the development of cholelithiasis.

The study involved 42 patients aged 2 to 17 years (boys - 16, girls - 26), who underwent examination and treatment at the Bukhara Regional Children's Medical Center from 2022 to 2025 (chief physician M. Amonov). The indication for hospitalization in more than half of the patients (59.4%) was recurrent abdominal pain without any pathognomonic signs, in some cases requiring exclusion of acute surgical pathology. In 8 cases (19.1%), typical biliary colic was

diagnosed, accompanied in 2 patients by clinical and laboratory signs of pancreatic pathology. In other patients with various types of chronic pathology (including children with allergic diseases, cystic fibrosis, congenital heart defects, hematological pathology, etc.), gallbladder stones were an accidental finding during an ultrasound examination of the abdominal cavity.

Research methods: All patients, in addition to the usual clinical and laboratory screening, ultrasound and endoscopic (FEGDS) examination, underwent plain radiography of the abdominal cavity (right hypochondrium) to verify radiopaque stones, a comprehensive biochemical blood test to determine markers of cholestasis and latent hemolysis. Patients with anamnestic indications of episodes of hyperbilirubinemia, jaundice, increased levels of liver transaminases and/or hyperamylasemia underwent magnetic resonance cholegraphy, and in isolated cases - ERCP.

Results and discussion: Among the probable risk factors for the development of cholelithiasis , according to the anamnesis, the most significant role belongs to a burdened heredity for cholelithiasis (this pathology was diagnosed in the closest relatives of 66.7% of patients). In 33.3% of cases, anomalies in the shape of the gallbladder were verified (persistent deformations according to polypositional dynamic echocholecystography), in 14.3% - hemolytic conditions of various origins. In most cases, a combination of several factors was noted in one patient. At the same time, children with excess body weight accounted for only 11.9% of those examined; children with a harmonious mesosomal balance predominated. somatotype . In isolated cases, factors such as long-term parenteral nutrition, endocrine diseases were noted; in two cases, cholelithiasis was diagnosed in patients with cystic fibrosis , in three cases - with celiac disease . In 7 patients (16.7%), probable risk factors could not be identified (Fig. 1).

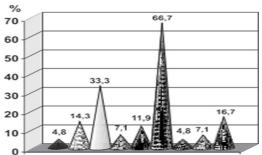


Fig. 1. Probable risk factors for cholelithiasis in the examined patients.

A differentiated approach to the choice of treatment tactics, taking into account the severity of abdominal pain syndrome, the presence of complications, the number, diameter and localization of stones, the age of the patient, as well as the nature and effectiveness of previous conservative therapy, made it possible to determine the indications for surgical treatment. Laparoscopic Cholecystectomy was performed in 15 patients.

The remaining patients (n = 27) were prescribed conservative therapy, which included, in addition to dietary recommendations and ursofalk , antispasmodics (duspatalin , no-shpa), pre- and probiotics (especially drugs containing dietary fiber), enzymes (creon). Medicines against the background of ursofalk were prescribed sequentially and no more than three drugs at a time.

After cholecystectomy, all patients were prescribed similar conservative therapy with the addition of choleretic and hepatoprotective drugs.

The follow-up period of the observed patients ranged from 6 to 24 months; the frequency of examinations (physical examination, determination of cytolysis and cholestasis markers, ultrasound) was once every 3–6 months.

In the group of patients who underwent cholecystectomy, abdominal pain syndrome and dyspeptic complaints (probably caused by concomitant pathology of other parts of the digestive tract) were noted in three cases; in one patient, PHES was verified; in the remaining cases, the operated patients did not present any complaints (Fig. 2).

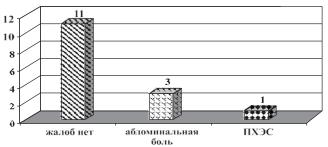


Fig. 2. Follow-up clinical characteristics of children who underwent laparoscopic cholecystectomy.

Among patients who were on conservative therapy, positive clinical dynamics of the main symptoms were noted in the majority of cases (91.3%). Although the goal of litholysis was achieved in only 3 cases, a decrease in the size of stones was recorded in 4 patients. Most patients (82.6%) who received ursofalk did not experience an increase in the

size, quantity or compaction of the structure of stones, almost all patients (88.9%) experienced the disappearance of biliary tract infection determined during the initial ultrasound examination. sludge (Fig. 3).

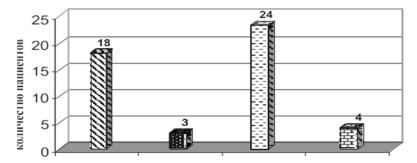


Fig. 3. Follow-up clinical characteristics of children after conservative therapy of cholelithiasis.

Thus , the choice of treatment tactics for children with cholelithiasis is based on the analysis of a set of clinical, anamnestic and laboratory-instrumental data and is not subject to schematization.

Laparoscopic Cholecystectomy , which is a radical method of treating cholelithiasis in school-age children, does not, however, solve the problem of eliminating the lithogenicity of bile, and therefore requires maintenance therapy with UDCA (ursofalk) . Surgical intervention should be carried out according to strict clinical and/or paraclinical indications (L.A. Kharitonova, 2002).

In our opinion, the indications for surgical treatment are as follows:

- developmental anomalies of the biliary tract with impaired gallbladder function (confirmed by CT or ERCP data);
- active inflammatory process in the gallbladder, biliary pancreatitis;
 - significant impairment of gallbladder function;
 - multiple floating stones;
 - large stones with a diameter of more than 1.5 cm;
- anamnestic indications of episodes of obstructive jaundice (a sign of choledocholithiasis);
 - "disconnected" (according to ultrasound data) gallbladder;
- the appearance or persistence of attacks of biliary colic against the background of conservative therapy.

In the latent form of the disease in young children, regardless of the number, size and structure of stones, in the presence of ultrasound signs of biliary sludge, it is indicated to prescribe complex therapy using UDCA preparations with clinical, biochemical and sonographic monitoring within the prescribed timeframes.

It is necessary to identify a risk group for the development of cholelithiasis. It should include children who have:

- diseases (conditions) accompanied by prolonged hemolysis;
- hereditary predisposition to cholelithiasis;
- congenital anomalies in the development of the biliary tract with impaired contractile function of the gallbladder (according to

dynamic polypositional echocholecystography);

- chronic inflammatory bowel diseases (especially with damage to the ileum, for example, Crohn's disease);
- various types of malabsorption syndrome (celiac disease , cystic fibrosis);
- anamnestic indications for resection of the ileum and ileocecal angle;
 - lipid metabolism disorders, hormonal disorders;
 - long-term use of hepatotoxic drugs.

This group of children needs regular sonographic screening, which makes it possible to diagnose cholelithiasis at the biliary stage. sludge (BS). It is at this stage of the disease that UDCA preparations are most effective, which allows achieving the maximum effect from conservative therapy.

Apparently, it is advisable to expand the indications for the prescription of UDCA preparations:

- after cholecystectomy to prevent ductal lithiasis;
- if it is impossible to perform a cholecystectomy regardless of the number, size and structure of stones;
- in patients at risk for developing cholelithiasis, especially with ultrasound signs of BS under clinical, biochemical and sonographic control within the prescribed timeframes (once every 3–6 months).

The following scheme of preventive observation of children at risk for cholelithiasis is possible:

- Ultrasound of abdominal organs once a year;
- if signs of BS are detected, prescribe traditional choleretic therapy for 1 month, followed by ultrasound monitoring;
- if BS persists prescribe UDCA (ursofalk) in the usual dose for 3 months with monthly monitoring of ALT levels in the blood and ultrasound monitoring after 3 months;
- continuation of dynamic sonographic observation once a year after the disappearance of signs of BS.

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