ROLE OF ECHOGRAPHY IN THE DIAGNOSIS OF DEVELOPMENT ANOMALIES OF GALLBLADDER IN CHILDREN

[1]Sultanova L.R., [2]Akhmedov E.A., [3]Turdiev F.E., [4]Abdusattorov Sh.Sh., [5]Ortikboeva Sh.O.
[1,2,3,4,5]Tashkent Pediatric Medical Institute

https://doi.org/10.5281/zenodo.10380845

Abstract. *Diagnosis of anomalies in the forms of the gallbladder in children is very difficult, which depends on a competent and skillful approach to solving the problems of the doctor-researcher, and the use of highly informative technologies. The ultrasound diagnostic method is currently a harmless, non-invasive and highly informative method that allows you to really evaluate both the shape of the gallbladder and differentiate the types of changes.*

Keywords: *ultrasound diagnosis, gall bladder, children, functional cases.*

Diseases of the gallbladder and biliary tract in children are the most common diseases of the digestive system. Developmental anomalies and acquired deformations of the gallbladder may have pathogenetic significance in disrupting the passage of bile as one of the causal factors of various pathological processes in the biliary tract. Stagnation in the bladder over time leads to the development of dystrophic processes in the wall of the gallbladder and, consequently, to disruption of its contractile function, up to atony.

Congenital and acquired pathologies of the gallbladder in the cervical-ductal zone are currently classified as a special group of diseases called siphonopathies. Various types of developmental anomalies and acquired deformations of the gallbladder and bile ducts interfere with their normal function and lead to impaired motility, mainly of the hypomotor type.

In this group of patients, the presence of putty-like bile and non-displaceable stones in the gallbladder is more often observed. Increased surgical activity on the biliary tract, primarily for cholelithiasis (GSD), requires knowledge of the clinical features of the manifestation of anomalies of its development. Diagnosis of most of them is difficult, since a feature of such anomalies is the absence of characteristic clinical signs. The manifestation of developmental anomalies usually occurs in childhood or adolescence.

The most common gallbladder anomaly is kinks (50 - 74% of all developmental anomalies). Kinks and constrictions in different parts of the gallbladder occur with varying frequencies. Kinks of the gallbladder are more common in the neck and body, constrictions - in the neck and fundus. The ratio of the constrictions of the gallbladder in the neck, body, and fundus is 4:2:1, and the ratio of constrictions in these sections is 7:1:3.

Ultrasound examination is one of the main methods for diagnosing developmental anomalies and acquired deformations of the gallbladder. The sensitivity of ultrasound in detecting gallbladder abnormalities is 88%, and the specificity is 98%. At the same time, in the diagnosis of anomalies of the ductal system, these indicators are almost equal to %.

Ultrasound specialists rarely evaluate the contractile function of the gallbladder. This does not allow the clinician to differentiate dyskinesia from cholecystitis. Not always, with “deformations” of the gallbladder (GB), a violation of its motor function is detected. There are no works devoted to the characteristics of clinical manifestations of gallbladder anomalies and their

prevalence in various diseases of internal organs. The relationship between the presence of gallbladder abnormalities and the clinical picture of cholecystitis has not been studied. There are few works concerning the function of the gallbladder with its anomalies.

Purpose of the study. Improving the diagnosis of various gallbladder anomalies in children through the use of modern ultrasound examinations.

Material and research methods. The work is based on the results of a comprehensive standard examination of 46 children with various deformations of the gallbladder aged from 1 to 18 years, who were examined and treated at the TashPMI clinic. The examination was carried out using an ultrasonic device “SONOSCAPE SSI 5000”, “APLIO 500” with sector and linear sensors with a frequency from 3.5 MHz to 7.5 MHz.

Research results.

Echography was performed in the morning on an empty stomach, no earlier than 12 hours after eating, the patient in the supine position, holding the breath during the deep inspiration phase. To improve contact of the sensor with the scanned surface, the skin of the outer abdominal wall was lubricated with a special gel. The study of the gallbladder included determining its length, width, and wall thickness. The contractile function of the gallbladder was assessed by data on its volume on an empty stomach and 40 minutes after a choleretic breakfast (egg yolk). Initially, the volume of the gallbladder was calculated using the formula proposed by A.A. Ilchenko (2004). With an ejection fraction of less than 30%, contractile function was assessed as reduced; 30-50% normal; more than 50% increased.

We examined 46 children with gallbladder diseases (21 (45.7%) boys and 25 (54.3%) girls aged 5 to 18 years) in 52.7% of children, gallbladder anomalies (GAB), In our studies, we did not encounter such anomalies of the gallbladder as agenesis, double and duplicated gallbladder, or its abnormal location. Most often, constrictions, kinks and an S-shaped gallbladder were detected.

At the same time, AGB were constrictions and kinks of the gallbladder of varying degrees of severity: in 23 children with dyskinesia of the gallbladder - in 50.2% of cases, in 19 children with chronic acalculous cholecystitis - in 41.3%, in 4 children with chronic calculous cholecystitis - in 8.5% of cases.

Gallbladder deformities were 1.3 times more common in girls than in boys. The incidence of AGB among patients with cholelithiasis and chronic acalculous cholecystitis did not differ from healthy individuals.

In 6 children, even in the absence of anatomical “defects,” a violation of the outflow of bile was observed, manifested by recurrent pain syndrome that was not amenable to conservative therapy.

Studies have shown that hypokinetic dyskinesia of the gallbladder was detected in 40% of children with kinks and somewhat more often (50%) with constrictions, and hyperkinetic dyskinesia was detected much less frequently (in 10 and 7% of patients, respectively). Some authors describe the dynamics of the contractile function of the gallbladder in children in the presence of its anomalies. Thus, at the initial stage there was hyperfunction, which subsequently turned into a decrease in the contractility of the gallbladder.

A uniform contraction of the bladder indicated compensation for the congenital defect, and difficulty in emptying the distal part indicated a violation of compensation. At the same time, when the deformation was localized in the area of the bottom and body of the bladder, hypermotor dyskinesia was observed in 35.7% of cases.

Conclusions. Thus, literature materials and our own data reveal anomalies of the gallbladder, both in healthy children and in pathologies of internal organs. Modern ultrasound devices make it possible to timely recognize their various options, objectively assess the function of the gallbladder and clarify its condition in various diseases of the internal organs with its anomaly.

REFERENCES

1. Рашидов, З. Р., & Фазылов, А. А. (2005). Лучевые методы в оценке функции почек при туберкулезе. Медицинская визуализация, (1), 67-71.
2. Рашидов, З. Р., & Янгуразова, Д. Р. (2005). Магнитно-резонансная томография при туберкулезе почек. Медицинская визуализация, (6), 80-85.
3. Рашидов, З. Р., & Фазылов, А. А. (2005). Адрес для корреспонденции: Рашидов Зафар Рахматуллаевич–zafar_r_uz@ rambler. ru. Медицинская визуализация, 1, 67.
4. Рашидов, З. Р., Фазылов, А. А., Убайдуллаев, А. М., & Хакимов, М. А. (1999). Туберкулино-эхографическая проба в дифференциальной диагностике нефротуберкулеза. Ультразвуковая диагностика, 3, 10.
5. Aliyev, M. M., Yuldashev, R. Z., Adylova, G. S., & Yusupalieva, G. A. UNSATISFACTORY RESULTS OF SPLENORENAL SHUNTING IN CHILDREN WITH EXTRAHEPATIC PORTAL HYPERTENSION.
6. Тилляшайхов, М. Н., Мухтаров, Д. З., Рашидов, З. Р., Абдурахмонов, Д. К., Хакимов, М. А., & Алиджанов, С. К. (2015). Эффективность троспиума хлорида при симптомах нижних мочевых путей у больных туберкулезом мочевой системы. Туберкулез и болезни легких, (5), 178-179.
7. Тилляшайхов, М. Н., Рашидов, З. Р., & Алиджанов, С. К. (2015). Эффективность ботулотоксина во фтизиоурологической практике. Туберкулез и болезни легких, (5), 179-179.
8. Тилляшайхов, М. Н., Рашидов, З. Р., Хакимов, М. А., & Набиев, С. Р. (2015). Клиническое течение туберкулеза почки, осложненного туберкулезным циститом. Туберкулез и болезни легких, (6), 154-155.
9. РАШИДОВ, З., ХАКИМОВ, М., САДЫКОВ, А., РАХМАТОВ, М., & НИГМАНОВ, Р. (2011). ДИАГНОСТИКА ПАТОЛОГИИ ГЕПАТОБИЛИАРНОЙ СИСТЕМЫ И ПОЧЕК У БОЛЬНЫХ ТУБЕРКУЛЕЗОМ ЛЕГКИХ С ВИЧ-ИНФЕКЦИЕЙ. Туберкулез и болезни легких, 88(5), 134-134.
10. Рашидов, З. Р., & Нигманов, Р. Т. (2010). Редкий случай сочетания эхинококкоза и туберкулеза почки. Экспериментальная и клиническая урология, (4), 76-78.
11. Рашидов, З. Р., & Янгуразова, Д. Р. (2005). Адрес для корреспонденции: Рашидов Зафар Рахматуллаевич–e-mail: zafar_r_uz@ rambler. ru. Медицинская визуализация, 6, 80.