

Informative Value of Ultrasound Examination in Various Forms of Acute Cholecystitis

Jumaeva M. M.

*Bukhara State Medical Institute,
Bukhara branch of RSCEMP*

Abstract: The use of echography allows you to make the correct diagnosis as soon as possible, determine the subsequent treatment tactics, and start conservative or surgical treatment in a timely manner. The advantages of ultrasound examination over X-ray cholecystography are shown, the features of echograms in various diseases of the gallbladder are considered.

Key words: *Ultrasound, cholecystitis, gallbladder, biliary tract.*

Relevance. As you know, currently cholecystectomy is the most frequent operation in surgical practice. Currently available moment literature sources do not contain diagnostic criteria for various forms of acute cholecystitis [1]. Only general approaches to the diagnosis of inflammatory diseases of the gallbladder are described. At the same time, accurate diagnosis of the stage of the inflammatory process in the gallbladder wall largely determines the patient's future treatment strategy of the patient[3-5]. Ultrasonography allows diagnosing hypertrophic diseases of the gallbladder, such as adenomyomatosis and cholesterol. The polypoid form of gallbladder cholesterol is especially well detected, and it is always necessary to conduct a differential diagnosis with cholelithiasis. The main difference is that the cholesterol polyp (polyps) does not give an acoustic shadow and does not move when the position of the patient's body changes.

Purpose of the study. Study of morphofunctional changes in the walls of the gallbladder in various forms of acute cholecystitis *помощью* using ultrasound.

Materials and methods of research. The materials were collected from the medical history of patients of the surgical department of RSCEMP BF with a diagnosis of acute cholelithiasis, static processing and a criterion for the reliability of these indicators. Ultrasound machines Mindray 6600, Esaote My lab X6, Esaote My lab 40

Research results. Ultrasound examination (US) plays an important role in the diagnosis of cholecystitis. A common bile duct diameter greater than 7 mm is usually considered a pathological dilation, although the diameter of the bile duct increases in elderly patients and after cholecystectomy. A normal bile duct with a diameter of up to 4 mm is found in 95% of the adult population. The gallbladder has a pear-shaped or conical shape, located on the lower surface of the liver, between the right and square lobes. The length of the gallbladder is from 5 to 14 cm, width-from 2 to 4 cm, capacity - from 30 to 70 ml. In the gallbladder, the bottom, body and neck are distinguished, which passes into the cystic duct. The wall of the gallbladder consists of mucous, muscular and connective tissue membranes, the lower surface is covered with a serous membrane. The mucous membrane has

numerous folds. Gallstone disease (GSD) is the most common disease of the gastrointestinal tract, which has a clear upward trend. Despite the solution of tactical and technical issues related to the diagnosis and treatment of cholelithiasis, this pathology retains its place among the problems of abdominal surgery.

Cholecystitis is an inflammation of the gallbladder. The cause of cholecystitis is pathogenic microflora that enters the gallbladder from the duodenum 12, as well as hematogenic or lymphogenic pathways from foci of chronic infection (in chronic pyelitis, adnexitis, tonsillitis, sinusitis, etc.). A factor contributing to the development of cholecystitis is bile stagnation. Parasitic diseases also contribute to the development of cholecystitis. Stones are an additional factor in the violation of bile evacuation and disorders of the motor function of the biliary tract. They injure the mucous membrane of the gallbladder and become a focus of infection, supporting chronic inflammation and contributing to exacerbations of the process. There is a distinction between acute and chronic cholecystitis, and both can be calculous and non-calculous. In acute cholecystitis, catarrhal and destructive (purulent) forms of acute cholecystitis are distinguished. Destructive forms include phlegmonous and gangrenous cholecystitis.

Acute catarrhal cholecysts. The gallbladder is enlarged and tense. The mucous membrane is hyperemic, swollen. Echographically: the wall is thickened to 3-4 mm and has a 2-layer structure, represented by a hyperechoic serous outer shell and a hypoechoic edematous inner mucosa and muscle membranes

Acute phlegmonous cholecystitis. The gallbladder is enlarged and tense. The lumen of the gallbladder contains purulent exudate. Echographically: the wall is thickened to 4-6 mm, usually has a 3-layer structure, represented by a hyperechoic serous membrane, a hypoechoic edematous muscle membrane, a hyperechoic necrotic mucosa impregnated with fibrin.

Acute gangrenous cholecystitis. If the necrotic process extends to the entire thickness of the gallbladder wall, gangrenous cholecystitis develops. The development of gangrenous cholecystitis is caused by a violation of hemodynamics as a result of inflammatory and necrotic changes in the walls of blood vessels. Gangrenous cholecystitis can also occur as a result of primary damage to blood vessels. Most often, gangrenous cholecystitis develops as a result of phlegmonous cholecystitis with cystic artery thrombosis. Echographically: the wall of the gallbladder is thickened to 5-7 mm, there is no clearly defined division into layers, the wall is homogeneous, increased echo density, with an indistinct contour.

Conclusions. The studied ultrasound signs of the gallbladder and its wall, such as the length of the gallbladder, its area and volume, indicate the possibility of using them in the differential diagnosis of chronic and acute calculous cholecystitis, as well as biliary tract obstruction. In phlegmonous cholecystitis, the wall has a thickness of 4-6 mm, 3-ply, the inner and outer layers are hyperechoic, between them is a hypoechoic layer. Blood flow in the cystic artery is present. In gangrenous cholecystitis, the wall is 5-7 mm thick, the individual layers are not differentiated, and the contours are indistinct. There is no blood flow in the cystic artery. Experimental and clinical observations indicate that removal of a functioning gallbladder leads to disruption of the sphincter apparatus of the biliary tract, since the gallbladder is the coordinator of its activity.

Literature

1. Практическое руководство по ультразвуковой диагностике. Общая ультразвуковая диагностика [Под ред. В.В. Митькова]. М.: Видар; 2006: 720.
2. Николаев А.В. Топографическая анатомия и оперативная хирургия: учебник. М.: ГЭОТАРМедиа; 2007: 784.

3. Жумаева М. М. Диагностика заболеваний щитовидной железы при помощи ультразвукового исследования// Барқарорлик ва Етакчи Тадқиқотлар онлайн илмий журнали.//2022.- Т. 2. – №.2.-С-194-198.
4. Жумаева М. М., Даминов Ш.Х., Адуллаев Ж.Х. Эффективность Применение Цифровой Рентгенографии При Хронической Обструктивной Болезни Легких //CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES //2022.-Т.3.-№.3.-С-52-58. [https://doi.org/ 10.17605/OSF.IO/CJGMS](https://doi.org/10.17605/OSF.IO/CJGMS)
5. Jumaeva M. M., Akhmadova M. A. THE POSSIBILITIES OF USING DIGITAL RADIOGRAPHY IN THE DIAGNOSIS OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE //Modern Journal of Social Sciences and Humanities ISSN: 2795-4846.- ISSN: 2795-4846- // Vol. 4. 2022.-P-99-103. <https://mjssh.academicjournal.io/index.php/mjssh>
6. Ахмедов Ф. Х., Жумаева М. М. Узи При ЖКб, Острый Калькулёзный Холецистит, Выбор Больных Для Лхэ, Изменение Желчных Протоков До И После Операции //CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES- 2022.- Т.3. – №.3.- С-322-324. <https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/788/>
7. Ахмедов Ф. Х., Жумаева М. М. Сравнительная Морфометрия Внутри И Внепеченочных Желчных Путей, Желчных Сфинктеров У Больных С ЖКБ, Подвергшихся Классической И Лапараскопической Холецистэктомии //RESEARCH JOURNAL OF TRAUMA AND DISABILITY STUDIES// 2022.- стр 231-241.
8. J.M. Mustaqimovna Diagnostics of Thyroid Diseases with the Help Ultrasonic Examination // Research Journal of Trauma and Disability Studies Vol1(10),2022.-P.129-134. <http://journals.academiczone.net/index.php/rjtds/article/view/358>
9. Ахмедов Ф. Х., Жумаева М. М. МОРФОЛОГИЧЕСКИЕ ИЗМЕНЕНИЕ ПРИ ЖЕЛЧЕКАМЕННОЙ БОЛЕЗНИ // EURASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES- ISSN 2181-287X- 2 (12) 2022. – С - 274-283. <https://doi.org/10.5281/zenodo.7381138>
10. Ахмедов Ф. Х., Жумаева М. М. Ультразвуковая Диагностика Желчного Пузыря При Желчекаменной Болезни // AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI - ISSN: 2181-3464.- 1(7). -2022.-Б.-15-21.
11. Ахмедов Ф. Х., Жумаева М. М. Сравнительная Морфометрия Внутри И Внепеченочных Желчных Путей И Желчных Сфинктеров У Больных С ЖКБ // AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI - ISSN: 2181-3464.-1(7). -2022.-Б.-22-27.
12. Akhedov F.Kh., Jumaeva N. Kh. Jumaeva M.M. COMPARATIVE MORPHOMETRY OF THE BILIARY TRACTS AND BILE SPHINCTERS IN PATIENTS WITH GSD UNDERGOING CLASSICAL AND LAPAROSCOPIC CHOLECYSTECTOMY.// Uzbek Scholar Journal- (<https://uzbekscholar.com/index.php/uzs/article/view/466>)
13. Ахмедов Ф. Х., Жумаева М. М., Абдуллаев Ф.Ф. Абдоминальная Боль При Желчнокаменной Болезни И Постхолецистэктомическом Синдроме//AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI- ISSN: 2181-3450.-1(7). -2022.-С.-236-241.
14. Ахмедов Ф.Х., Жумаева М.М. Биллиарный Сладж// Research Journal of Trauma and Disability Studies- ISSN: 2720-6866.-1(12). -2022.-С.-73-82.
15. Махмудова Г. Ф., Темирова, Д. В., &Баротова, Ш. Б. (2021). Бачадон бўйни хавфли ўсмаларининг ёшга хосхусусиятлари//Academic research ineducational sciences // 2(5).-Б.-186-196. <https://doi.org/10.24411/2181-1385-202100871>
16. Maxmudova G.F.,Soxibova Z.R., Mamedov U.S., Nurboboyev A.U. Fertil va keksa yoshli ayollarda bachadon bo'yni xavfli o'smalari tahlili (Buxoro viloyatida)//Oriental Renaissance: Innovative, educational, natural and social sciences//-2021.-V 8.-B. 175-184.
17. Nurboboyev A.U., Makhmudova G.F. Miniinvazive approach in the complex treatment of tumor and stone etiology of mechanical jaundice// International journal on Orange technology// Vol 3. Issue 9. Sep.2021.- P. 85-90

18. М.А. Ахмадова, А.Т. Чўлиев, Ж.Р. Нуров, Д.К. Худойбердиев Лучевая диагностика эхинококкоза печени./Биология ва тиббиёт муаммолари.2019,№4.2(115)с.20-25
19. Нарзиева Д.Ф. Значение Иммуногистохимических маркеров при метастазировании рака молочной железы в легкие.// Oriental Renaissance:Innovative,educational,natural and social sciences.// -2021 Vol.1-С.170-175
20. Xalikova Feruza. Current concepts of breast cancer risk factors//International journal of philosophical studies and social sciences//2021.- Vol 1.-P.57-66.
21. Z.R. Sokhibova, M.R. Turdiyev, (2021). Some Features Of Laboratory Indicators Of Micro And Macro-Elementary Condition Of The Organism Of Female Age Women In Normality And In Iron Deficiency. The American Journal of Medical Sciences and Pharmaceutical Research, 3(02), MO145.
22. Mamedov U.S., Pulatova D.S.H. The Results of Cancer Treatment of the Oral Cavity Tumors in //the Republic of Uzbekistan European journal of Pharmaceutical and Medical Research. -2019. -6(9). - P. 326-329.
23. Narziyeva D.F., Jonibekov J.J.; Morphological features of tumor in different treatment options for patients with locally advanced breast cancer // Middle European scientific bulletin. Volume 7-2020-Dec. – P. 105-10
24. Nurov J.R., Khalikova F.S. Long-term results of surgical treatment patients with stomach cancer // Вестник науки и образования. – 2020. – №23-2(101). – С. 85-89. Modern Journal of Social Sciences and Humanities103
25. R. R. Navruzov. Morphological and morphometric changes of the stomach layer of one monthly white rats // Journal For Innovative Development in Pharmaceutical and Technical Science (JIDPTS). Volume:4, Issue:5, May:2021 pp :(7-10)
26. R. R. Navruzov. Lymphothorax therapy in the complex of treatment of purulent inflammatory diseases of the hand in outpatient conditions // New day in medicine 30.2020
27. Nurov Jamshid Raxmatovich, Ahmadova Maftuna Amin qizi. Features of Anatomy of the Greater Omentum // International journal on orange technology. – 2021. – Vol. 03(9). – P. 66-68.
28. Nurov Jamshid Raxmatovich, Narziyeva Dilnoza Fakhridinovna. Immediate Results of Surgical Treatment of Gastric Cancer // International journal on orange technology. – 2021. – Vol. 03(9). –P. 62-65.
29. Akhmedov F. Kh., Jumaeva M. M. Ultrasound Comparative Morphometry in Patients with Conventional Cholecystectomy//Journal of Natural and Medical Education. -2023.- Volume 2, Issue 3. ISSN: 2835-303X. –P. 168-173.
30. Akhmedov F. Kh., Jumaeva M. M. Ltrasound Comparative Morphometry of Intra- And Extrahepatic Bile Ducts after Laparoscopic Cholecystectomy //Journal of Natural and Medical Education. -2023.- Volume 2, Issue 3. ISSN: 2835-303X. –P. 174-179.
31. Жумаева М. М. Ўт Тош Касаллигида Ут Копи Деворининг Морфологик Ва Гистокимёвий Ўзгаришлар //AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI.- 2023.- Jild: 02 Nashr:04.-Б.-1-4.
32. Жумаева М. М. Касалхонадан Ташқари Пневмония Ва Унинг Клиник Кечишининг Нур Ташхисоти// AMALIY VA TIBBIYOT FANLARI ILMIY JURNALI.- 2023.- Jild: 02 Nashr:06.-Б.-40-44.
33. Jumaeva M.M. Informativeness of Ultrasound in the Diagnosis of Changes in the Wall of the Gallbladder in Cholecystitis// CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES.2023.Vol 4.Issue 3.- P-657-660.