Uzbek Scholar Journal
Volume- 11, Dec., 2022
www.uzbekscholar.com

COMPARATIVE MORPHOMETRY OF THE BILIARY TRACTS AND BILE SPHINCTERS IN PATIENTS WITH GSD UNDERGOING CLASSICAL AND LAPAROSCOPIC CHOLECYSTECTOMY

Akhedov F.Kh.
Jumaeva M. M.
Jumaeva N.Kh .
Bukhara State Medical Institute Bukhara Branch of the Republican
Scientific Center of Emergency Medical Care

ANNOTATION
he use of ultrasound examination of cholelithiasis allows you to make the correct diagnosis as soon as possible, determine the subsequent treatment tactics, morphological changes inside and extrahepatic ducts, and start conservative or surgical treatment in a timely manner. Timely diagnosis of lesions of the bile ducts, stagnation of the extrahepatic and intrahepatic bile ducts.

Keywords: Ultrasound, cholecystitis, gallbladder, biliary tract, cholelithiasis.

Introduction

Cholelithiasis is a disease of the hepatobiliary system, caused by a violation of the metabolism of cholesterol and bilirubin and characterized by the formation of stones in the gallbladder and bile ducts. The use of ultrasound to improve the diagnosis of cholelithiasis, the pathology of the extrahepatic and intrahepatic bile ducts, the objectivization of indications for urgent surgery and the reduced number of “forced interventions”; Currently, the method of video-laparoscopic cholecystectomy (VLCE) is recognized as the "gold standard" for the surgical treatment of calculous cholecystitis. Selection of patients for LCE according to the official algorithm and predicted the degree of future technical difficulties of endovisiosurgical intervention according to ultrasound criteria. The active implementation of the endovideosurgical method for the treatment of patients with cholelithiasis did not reduce the incidence of postoperative complications. Purpose of the study. The study of morphofunctional changes inside and extrahepatic bile ducts in cholelithiasis.

Materials and Research Methods

Materials of the collection from the medical history of patients of the surgical department of the Republican Research Center for Medical Employment and Health of the BF with a diagnosis of acute cholelithiasis, static processing and the criterion of significance for the difference in indicators. Ultrasound devices Mindray 6600, Esaote My lab X6, Esaote My lab 40

Research Results

Ultrasound examination (ultrasound) plays an important role in the diagnosis of cholelithiasis. Among diseases of the gallbladder and extrahepatic bile ducts, the most common reason for cholecystectomy is inflammatory processes (cholecystitis, cholangitis, cholelithiasis). Currently, in urgent surgery for cholecystectomy, the number of patients with cholelithiasis worldwide is growing, mainly among people of working age, among elderly and senile people, gallbladder stones are detected in every third patient. According to WHO, cholelithiasis (GSD) affects 12 to 15% of the population. Cholecystectomy remains the most radical method of treatment so far. [1] Gallstones are found in persons of pycnic

physique, a tendency to be overweight. Overweight is observed in approximately 2/3 of patients. Two factors contribute to the formation of gallstones, these are endogenous and exogenous. Endogenous factors gender, age, congenital anomalies, obstruction of the outflow of bile, for example, stenosis and cysts of hepatocholedis, parapapillary diverticula of the duodenum, and from acquired diseases, chronic hepatitis with the outcome of cirrhosis of the liver. Exogenous factors include nutritional characteristics associated with geographical, national and economic characteristics of the life of the population [2]. The increase in the spread of cholelithiasis during the 20th century, mainly in economically developed countries, is explained by most authors by an increase in the consumption of food rich in fat and animal proteins, while at the same time in economically prosperous Japan, due to national dietary habits, cholelithiasis occurs several times less frequently than in developed countries. European countries, USA or Russia. It is extremely rare in tropical countries, India, Southeast Asia, where the population mainly eats plant foods. 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. In urgent surgery, the number of patients with cholelithiasis is growing, the main treatment for cholelithiasis of emergency care is cholecystectomy. Despite the development and implementation of more gentle methods of surgical intervention, surgical complications increase from 5% to 40% of operated patients, these patients present complaints from the gastrointestinal tract [3]. In recent years, the number of laparoscopic cholecystectomy (LC) has increased. In the structure of emergency medical care, acute calculous cholecystitis (ACC) ranks third after acute appendicitis and acute pancreatitis, patients with ACC account for about 20-50% of the total number of patients with surgical disease. When GSD affects the bile ducts and ducts, and the large duodenal incision, timely endoscopic treatment of GSD has led to significant progress in this direction, but has not solved all clinical problems [5] . A big problem is the timely diagnosis of lesions of the bile ducts and tracts that are observed in patients with pathology of the biliary system, An urgent problem is the diagnosis of stagnation of extrahepatic and intrahepatic bile ducts in patients at different times after cholecystectomy. To a certain extent, the problems that surgeons face in cholelithiasis are associated with lesions of the biliary tract and ducts, the major duodenal papilla, the development of timely endoscopic methods for the treatment of cholelithiasis has led to significant progress in this direction, but has not solved all clinical problems. Removal of the gallbladder is the main intervention for acute cholecystitis, leading to complete recovery of the patient. This operation was first performed by K. Langenbuch in 1882. Two methods of cholecystectomy are used - “from the neck” and “from the bottom”. The method of removing the gallbladder “from the neck” has undoubted advantages Removing the “disabled gallbladder”, is not accompanied by an expansion of the common bile duct after surgery. According to some researchers, PCES in this case occurs only in 3-4% of patients. The quality of life in patients operated against the background of reduced contractile functions of the gallbladder turned out to be higher than with its increased or normal function. This fact is explained by the gradual adaptation of the ductal system to the conditions of a non-functioning gallbladder; therefore, patients experience abdominal pain and dyspepsia after cholecystectomy much less frequently. Thus, the opinion that functional disorders of the sphincter apparatus of the biliary tract are a pathogenetic link in the development of cholelithiasis and tend to progress after surgical treatment deserves attention [6]. Obviously, many researchers are directing their efforts to the timely diagnosis of motor disorders of the sphincter of Oddi and, based on the results, seek to develop an optimal strategy and algorithm for the treatment of patients with PCES.

The clinical picture of PCES manifestations has such a wide polymorphism that it is difficult to systematize. After removal of the gallbladder, there may be a cumulative effect of several factors that disrupt the normal functioning of the sphincter apparatus of the biliary tract, therefore, when forming a diagnosis, it becomes necessary to give it a complete description indicating the type and extent of the surgical intervention, the nature and localization of disorders (organic and functional) taking place in a particular case with an indication of concomitant pathology on the part of the digestive tract. With a violation of the patency of the extrahepatic biliary tract, it consists in the preoperative elimination of the phenomena of obstructive jaundice (usually by endoscopic papillosphincterotomy) and the second stage is the implementation of cholecystectomy. However, this treatment option is often hindered by a number of reasons - anatomical, tactical, technical, organizational [7]. After cholecystectomy, there are several factors affecting the normal functioning of the sphincter apparatus of the biliary tract, it becomes necessary to give it a complete description, indicating the type and volume of the surgical intervention, the nature and localization of organic and functional disorders that occur in a particular case, indicating concomitant pathology on the part of the organs GIT. The most severe complications of gallbladder surgery, In the stomach and duodenum is the damage and structure of the extrahepatic bile ducts, the treatment of which is a complex problem of surgical hepatology. The technique of the operation is improved day by day, the frequency of damage to the ducts does not decrease. In the last two decades, laparoscopic cholecystectomy (LC) has gained widespread acceptance and the status of the "gold standard" of surgical treatment of cholelithiasis. According to the literature, the frequency of long-term results after cholecystectomy is 4%, good 60-90%, satisfactory 12-26%, unsatisfactory 2-11%. The advantage of LCE is minimal trauma, 2-3 times shorter bed-days, reduced rehabilitation period, however, an important criterion for the effectiveness of new medical technologies is the quality of life of patients in the department after the operation period. However, with the successful implementation of modern surgical treatment in 5-50% of cases, complaints persist or increase, which are interpreted as a manifestation of post-cholecystectomy syndrome (PCS), which causes a significant decrease in the quality of life of patients and increases the cost of treatment and rehabilitation. At the moment, the issues of terminology and interpretation of the adverse effects of the LCE performed are controversial at the moment, the generally accepted name of PCES is being actively discussed; today there is no consensus. Postcholecystectomy syndrome is a multifactorial pathological condition of the body, characterized by a set of functional or organic changes in the hepatoduodenopancreatabiliary zone that occur or worsen after cholecystectomy, regardless of the method of its implementation. Some authors identify several options for the course of PCES: dyspeptic, painful, icteric and asymptomatic variants. Numerous modern studies have shown that almost all patients with cholelithiasis have morphological and functional disorders of hepatocytes, which is the main cause of dyscholia leading to the formation of lithogenic bile and the development of biliary insufficiency. Removal of the gallbladder with the loss of its concentration function does not eliminate these disorders, but, on the contrary, contributes to their progression [8]. The morphological basis for the development of an altered area of the major duodenal papilla (MPD) in patients with cholelithiasis determines the frequency and structure of an altered area in the pancreatobiliary zone in cholelithiasis. The existing classifications of morphological changes in OBD are not general, and data on a comprehensive morphological study of the OBD and the mucous membrane of the descending part of the duodenum in patients with cholelithiasis are absent. In the sequences devoted to morphological changes in the OBD, the need to determine the relationship between histological changes in the area of the papilla of Vater and clinical

and endoscopic manifestations after LCE is emphasized. Among patients with PCES, patients with functional motor disorders prevail and their number reaches 78%, since dyskinesia of the gallbladder and sphincter apparatus of the biliary tract is an integral part of the pathogenesis of cholelithiasis. Data cited by various researchers indicate the presence of motor dysfunction in more than 2/3 patients with cholelithiasis [9]. The control of the functioning of the biliary tract, as well as other body systems, is based on multi-level regulation. Obviously, surgical interventions lead to significant changes in the mechanisms of functioning of this system. Experimental and clinical observations indicate that the 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. Pain in patients after surgery in most cases is associated with hypertension of the biliary tract. The basis of biliary hypertension is a violation of the function of the sphincter of Oddi, through which there is a close anatomical and physiological connection between the biliary tract, pancreas and duodenum. The physiological control of the sphincter of Oddi involves a variety of neural and hormonal stimuli. Gastrointestinal hormones play an important role in the regulation of bile secretion processes. Of particular importance is cholecystokinin and secretin, which are produced by the duodenal mucosa of the initial section of the jejunum in the presence of fat in food. Once in the blood, they stimulate pancreatic secretion, cause contraction of the gallbladder, help reduce the tone of the sphincter of Oddi, reducing pressure in the bliary tract. Normally, the relaxation of the sphincter of Oddi occurs synchronously with the contraction of the gallbladder, as a result of which bile and pancreatic juice enter the duodenum. According to some data, cholecystokinin has a direct effect on hepatocytes, stimulating the production of bile. The gallbladder takes an active part in modulating the response of the sphincter of Oddi to the effects of gastrointestinal hormones. After the removal of the gallbladder, the threshold of sensitivity of the receptor apparatus of the sphincter of Oddi to the effects of secretin and cholecystokinin decreases. As a result, a spasm and discoordinated work of the sphincter occurs, the concentration and deposition of bile in the inter-digestive period changes, which manifests itself in patients with constant or recurring pain in the right hypochondrium and epigastrium, as well as dyspeptic disorders. After removal of the gallbladder in a number of patients, there is a decrease in the concentration of cholecystokinin in the blood serum and at a value of less than 0.5 ng / ml (the norm is 0.5-1.0 ng / ml0 they establish dysfunction of the sphincter of Oddi. The risk of developing clinical manifestations of sphincter dysfunction increases sharply if on the 9th day after cholecystectomy the level of cholecystokinin decreases by more than 2 times from the initial value [10]. Disputes about the nature of the functional state of the sphincter of Oddi after removal of the gallbladder are still ongoing. Some authors believe that sphincter tone increases after surgery, which leads to biliary hypertension and dilatation of the choledochus in most patients. Others insist that against the background of the removed gallbladder, insufficiency of the sphincter function develops, which leads to a constant flow of bile not only after eating, but also during the interdigestive period. As a result of insufficiency of the sphincter of Oddi, according to some authors, cholangiogenic diarrhea very often develops after surgery and in some patients there is no compensatory expansion of the common choledochus. Controversial opinions about the state of the sphincter of Oddi after cholecystectomy may be associated with different periods after cholecystectomy, in which diagnostic tests are carried out. Some scientists believe that in the absence of a "reservoir" for the accumulation of bile, hypertonicity of the sphincter of the OBD initially matters, biliary hypertension develops, which is detected in monometry in 87% of patients already in the first month after removal of the gallbladder.

Prolonged sphincterospasm leads to morphological changes in the OBD, which lead to the development of fibrosing papillitis and a decrease in the contractility of the sphincter of Oddi.

Conclusion

The studied ultrasound signs of the gallbladder and in its wall, such as the length of the gallbladder, its area and volume, indicate the possibility of their use in the differential diagnosis of chronic and acute calculous cholecystitis, as well as obstruction of the biliary tract. In patients with acute calculous cholecystitis and obstruction of the biliary tract, the wall of the gallbladder thickens with an increase in size (length, area, volume) and has a high level of correlation with the degree of increase in intravesical pressure.

References

1. Abdullayeva, M. (2019). Clinical efficacy of montelukast (l-montus kid®) in the control of Mild persistent bronchial asthma in children. Journal of Critical Reviews, 7(5), 2020.
2. Шамсиева, Э. Р., & Ташматова, Г. А. (2022). Деструктивно-воспалительная патология суставов у детей до 16 лет (Doctoral dissertation, England).
3. Шамсиева, Э. Р. (2022). Клинические проявления семейного нефротического синдрома у детей (Doctoral dissertation, Россия).
4. Шамсиева, Э. Р. (2022). Клинические особенности течения различных форм ювенильного ревматоидного артрита у детей.
5. Шамсиева, Э. Р. (2004). Клинико-патогенетическое обоснование сочетанного применения кобавита с сернокислой медью и лазерного воздействия в комплексном лечении пневмонии у детей раннего возраста. Актуальные проблемы современной науки, (1), 165-166.
6. Файзиева, У. Р., & Сатибалдиева, Н. Р. (2016). Специфика проблемного обучения студентов медицинских вузов по предмету педиатрия. Современные инновации, (2 (4)), 21-24.
7. Файзиева, У. Р., Сатибалдиева, Н. Р., & Ахмедова, Г. Х. (2016). Новые инновационные технологии по предмету Сестринское дело по педиатрии. European science, 3, 13.
8. Tatochenko, V. K. (2021). Community-acquired pneumonia in children– problems and solutions. Rossiyskiy Vestnik Perinatologii i Pediatrii (Russian Bulletin of Perinatology and Pediatrics), 66(1), 9-21.
9. Файзиева, У. Р., & Худойкулова, Э. А. (2017). Эффективность применения препарата АкваДЗетрима при рахите. Интерактивная наука, (12), 75-77.
10. Худойкулов, Э. А., Сатибалдиева, Н. Р., & Файзиева, У. Р. (2016). Эффективность применения метаболитов на фоне комплексной терапии у детей с пневмонией. Современные инновации, (3 (5)), 57-59.
11. Халматова, Б. Т., Сотиболдиева, Н. Р., & Абдуллаева, Д. Т. (2010). Отдаленные последствия бронхообструктивного синдрома у детей. Врач-аспирант, 43(6), 57-61.
12. Chorieva, Z. Y., Dzhuraev, I. B., Fayzieva, U. R., Satibaldiyeva, N. R., & Ashurova, A. S. (2021). Influence of Environmental Indicators on the Development of Broncho-pulmonary Pathology in Children. European Journal of Molecular & Clinical Medicine, 7(11), 4419-4425.
13. Umurov, F. F., Amonova, M. M., & Sultanova, D. B. (2020). Improvement of wastewater treatment sorption-coagulation-flocculation method. European Journal of Molecular and Clinical Medicine, 7(8), 1599-1604.

14. Амонова, М. М. (2017). ИЗУЧЕНИЕ РЕОЛОГИЧЕСКИХ СВОЙСТВ ШЛИХТУЮЩЕЙ ПОЛИМЕРНОЙ КОМПОЗИЦИИ НА ОСНОВЕ КРАХМАЛА И ПОЛИАКРИЛАМИДА. Вестник магистратуры, (2-1 (65)), 19-20.
15. Amonova, M. M., Ravshanov, K. A., & Amonov, M. R. (2019). Studying the doses of coagulants in the treatment of textile waste water. Universum: chemistry and biology (electronic scientific journal).-Moscow, (6), 60.
16. Амонова, М. М., & Мухиддинов, Б. Ф. (2021). ИССЛЕДОВАНИЕ ВЛИЯНИЯ КОНЦЕНТРАЦИИ КОАГУЛЯНТНОВ И АДСОРБЕНТОВ ПРИ ОЧИСТКЕ СТОЧНЫХ ВОД ТЕКСТИЛЬНОГО ПРОИЗВОДСТВА. Universum: технические науки, (5-4 (86)), 10-15.
17. Амонова, М. М., & Ахророва, М. А. (2016). Физико-химические и технологические характеристики буровых композиционных растворов. Учёный XXI века, (4-4 (17)), 21-23.
18. Амонова, М. М., & Амонова, М. М. (2022). ОСОБЕННОСТИ КОМПЛЕКСНОЙ ОЧИСТКИ СТОЧНЫХ ВОД ТЕКСТИЛЬНЫХ ПРЕДПРИЯТИЙ. Galaxy International Interdisciplinary
19. Abdullayeva, M. (2019). Clinical efficacy of montelukast (l-montus kid®) in the control of Mild persistent bronchial asthma in children. Journal of Critical Reviews, 7(5), 2020.
20. Шамсиева, Э. Р., & Ташматова, Г. А. (2022). Деструктивно-воспалительная патология суставов у детей до 16 лет (Doctoral dissertation, England).
21. Шамсиева, Э. Р. (2022). Клинические проявления семейного нефротического синдрома у детей (Doctoral dissertation, Россия).
22. Шамсиева, Э. Р. (2022). Клинические особенности течения различных форм ювенильного ревматоидного артрита у детей.
23. Шамсиева, Э. Р. (2004). Клинико-патогенетическое обоснование сочетанного применения кобавита с сернокислой медью и лазерного воздействия в комплексном лечении пневмонии у детей раннего возраста. Актуальные проблемы современной науки, (1), 165-166.
24. Файзиева, У. Р., & Сатибалдиева, Н. Р. (2016). Специфика проблемного обучения студентов медицинских вузов по предмету педиатрия. Современные инновации, (2 (4)), 21-24.
25. Файзиева, У. Р., Сатибалдиева, Н. Р., & Ахмедова, Г. Х. (2016). Новые инновационные технологии по предмету Сестринское дело по педиатрии. European science, 3, 13.
26. Tatochenko, V. K. (2021). Community-acquired pneumonia in children– problems and solutions. Rossiyskiy Vestnik Perinatologii i Pediatrii (Russian Bulletin of Perinatology and Pediatrics), 66(1), 9-21.
27. Файзиева, У. Р., & Худойкулова, Э. А. (2017). Эффективность применения препарата АкваДЗетрима при рахите. Интерактивная наука, (12), 75-77.
28. Худойкулов, Э. А., Сатибалдиева, Н. Р., & Файзиева, У. Р. (2016). Эффективность применения метаболитов на фоне комплексной терапии у детей с пневмонией. Современные инновации, (3 (5)), 57-59.
29. Халматова, Б. Т., Сотиболдиева, Н. Р., & Абдуллаева, Д. Т. (2010). Отдаленные последствия бронхообструктивного синдрома у детей. Врач-аспирант, 43(6), 57-61.
30. Chorieva, Z. Y., Dzhuraev, I. B., Fayzieva, U. R., Satibaldiyeva, N. R., & Ashurova, A. S. (2021). Influence of Environmental Indicators on the Development of Broncho-pulmonary Pathology in Children. European Journal of Molecular & Clinical Medicine, 7(11), 4419-4425.

31. Umurov, F. F., Amonova, M. M., & Sultanova, D. B. (2020). Improvement of wastewater treatment sorption-coagulation-flocculation method. European Journal of Molecular and Clinical Medicine, 7(8), 1599-1604.
32. Амонова, М. М. (2017). ИЗУЧЕНИЕ РЕОЛОГИЧЕСКИХ СВОЙСТВ ШЛИХТУЮЩЕЙ ПОЛИМЕРНОЙ КОМПОЗИЦИИ НА ОСНОВЕ КРАХМАЛА И ПОЛИАКРИЛАМИДА. Вестник магистратуры, (2-1 (65)), 19-20.
33. Amonova, M. M., Ravshanov, K. A., & Amonov, M. R. (2019). Studying the doses of coagulants in the treatment of textile waste water. Universum: chemistry and biology (electronic scientific journal).-Moscow, (6), 60.
34. Амонова, М. М., & Мухиддинов, Б. Ф. (2021). ИССЛЕДОВАНИЕ ВЛИЯНИЯ КОНЦЕНТРАЦИИ КОАГУЛЯНТНОВ И АДСОРБЕНТОВ ПРИ ОЧИСТКЕ СТОЧНЫХ ВОД ТЕКСТИЛЬНОГО ПРОИЗВОДСТВА. Universum: технические науки, (5-4 (86)), 10-15.
35. Амонова, М. М., & Ахророва, М. А. (2016). Физико-химические и технологические характеристики буровых композиционных растворов. Учёный XXI века, (4-4 (17)), 21-23.
36. Амонова, М. М., & Амонова, М. М. (2022). ОСОБЕННОСТИ КОМПЛЕКСНОЙ ОЧИСТКИ СТОЧНЫХ ВОД ТЕКСТИЛЬНЫХ ПРЕДПРИЯТИЙ. Galaxy International Interdisciplinary