Correction of iatrogenic injuries of the extrahepatic bile ducts and external bile fistulas using a minimally invasive technique

Turakulov U.N., Akbarov M.M., Saatov R.R.

Republican Specialized Scientific and Practical Medical Center Of Surgery Named After Academician V. Vakhidov Ministry Of Health of The Republic of Uzbekistan, TMA, Center For the Development of Professional Qualifications of Medical Workers.

Abstract: The problem of surgical correction of iatrogenic bile duct injuries (IBD) and external biliary fistulas (EBF) is one of the most pressing issues of abdominal surgery [1,2]. The urgency of the situation in APZhP and NZhS is due to the duration of the pathology, the increase in chronic obstructive jaundice and subsequent biliary cirrhosis, portal hypertension, purulent cholangitis, and liver failure. These patients undergo multiple restorative and reconstructive surgeries.

Keywords: reconstructive surgeries, intraoperative injuries, performing cholecystectomy.

The frequency of intraoperative injuries of the extrahepatic bile ducts reaches 0.2 - 3% of the total number of operations on the abdominal organs, and reconstructive operations lead to recurrence of strictures of the bile ducts and external bile fistulas (EBF) within 10-12%, and mortality in case of this ranges from 8 to 40% [3,4].

An analysis of the literature shows that in 90% of the cases, PVA are observed during cholecystectomy. If when performing cholecystectomy by laparotomic access, UAS occur from 0.8 to 1%, then with laparoscopic techniques they increase from 0.3 to 3% of cases [3,4]. Of course, the introduction of laparoscopic technology is evidence of the progress of medical science and practice, however, an increase in the number of laparoscopic interventions at the stage of mastering this technique inevitably leads to all kinds of complications. These iatrogenic complications require repeated high-tech interventions, not to mention the fact that the fate of these patients is sometimes dramatic.

Resections of the stomach lead to UAD in 0.4-9.1%, which is primarily due to the level of professional training of the surgeon, as well as the severity of the inflammatory-destructive process on the elements of the hepatoduodenal ligament.

Numerous restorative and reconstructive operations performed for this pathology, unfortunately, cannot be considered satisfactory. The possibilities of a relatively new direction in biliary tract surgery, endobiliary stenting, remain controversial [5,6]. As a result, further improvement of sparing methods of surgical treatment of iatrogenic lesions of

hepaticocholedochus and SJ remains a demanded problem, and discussions on this problem should end with an optimal solution.

Objective: To improve the results of surgical treatment of iatrogenic injuries of the extrahepatic biliary tract and external biliary fistulas using sparing endoscopic technologies.

Material and methods. Endoscopic retrograde cholangiopancreatography (ERCP) and polypositional fistulography are of decisive importance in the diagnosis of intraoperative injuries, cicatricial strictures and SVC to clarify the nature of the pathology and the choice of tactics for its elimination. We performed ERCP using a duodenofibroscope with side optics JF-B(B2), JF-10 from Olimpus (Japan). In “ RS NPM TsKH named after yeni and cad. V. Vakhidov ” from 2010 to 2022 296 studies were carried out . Of this number, ERCP was combined with subsequent endoscopic papillosphincterotomy (EPST) in 173 patients. Control ERCP was performed after EPST in 94 patients. The bougienage of the stenotic segment was carried out with biopsy forceps with local diathermocoagulation of the difficult-to-bouginate scar segment. After that, stenting of the stenotic site was performed. Standard endobiliary stents were used.

Results and its discussion. According to our data, the cause of the formation of cicatricial strictures and fistulas were: damage to the bile ducts and their inadequate drainage during cholecystectomy (9.2%), resection of the stomach (7.0%) and echinococcectomy (2.8%).

We performed 173 endoscopic transduodenal stentings of stenotic areas of the extrahepatic biliary tract after primary surgical interventions. In all cases, hepaticocholedochal strictures were found, which formed an external biliary fistula. At 36 cases, the stricture was located in the confluence zone and was of a critical nature, accompanied by the progression of obstructive jaundice. In this group of patients, direct bilirubin ranged from 200 to 300 μmol/l. Thirteen patients had initial signs of liver failure in the form of manifestations of encephalopathy, a decrease in albumin levels below 30 g/l, and a decrease in the prothrombin index below 82%. In 53 cases, the obstruction was located at the confluence of the cystic duct part of the common bile duct. The content of direct bilirubin in these patients ranged from 300 to 390 μm/l. They were delivered to our hospital before the development of liver failure. Using the endoscopic method, it was possible to restore the patency of the lumen of the hepaticocholedochus, and to carry out stenting of the stenotic segment, which led to recovery and discharge of patients after 6-8 days. In order to prevent encrustation of the drainage tube, a constant intake of deoxycholic acid preparations (henochol, chenofalk, ursosan) was prescribed. All these patients were under constant control in the postoperative period. There were no

complications associated with stenting of the external bile ducts in any case. At different times (from 6 to 10 months), the stents were removed by duodenoscopy.

Findings. Thus, the cause of intraoperative injuries, cicatricial strictures and external biliary fistulas is

There are tactical and gross technical errors during primary operations, more often during cholecystectomy.

Methods of endobiliary stenting are one of the main methods for correcting iatrogenic damage to the EBD and SGA. In a certain number of cases, they prevent patients from severe and sometimes repeated surgical interventions.

BIBLIOGRAPHY

1. .D. Z, Z., Zh. B, E., & Z. Z, M. (2022). Changes visual systems at patients with essential arterial hypertension. central asian journal of medical and natural sciences, 3(3), 744-750. retrieved from https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/85113
2. .Zuxridinovna, J. D. (2022). Ultrasonic Dopplerography of retinal vessels in acute cerebral ischemia against the background of arterial hypertension. central asian journal of medical and natural sciences, 3(3), 100-106. retrieved from https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/73714
3. A Sidikov, D Zaslavsky, A Sadykov, N Ibragimova,M Megna, O Olisova, D Kozlova, R Nasyrov, E. Shalaeva,T Garcia The new differential diagnostic test for the lichenoid drug eruption Dermatologic therapy, 2020 https://doi.org/10.1111/dth.13784
4. Ablakulova Munisa Hamrokulovna, Yuldashova Nadira Egamberdiyevna sovuqlik zanjiri – vaksinatsiya kuchi // ta'lim fidoyilari. 2022. №1. url: https://cyberleninka.ru/article/n/sovuqlik-zanjiri-vaksinatsiya-kuchi
5. Aliev M.A., Arynov N.M., Akhmedov E.A. Repeated operations on the biliary tract //Mat. X - Anniversary international conference of surgeons-hepatologists of the CIS countries. - With. 39-46.
6. Arifov S.S., Erkinlar Z.E., & Malikova N.N. (2021). modern methods of acne and post-acne therapy. the American journal of medical sciences and pharmaceutical research, 3(09), 147–153. https://doi.org/10.37547/TAJMSPR/Volume03Issue09-24
7. Cameron J .W., Skinnek DB, Luidema GD Long - term transephatic intubation for hilar hepatic duct strictures //Ann surg. - 1996. - Vol. 183-P 483-485.
8. Catt RB, Hogg DF, Clunic GH Retained Biliary Calculi: Denoval by a simple non-operative technique //Ann. Surg. - 1994. - Vol. 180: 2/ - P. 247-251.
9. Galperin E.I., Kuzovlev N.F., Karagyulyan S.R. Cicatricial strictures of the bile ducts. - M. - 1982 - p. 240.
10. Kholbayev, S. B., Yusupov, S. A., Yuldashova, N. E., & Sulaymanova, N. E. влияние медикаментозной терапии ожирения на клинические проявления остеоартроза коленных суставов на первичном звене здравоохранения. Здобутки клінічної і експериментальної медицини, (1), 181-187. https://ojs.tdmu.edu.ua/index.php/zdobutky-eks-med/article/download/11085/10568

11. Kholboyev, S., Yusupov, S. A., & Yuldashova, N. E. (2021). результати спостереження за особами, які перенесли covid-19, на первинній ланці охорони здоров'я. інфекційні хвороби, (1), 18–22. https://doi.org/10.11603/1681-2727.2021.1.11948
12. Khudoykulova Farida Vafokulovna. (2022). no alcohol of the liver diagnostic and treatment of obesity disease modern objectives. conference zone, 600–605. retrieved from http://www.conferencezone.org/index.php/cz/article/view/897
13. Khudoykulova Farida Vafokulovna. (2022). nonalcoholic fatty liver disease, modern considerations. conference zone, 592–599. retrieved from http://www.conferencezone.org/index.php/cz/article/view/896
14. L.Khakimova, D. Abdukhamidova, M. Akhmedova, & M.Ablakulova. (2022). acne in allergic skin diseases. texas journal of medical science, 8, https://zienjournals.com/index.php/tjms/article/view/1818
15. N Ibragimova, R Tregulova, N Normatova, S Djalalov-comparative analysis of the prevalence of type 2 diabetes according to the screening and register data in Uzbekistan - Endocrine Abstracts ISSN 1470-3947 (print) | ISSN 1479-6848 (online) https://www.endocrine-abstracts.org/ea/0056/abstracts/poster-presentations-diabetes-obesity-and-metabolism/diabetes-to-include-epidemiology-pathophysiology/ea0056p342/ https://doi.org/10.1530/endoabs.56.P342
16. N.N Malikova, K.Y Karimov, K.T Boboev, S.S Arifov - The CYP17A1 rs743572 gene polymorphism and risk of development and clinical features of Acne Vulgaris in the Uzbek population.International Journal of Biomedicine, 2019. https://www.elibrary.ru/item.asp?id=38469333
17. Nichitailo M.E., Skums A.V., Galochka I.P. Damage to the bile ducts during laparoscopic cholecystectomy // Annals of Surgical Hepatology - 2005. - No. 2. - S. 30-35.
18. Normatova N., Ibragimova N. Frequency of occurrence and factors of diabetic retinopathy advancement in people with DM type 2 in Uzbekistan //Endocrine Abstracts. – Bioscientifica, 2016. – Т. 41. https://www.endocrine-abstracts.org/ea/0041/ea0041ep520 https://doi.org/10.1530/endoabs.41.EP520
19. Pyagay Grigory Borisovich, & Nargiza Sayfutdinovna Ibragimova. (2023). THE effectiveness of conservative methods of treatment of actinic keratosis. conference zone, 150–155. retrieved from http://conferencezone.org/index.php/cz/article/view/948
20. Pyagay, Grigory Borisovich, & Nargiza Sayfutdinovna Ibragimova. (2023). criteria for selecting therapy for patients with actinic keratosis. conference zone, 156–161. retrieved from http://conferencezone.org/index.php/cz/article/view/949
21. Shapovalyants S.G., Orlov S.Yu., Pankov L.G., Budzinsky S.A. Endoscopic stenting for cicatricial strictures of the bile ducts // Annals of Surgical Hepatology, - 2005. - No. 2. - S. 68.
22. Zaslavsky D.V., Sidikov A.A., Garyutkina L.V., Pyagai G.B., Alaeva M.D., Ibragimova N.S., Malikova N.N., Kozlova D.V. A new principle for the diagnosis morphea in the onset of the disease // Russian Journal of Skin and Venereal Diseases. - 2021. - Vol. 24. - N. 3. - P. 263-274 https://doi.org/10.17816/dv72328 https://rjsvd.com/1560-9588/article/view/72328
23. Zukhriddinovna, Z. D. (2022). clinical and metabolic peculiarities children and teenagers with arterial hypertension. central asian journal of medical and natural

science, 3(3), 177-184. retrieved from https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/755

24. Zukhridinovna Z. D. modern aspects of neuroprotective treatment in hypertensive retinopathy //web of scientist: international scientific research journal. – 2022. – т. 3. – №. 02. – с. 949-952.
25. А.А Садиков, Н.С Ибрагимова, С.И Мавлянов - частота встречаемости кожной патологии у спортсменов при проведении углубленного медицинского осмотра (умо) и степень приверженности лечению. Безопасный спорт-2019. https://www.elibrary.ru/item.asp?id=41357327
26. А.А Садыков, Н.С Ибрагимова, А.А Юлдашев Зуд при коморбидных состояниях - va estetik tibbiyot, 2015 https://dermatology.uz/pdf/medic_juranal/Dermatologiya_N1_2015.pdf#page=29
27. Ахмедова Ш.У., Абдуллаева О.И., Даминова М.Н., Алиева Г.Р., Ибрагимова Х.Н. функциональное состояние эритроцитов у детей и подростков с сахарным диабетом 1 типа на фоне микробиоценоза кишечника // нау. 2015. №4-4 (9). url: https://cyberleninka.ru/article/n/funktsionalnoe-sostoyanie-eritrotsitov-u-detey-i-podrostkov-s-saharnym-diabetom-1-tipa-na-fone-mikrobiotsenoza-kishechnika
28. Бабаев S., Бектурдиев S., Рахимов N., Джалалова D., Юсупова D., & Шаханова S. (2021). Assessment of the state of immunity in patients with tumors. in Library, 21(2), 218–225. извлечено от https://inlibrary.uz/index.php/archive/article/view/14549
29. Ваисов А. Ш., Ташкенбаева У. А., Ибрагимова Н. С. Современные аспекты этиологии, патогенеза, течения и ранней диагностики васкулитов: обзор //Новости дерматовенерол. и репрод. здоровья. – 2007. – №. 2. – С. 88.
30. Жалалова Д.З, Эшонкулов Ж.Б, Муратов З.З изменения зрительной системы у пациентов с эссенциальной артериальной гипертензией // sai. 2022. №d3. URL: https://cyberleninka.ru/article/n/izmeneniya-zritelnoy-sistemy-u-patsientov-s-essentsialnoy-arterialnoy-gipertenziey
31. И.У Салимова, Ш.Т Аюпова, Н.С Ибрагимова аспекты псориаза в дерматологии - Spirit Time, 2020 https://www.elibrary.ru/item.asp?id=42780705
32. Камалова, Ё., Наимова, Х., Мавлянова, З., & Набиев, З. (2014). физиотерапия при острых респираторных заболеваниях у детей и подростков. журнал проблемы биологии и медицины, (3 (79), 108. извлечено от https://inlibrary.uz/index.php/problems_biology/article/view/5063
33. Лапасов С.Х., Хакимова Л.Р., Аблакулова М.Х., Валиева М.Х. диагностика, лечение и профилактика хронического гепатита b с позиции доказательной медицины // человек и его здоровье. 2015. №3. url: https://cyberleninka.ru/article/n/diagnostika-lechenie-i-profilaktika-hronicheskogo-gepatita-b-s-pozitsii-dokazatelnoy-meditsiny
34. Маматкулов, Х., Кудратова, М., Рахимова, Х., Сулайманова, Н., Юлдашева, Н., & Пен, А. (2011). Значение социальных факторов в психоэмоциональном рразвитии и формировании как личности детей школьного возраста от 10 до 14 лет. Журнал вестник врача, 1(4), 76–77. извлечено от https://inlibrary.uz/index.php/doctors_herald/article/view/12319
35. Мухамедов, Б., Хаджиметов, А., & Садыков, А. (2022). взаимосвязь показателей липидного состава сыворотки крови и ацетиляторного статуса у больных вирусным гепатитом с проявлениями дерматологического характера. research and

education, 1(9), 231–240. retrieved from http://researchedu.org/index.php/re/article/view/976

36. Пягай, Г., Ибрагимова, Н., Мухамедов, Б., Маликова, Н., & Аллаева М. (2021). клинический случай поздней диагностики пигментной крапивницы. медицина и инновации, 1(1), 148–150. извлечено от https://inlibrary.uz/index.php/medicine_and_innovations/article/view/55
37. Сулайманова N., Рахимова Х. ., & Юлдашова N. . (2022). особенности назначения лекарственных препаратов пациентам пожилого возраста. журнал кардиореспираторных исследований, 2(3), 85–88. https://doi.org/10.26739.2181-0974-2021-3-17
38. Хакимова Л. и др. результаты оценки знаний и навыков слушателей последипломного медицинского образования посредством использования тестов множественного выбора //медицинское образование сегодня. – 2018. – с. 116. http://elib.kirovgma.ru/sites/default/files/3-2-pb.pdf#page=116
39. Холбоев С., & Юлдашова, Н. (2022). результаты анализа основанные на миссии воз и китайской народной республики по проблеме новой коронавирусной инфекции covid-2019. Журнал кардиореспираторных исследований, 1(SI-1), 81. https://doi.org/10.26739.2181-0974-2020-SI-1-29
40. Худойкулова, Ф. В., Ибрагимова, М. Ш., Равшанова, М. З., Бурханова, Г. Л., & Абдухамидова, Д. Х. (2023). the structure, age features, and functions of hormones. pedagog, 1(5), 681-688. https://bestpublication.org/index.php/pedg/article/view/3166 https://bestpublication.org/index.php/pedg/article/view/3166/3037
41. Хусинова, Ш., & Аблакулова, М. (2017). Преддиабет. Журнал проблемы биологии и медицины, (1 (93), 215–217. извлечено от https://inlibrary.uz/index.php/problems_biology/article/view/2968
42. Юлдашова, Н., Сулейманова, Н., Марданова, М., & Халилова, Н. (2018). Диагностика и лечение эпилепсии у взрослых. Журнал проблемы биологии и медицины, (3 (102), 198–202. извлечено от https://inlibrary.uz/index.php/problems_biology/article/view/2636