

EFFECTIVENESS AND SAFETY OF ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY FOR POST-CHOLECYSTECTOMY BILE DUCT INJURIES IN DUHOK / IRAQ

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ABSTRACT

Background: Post-cholecystectomy bile duct injuries constitute a significant clinical problem. Endoscopic Retrograde Cholangiopancreatography (ERCP) now has a major role in treating this condition using endoscopically applied therapeutic interventions.

Objective: to determine the effectiveness and safety of ERCP for management of post-cholecystectomy bile duct injuries in Duhok – Kurdistan region – Iraq.

Patients and methods: This is a prospective study that was carried out in Duhok-Iraq from January 2015 to January 2025. It included 103 patients. ERCP was done in all patients, and bile duct injuries were classified by Amsterdam classification. The study included a follow up period of 3-12 months to conclude the outcomes of ERCP.

Results: The study included 85 females & 18 males. The mean age was 44 years (95% CI = 42.1-46.2). The method of cholecystectomy was laparoscopic in 83 (80.6%) and open in 20 (19.4%). The post-cholecystectomy bile duct injuries were of Amsterdam class - A in 63 (61.1%), class-B in 25 (24.3%), class-C in 10 (9.7%) and class-D in 5 (4.9%). The success rate for ERCP was 91.3% (N=94). The most common complication of ERCP was pancreatitis (N=10, 9.7%). No mortality was reported in this study. There was significant statistical association between the method of cholecystectomy and having class-A bile duct injury (P-value = 0.0005).

Conclusion: This study emphasizes the essential role of ERCP in the diagnosis and treatment of post-cholecystectomy bile duct injuries and establishes its effectiveness and safety. ERCP should have a primary role in management of these injuries in our area.

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Keywords: ERCP, post-cholecystectomy, bile duct injury, Duhok.

Cholecystectomy is a common surgical procedure for gallbladder disease, the most common of which is gallstones^[1]. Laparoscopic cholecystectomy which was initiated in 1988 and rapidly gained acceptance by both surgeons and patients due to the quick recovery, decreased hospital stay, less postoperative abdominal pain, reduced morbidity, and minor incisions^[1,2]. It is now considered the gold standard resection method for symptomatic

gallbladder pathologies^[3]. Despite these advantages, the reported incidence of complications from laparoscopic cholecystectomy are generally double those of open cholecystectomy^[4,5].

Post-cholecystectomy bile duct injuries (PBDI) are defined as partial or total division and / or obstruction of the biliary tree ducts after cholecystectomy. The incidence of bile duct injury with open cholecystectomy was reported to be 0.1-

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0.2% while with laparoscopic cholecystectomy it was 0.3-0.5%^[2]. Recent studies are reporting similar rates of bile duct injury after laparoscopic and open techniques attributed to the better learning curves [6]. Bile duct injuries have a great impact on the patients, surgeons and health care systems and can be life-threatening. They can manifest as abdominal pain, surgical drain bile leaks, fever, jaundice and can be presented as delayed strictures from fibrosis following thermal injury. These injuries, if not recognized in the intraoperative period, can be diagnosed by incorporating clinical features with biochemical investigations and imaging studies^[7,8].

Traditionally bile duct injuries were treated by surgery but the advent of Endoscopic Retrograde Cholangiopancreatography (ERCP) and the technical advances in the field of endoscopy have revolutionized the management of bile duct injuries and ERCP is now a key diagnostic and therapeutic tool for these injuries^[9]. The advantages of ERCP include confirming the diagnosis, identifying the site and extent of injury, excluding coexisting bile duct stones, being minimally invasive, having lower cost, associated with lower rates of morbidity and mortality^[3,4,10]. Studies have documented that on-time ERCP has a significant favorable impact on morbidity and patient outcomes when compared to deferred interventions^[11,12]. The reported rates of success of ERCP in the management of bile duct injury range from 80-100%^[4,13]. However, ERCP is a procedure with technical difficulties and carries a rate of complications that is generally 5-15% which includes pancreatitis, bleeding, perforation and sedation related complications^[14]. There is a paucity of local data from Iraq, therefore this study was planned aiming to determine the effectiveness and safety of ERCP for management of PBDI.

PATIENTS AND METHODS:

This is a prospective study that was carried out in Azadi gastroenterology and hepatology center, Vin hospital and Jeen clinics in Duhok city - Kurdistan region - Iraq. The study extended over a period of 10 years from January 2015 to January 2025. The study population consisted of 103 patients who were referred to these facilities as cases of suspected PBDI based on clinical manifestation (abdominal pain, jaundice, fever and /or leak from the wound or drain), laboratory testing (abnormal liver biochemical tests) and imaging studies (showing fluid collection, dilated bile duct or bile duct filling defects). We excluded patients with non-biliary associated post-cholecystectomy complications (eg wound infections, diarrhea,...etc). The study design was approved by the scientific committee of the college of medicine in Duhok University number 2536X and informed consent was obtained from all patients.

Patients were assessed before the ERCP to record clinical data (details of cholecystectomy, presenting symptoms and time interval between cholecystectomy and symptoms). The presenting symptoms included abdominal pain (right hypochondrial or epigastric pain), jaundice, fever, and biliary leak from the drain or wound. Then the initial diagnostic work up was conducted by assessing the liver biochemical tests and doing trans-abdominal ultrasound. The magnetic resonance cholangiopancreatography (MRCP) was done in 99 cases as 4 patients had contraindications for MRCP (pacemakers and shell injuries) and CT scan was done in 24 patients.

The ERCP was performed under conscious sedation by an experienced gastroenterologist. The initial cholangiogram was taken to identify the characteristics of the bile duct injury including its nature and site. Thereafter, therapeutic interventions were done depending on this cholangiogram. Amsterdam classification was used for the bile duct injuries in this study which was

used to guide the management strategy. This classification divides bile duct injuries into four types. Type-A is peripheral leaks from the cystic duct, aberrant or peripheral hepatic branches. This type was treated with sphincterotomy and stent insertion for 6 weeks. Type-B are major bile duct leaks with or without biliary strictures and these are managed with stenting for 3 months. Type-C are bile duct strictures without bile leaks and were treated with sequential stents for 1 year. Type-D included complete transection of the bile duct and these were referred for surgical operation^[15].

After ERCP patients were admitted to the medical ward under observation for 24 hours. Further decision to discharge or keep the patient in the hospital was guided by the patient's clinical status. Post-ERCP complications were documented using Cotton consensus classification as mild-moderate and severe^[15] and managed accordingly. The follow up was done on outpatient base at one week and then monthly for 3 months. For strictures, the stents were exchanged every 3 months for 1 year. On each follow up visit, patients were assessed clinically, and investigations (liver biochemical tests and abdominal ultrasound) were done. Further investigations like MRCP were ordered if necessary. The outcome of ERCP was considered effective when it was technically successful and resulted in complete improvement of symptoms and

normalization of liver biochemical tests. For strictures, there should have been restoration of luminal continuity on cholangiogram taken at 1 year. For leaks, there should be no extravasation of the contrast on subsequent ERCP conducted at 6-12 weeks^[16]. Analysis of data using Statistical Package for the Social Sciences (SPSS) program version 30.0 for windows was done. Statistical analysis was conducted to calculate the P-value using χ^2 (or Fisher's exact test if an expected number in any cell was less than 5). For the associations or differences to be significant, the P-value should have been less than 0.05.

RESULTS

Of the study population, 85 (82.5%) were females & 18 (17.5%) were males with female: male ratio being 4.7:1. The mean age was 44 years (range = 16 -72 years, 95% CI = 42.1-46.2). The method of cholecystectomy was laparoscopic in 83 patients (80.6%) and open in 20 patients (19.4%). Abdominal pain was the most common presentation (N = 56, 54.3%). The time interval between surgery and clinical presentation was less than 1 week in 88 patients (85.4%) while 10 patients (9.7%) presented after 1 year. The most common indication for cholecystectomy was symptomatic gallstones (N=55, 53.4%) followed by acute cholecystitis (N=31, 30%) as shown in table-1.

Table-1: Clinical data of study population (N = 103)

SN	Parameters	Number	Percentage
1	Clinical presentation		
1.1	Abdominal pain	56	54.3%
1.2	Biliary leak from the drain or wound	21	20.4%
1.3	Jaundice	18	17.5%
1.4	Fever	8	7.8%
2	Duration from surgery to presentation		
2.1	Less than 1 week	88	85.4%
2.2	1 week to 1 month	5	4.9%
2.3	1 month to 1 year	10	9.7%
3	Indications of cholecystectomy		
3.1	Symptomatic gallstones	55	53.4%
3.2	Acute cholecystitis	31	30%
3.3	Chronic cholecystitis	12	11.6%
3.4	Empyema	3	3%
3.5	Gallbladder tumor	2	2%

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The laboratory data are shown in table-2. About three quarters had high alkaline phosphatase while less than a half had

abnormal total serum bilirubin and aminotransferases.

Table-2: Laboratory data of study population (N = 103)

Parameter	Aspartate aminotransferase (IU/L)	Alanine aminotransferase (IU/L)	Alkaline Phosphatase (IU/L)	Total serum bilirubin (mg/dl)
Mean (95% CI)	56 (53.2-58.6)	62 (58.8-65.3)	403 (389-418)	3 (2.7-3.4)
Range	5-207	7-249	67-1240	0.3-21
No. of patients with value more than upper normal	42 (40.8%)	49 (47.6%)	78 (75.7%)	50 (48.5%)

All the patients had trans-abdominal ultrasound while 99 patients had MRCP and 24 patients had CT scan. The findings on these imaging studies are shown in table-3 which included bile duct dilatation, filling defects, leaks, cut off/missed segment or abnormal collection. The most common finding on trans-abdominal ultrasound was abnormal collection (N=52, 50.5%).

MRCP could identify features of bile duct injury (leak, cut off/missed segment or abnormal collection) in 82 cases (79.6%) including showing missed stones in 10 cases (9.7%) and was non-informative in 17 (16.5%) of cases. CT scan was only able to confirm the finding on trans-abdominal ultrasound.

Table-3: Imaging studies of study population (N = 103)

Parameter	Trans-abdominal ultrasound	MRCP	Computed Tomography
No. of patients	103 (100%)	99 (96.1%)	24 (23.3%)
Range of bile duct diameter (mean, 95)	5-24 mm (9 mm)	4-28 mm (10.1 mm)	5-17 (9.3 mm)
Leak	None	37 (36%)	None
Cut off / Missed segment	None	20 (19.4%)	None
Abnormal collection	52 (50.5%)	25 (24.3%)	18 (17.5%)
Stone / filling defects	7 (6.7%)	10 (9.7%)	3 (3%)

MRCP = Magnetic resonance cholangiopancreatography

All the patients were subjected to ERCP. The PBDI were of Amsterdam class - A in 63 (61.1%), class - B in 25 (24.3%), class - C in 10 (9.7%) and class - D in 5 (4.9%) as shown in figure-1. Table-4 shows that the

overall success rate for endoscopic intervention was 91.3% (N=94). The most common complication of ERCP was pancreatitis (N=10, 9.7%). No mortality was reported in this study.

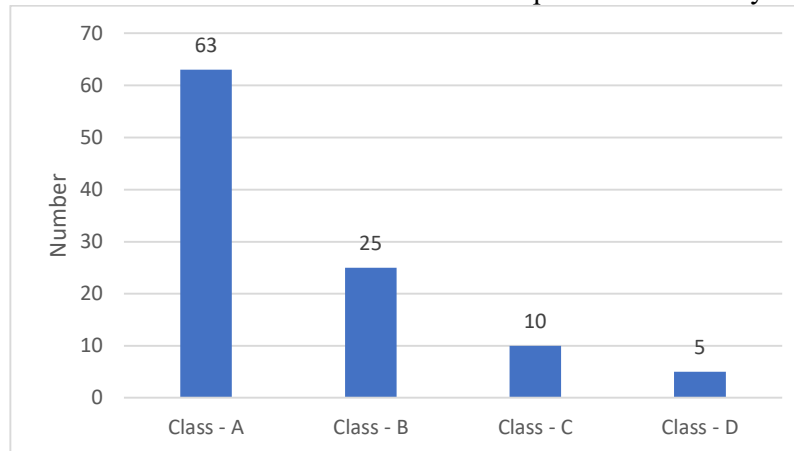


Figure-1: Amsterdam classification of PBDI (N=103)

Table - 4: Amsterdam class, interventions, follow up & complications of ERCP (N = 103)

Amsterdam class	No.	Intervention		Follow up		Complications		
		ES + Stent	Stone extraction	Improved	Referred for surgery	Pancreatitis	Cholangitis	Bleeding
Class - A	63 (61.1%)	61 (59.3%)	7 (6.7%)	61 (59.3%)	2 (2%)	6 (5.8%)	1 (1%)	0
Class - B	25 (24.3%)	24 (23.3%)	3 (3%)	24 (23.3%)	1 (1%)	3 (3%)	0	0
Class - C	10 (9.7%)	9 (8.7%)	0 (0%)	9 (8.7%)	1 (1%)	1 (1%)	1 (1%)	0
Class - D	5 (4.9%)	0	0	0	5 (4.9%)	0	0	0

Abbreviations: ES = Endoscopic Sphincterotomy, ERCP= Endoscopic Retrograde Cholangio-Pancreatography

A significant statistical association between the method of cholecystectomy and having class-A bile duct injury (P-value = 0.0005) was observed (Table 5). There was no

significant statistical association between the method of cholecystectomy and indication of cholecystectomy or success rate or complications of ERCP (P > 0.05).

Table-5: comparison between laparoscopic and open cholecystectomy (N=103)

SN	Parameter	Laparoscopic cholecystectomy (N=83)	Open cholecystectomy (N=20)	P-value
1	Indications of cholecystectomy			
1.1	Symptomatic gallstones	46	9	0.5
1.2	Acute cholecystitis	26	5	0.7
1.3	Chronic cholecystitis	9	3	0.8
1.4	Empyema	1	2	0.1
1.5	Gallbladder tumor	1	1	0.2
2	Amsterdam class			
2.1	Class - A	51	12	0.0005
2.2	Class - B	18	7	0.3
2.3	Class - C	9	1	0.7
2.4	Class - D	5	0	0.3
3	ERCP			
3.1	Success	77	17	0.4
3.2	Complications	9	3	0.6

ERCP= Endoscopic Retrograde Cholangio-Pancreatography

DISCUSSION

Despite the long history of cholecystectomy (first done in 1882) and all the scientific advances in the surgical field, it continues to have a well-recognized spectrum of complications that are although uncommon but have impact on patients' morbidity and can result in mortality in addition to increasing the financial burden [9]. The discovery of laparoscopic cholecystectomy has been a great advance that resulted in more patient's comfort and faster recovery but unfortunately the complication rate and

especially bile duct injuries have increased despite all the intraoperative precautions taken to reduce such complications [7]. It is important to remember that we are dealing with an expanding problem as data show that gallbladder disease prevalence has been doubled in USA over the past 3 decades [17] and as the frequency of cholecystectomies has increased after laparoscopic cholecystectomy, the bile duct injuries have also increased [8].

The currently available treatment lines for PBDI are surgery, ERCP and percutaneous transhepatic biliary drainage (PTBD). The

morbidity and mortality associated with surgery and PTBD are higher than that of ERCP, hence ERCP is now considered the modality of first choice as it can complete the diagnosis and initiate therapy in the form of sphincterotomy and stenting. Surgery and PTBD are now used for patients in whom ERCP was not successful^[18]. Much of the acceptance and enthusiasm for ERCP in clinical practice has developed without robust data from comparative trials to guide clinicians in the decision-making process. This has made it difficult to carry out randomized controlled trials. However, it is of paramount importance to conduct studies aiming at determining the proper use of ERCP in various categories of patients by identifying the safety and effectiveness of ERCP in such patients so that we can have the best scientific evidence upon which we can allocate patients to the endoscopic or surgical interventions to achieve the best outcome^[19]. From this point of view, we planned and implemented this study to have our local data which could aid us in selecting the best strategy of treatment for our patients. The general findings of this study align and add to the current literature on this important topic.

Laparoscopic cholecystectomy is now the standard of care for many gallbladder diseases with accepted conversion rates of 5-10%^[20] but in this study, 20 patients (19.4%) have been cholecystectomized with open cholecystectomy. This might be attributed to that many of the referred patients were from secondary hospitals in districts where open cholecystectomy is still in wide practice by surgeons lacking adequate experience and training in laparoscopic surgery and this may also result in more complications associated with lower ability to identify such complications intra-operatively. Another explanation for this may be the level of difficulty of the cases in the form of having acute inflammation or congenital abnormalities which makes bile duct injury more likely. This was reported in studies

elsewhere and may further stress the important role of ERCP in the management of post-cholecystectomy bile duct injuries^[3,9].

Most of the patients in this study were females and the mean age was 44 years which is concordant with that reported by other studies and the well-known fact that gallstone disease, which is the most common indication for cholecystectomy, is more common in young females^[3,21]. In this study, the most common presentation was abdominal pain (N = 56, 54.3%) which was also the most common presentation in some studies^[8,15] while a study by Bakhsh et al^[22] reported jaundice as the most common presentation followed by abdominal pain. Majority of patients (N=88, 85.4%) presented within one week from the time of surgery and this is reported in other studies^[15,16]. The mode of presentation and the time interval between surgery and presentation reflects the heterogeneity and severity of bile duct injury and depending on that the timing of ERCP for bile duct injury is still a debatable issue, with time intervals that can vary from intraoperative ERCP to many months after the offending surgery^[7]. The most common indication for cholecystectomy was symptomatic gallstones (N=55, 53.4%) followed by acute cholecystitis (N=31, 30%). This has been reported by a study^[3] while another study found that acute cholecystitis was the most indication of cholecystectomy^[2].

Liver biochemical tests are requested during assessment of all patients with biliary disease. Alkaline phosphatase was the most likely test to be abnormal followed by serum bilirubin and then transaminases and one in four patients had normal liver biochemical test which implies that normal liver biochemical tests should not divert the physician from demanding more advanced investigation especially when biliary leaks are suspected where liver biochemical test can be normal or only mildly elevated^[23].

The use of imaging studies is an important part in the assessment of post-

cholecystectomy biliary leaks and in this study ultrasound was requested in all cases while MRCP was requested in 96% of the cases. Ultrasound was able to detect collection in 50% which is comparable to that from another study [24]. MRCP was abnormal in 79.6% of cases which is much lower than that reported in other studies which could approach 95% and this could be due to the limited experience of the interpreting radiologists and the fact that MRCP is less sensitive in biliary leaks [24]. CT scan was only able to reinforce the ultrasound findings. The previous discussion takes us to the conclusion that the use of clinical manifestations, laboratory tests and imaging studies cannot reliably identify PBDI. This enforces the role of ERCP in finalizing the diagnosis, identifying the site and severity of bile duct injury and initiating therapeutic interventions [24].

The success rate of ERCP in this study was 91.3%. This included deep cannulation, taking occlusion cholangiogram and doing the therapeutic intervention in the form of stenting in addition to stone extraction when present. Sphincterotomy was done to facilitate stenting and stone extraction. This success rate is comparable to that achieved by other studies [3,25] although some studies reported success rates of 100% [10, 16]. The most common bile duct injury class was Amsterdam class - A in 63 (61.1%) followed by class - B in 25 (24.3%) and class - C in 10 (9.7%) while class - D was present in 5 (4.9%). This generally aligns with findings from studies done elsewhere [15,16,25]. ERCP failed to achieve the identified outcome in 9 patients, 5 of them had class - D injury in which the guidewire could not be passed through the missing segment, and endoscopy has a very high failure rate in these cases [26]. One patient had class - C in which ERCP failed to result in stricture resolution despite technical success and this has been reported in other studies also [4]. In the 3 patients with class - A and class - B bile duct injury, deep

cannulation failed due to the presence of large periampullary diverticulum interfering with safe deep cannulation. This is added to the lack of prominent bile duct dilatation making PTBD or Rendezvous procedure technically difficult or unsafe for them [27].

ERCP was safe in this study with a complication rate of 11.6% (N=12) with most common complication being pancreatitis at a rate of 9.7% (N=10) and cholangitis at rate of 2% (N=2). This is within the acceptable rates of ERCP complications, which is 5-15%. Fortunately, all the cases of complications were mild cases and were treated medically with good outcomes. No mortality was reported in this study while other studies have reported mortality rates up to 3.5% [27]. There was a significant statistical association between the method of cholecystectomy and having class - A bile duct injury (P-value = 0.0005). This class of bile duct injury is mostly due to slipped clips or partial clipping of the bile duct or thermal injury of the biliary tree and they are reported more with laparoscopic cholecystectomy than open cholecystectomy [15,16]. There was no significant statistical association between the method of cholecystectomy and indication of cholecystectomy or success rate or complications of ERCP (P > 0.05). This makes us reach the final conclusion which is that even if laparoscopic cholecystectomy has higher incidence of complications [7], the characteristics of these complications and effectiveness of endoscopic management is not influenced by the method of cholecystectomy. This has been shown in other studies which also showed that although bile duct injuries are reported to be more common in laparoscopic cholecystectomy, the overall complication rate reported by recent studies depending on standardized methods are lower with laparoscopic cholecystectomy compared to open cholecystectomy reflecting a declining trend of

complications with laparoscopic cholecystectomy gained by better learning curves and more experience in laparoscopic surgery^[28].

This study had a good sample size and adequate follow up period but still had limitations of being a case series which have inherent limitations in establishing causality, controlling for bias and universalizing findings.

CONCLUSION:

This study strengthens the emerging role of ERCP as an effective and safe tool for the diagnosis and treatment of PBDI. Surgeons are advised to be cautious about PBDI but when PBDI occurs, then they must consider ERCP as a pivotal step in the management of PBDI especially in our area where repeat surgery and PTBD can be more hazardous. Future larger multicenter randomized studies are needed to confirm or refute our findings.

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کاریگەری و سەلامەتی کۆلۆنجیۆپانکریاتۆگرافی پاشەکشەیی ئەندۆسکۆپی بۆ برینەکانی بۆری زەرداو لە دواى کۆلیستیکتۆمى لە دهۆک / عێراق

پوختە

پێشەکی: برینەکانی بۆری زەرداوی دواى نەشتەرگەری کیسی کۆلیستیکت کێشەیهکی کلینیکی بەرچاو پێکدههێنن. ئیستا کۆلۆنجیۆپانکریاتۆگرافی پاشەکشەیی ئەندۆسکۆپی (ERCP) رۆلێکی سەرەکی ھەیە لە چارەسەرکردنی ئەم ھالەتەدا بە بەکارھێنانی دەستیوەرەدانەکانی چارەسەری ئەندۆسکۆپی بەکارھێنراو.

نارماتج: دیاریکردنی کاریگەری و سەلامەتی ERCP بۆ بەرپۆمەردنی برینەکانی بۆری زەرداو دواى نەشتەرگەری کۆلیستیکتۆمى لە دهۆک - ھەریمی کوردستان - عێراق.

نەخۆش و شێوازەکان: ئەمە توێژینەمیەکە ئابنەییە کە لە دهۆک-عێراق لە مانگی یەکى ساڵی 2015 تا مانگی یەکی ساڵی 2025 ئەنجامدراوە، 103 نەخۆشی لەخۆگرتووە. ERCP لە ھەموو نەخۆشەکاندا ئەنجامدرا، و برینەکانی بۆری زەرداو بەپێی پۆلێنکردنی ئەمستردام پۆلێن کران. توێژینەمیەکە ماوەی بەدواداچوونی 3-12 مانگی لەخۆگرتبوو بۆ کۆتاییهێنان بە دەرئەنجامەکانی ERCP.

ئەنجام: توێژینەمیەکە 85 مێ و 18 نێر لەخۆگرتبوو. مامناوەندی تەمەن 44 ساڵ بوو ($CI = 42.1-46.2\%$). شێوازی نەشتەرگەری نەشتەرگەری لاپارۆسکۆپی لە 83 (80.6%) و کراوە بوو لە 20 (19.4%). برینەکانی بۆری زەرداوی دواى نەشتەرگەری کۆلیستیکتۆمى پۆلی ئەمستردام بوون - A لە 63 (61.1%)، پۆلی-B لە 25 (24.3%)، پۆلی-C لە 10 (9.7%) و پۆلی-D لە 5 (4.9%). رێژەی سەرکەوتن بۆ ERCP 91.3% بوو (N=94). باوترین ئالۆزبەکانی ERCP ھۆکردنی پەنکریاس بوو (N=10، 9.7%). لەم توێژینەمیەدا ھیچ ھالەتێکی مردن راپۆرت نەکراوە. پەیوەندییەکی ناماری بەرچاو لە نێوان شێوازی نەشتەرگەری لابردنی کیسی کۆلیستیکتۆمى و ھەبوونی برینداربوونی بۆری زەرداوی پۆلی A ھەبوو ($P = 0.0005$).

دەرئەنجام: ئەم توێژینەمیە جەخت لەسەر رۆلی بنەرەتی ERCP دەکاتەوێ لە دەستتێشانکردن و چارەسەرکردنی برینەکانی بۆری زەرداوی دواى کۆلیستیکتۆمى و کاریگەری و سەلامەتیەکی دادەمەزرێنێت. پێویستە ERCP رۆلەکی سەرەکی ھەبێت لە بەرپۆمەردنی ئەم برینانە لە ناوچەکەماندا.

فعالية وسلامة تصوير القنوات الصفراوية والبنكرياس بالمنظار الرجوعي في إصابات القناة الصفراوية بعد استئصال المرارة في دهوك / العراق

الخلاصة

الخلفية والأهداف: إصابات القناة الصفراوية بعد استئصال المرارة تعد مشكلة سريرية مهمة. يعد تصوير القنوات الصفراوية والبنكرياس بالمنظار الرجوعي (ERCP) الآن أداة أساسية في علاج هذه الحالة باستخدام التدخلات العلاجية المنفذة بالمنظار.

الهدف: تحديد فعالية وسلامة الـ ERCP في علاج إصابات القناة الصفراوية بعد استئصال المرارة في دهوك – إقليم كردستان – العراق.

الطرق: هذه دراسة مستقبلية أجريت في دهوك – العراق، من يناير 2015 إلى يناير 2025. شملت 103 مريض. أجري ERCP لجميع المرضى، وصنفت الإصابات الصفراوية وفقا لتصنيف أمستردام. تضمنت الدراسة فترة متابعة تراوحت بين 3-12 شهرا لتقييم نتائج الـ (ERCP).

النتائج: شملت الدراسة 85 أنثى و18 ذكرا. كان متوسط العمر 44 سنة. (95% CI = 42.1–46.2) أجري استئصال المرارة بالمنظار لـ 83 مريضا (80.6%) وبالطريقة المفتوحة لـ 20 (19.4%). كانت إصابات القناة الصفراوية بعد استئصال المرارة من الفئة A في 63 (61.1%)، والفئة B في 25 (24.3%)، والفئة C في 10 (9.7%)، والفئة D في 5 (4.9%). بلغت نسبة نجاح الـ ERCP 91.3%. (N=94) كانت المضاعفة الأكثر شيوعا هي التهاب البنكرياس 9.7% (N=10)، لم تسجل أي وفيات. وجد ارتباط إحصائي معنوي بين طريقة استئصال المرارة وحدوث إصابة من الفئة A. (P=0.0005).

الاستنتاجات: تؤكد هذه الدراسة الدور الأساسي للـ ERCP في تشخيص وعلاج إصابات القناة الصفراوية بعد استئصال المرارة، وتثبت فعاليته وسلامته. ينبغي أن يكون للـ ERCP دور رئيسي في تدبير هذه الإصابات في منطقتنا.