РЕЗЮМЕТА НА НАУЧНИТЕ ТРУДОВЕ

CONTROL ID: 3700244

EUS-GUIDED BILIARY DRAINAGE VERSUS ERCP IN MALIGNANT BILIARY OBSTRUCTION PRIOR TO HEPATOBILIARY SURGERY: AN INTERNATIONAL MULTICENTER COMPARATIVE STUDY

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Introduction: Endoscopic ultrasound-guided biliary drainage (EUS-BD) has become the procedure of choice for relieving biliary obstruction in patients who cannot undergo traditional endoscopic retrograde cholangiopancreatography (ERCP). Certain patients may require hepatobiliary surgery after EUS-BD; the outcomes of patients undergoing surgery after EUS-BD is unknown. We compare feasibility and outcomes of hepatobiliary surgery after EUS-BD compared to after conventional ERCP. Methods: We conducted a multicenter international cohort study of patients who underwent hepatobiliary surgery after having undergone EUS-BD or ERCP from 6 tertiary care centers. Patient demographics, procedural data (endoscopic and surgical), and follow-up care were collected in a dedicated registry. Results: 145 patients were included: EUS-BD n=58 (mean age 66, 45%male), ERCP n=87 (mean age 68, 53%male) (Table 1 and 2). The majority of patients had pancreatic cancer, cholangiocarcinoma, or gallbladder malignancy. In the EUS- BD group, 29 patients had hepaticogastrostomy, 24 had choledochoduodenostomy, and 5 had transpapillary stent placement via rendez-vous technique. Most patients in the EUS-BD group had metal stents placed; most patients in the ERCP group had plastic stents placed. The most common surgery was whipple in both groups (n=41 EUS-BD, n=56 ERCP) followed by partial hepatectomy (n=7 EUS-BD, n=14 ERCP) and cholecystectomy (n=2 EUS-BD, n=2 ERCP). Endoscopy technical and clinical success was high in both groups (100% and 98% EUS-BD, 95% and 94% ERCP). Endoscopy adverse event rates were similar in both groups, though consisted mainly of biloma and bleeding in the EUS-BD group (n=10, 17%) and pancreatitis, cholangitis, and bleeding in the ERCP group (n-23, 26%). The need for repeat intervention prior to surgery was significantly higher in the ERCP group (38% vs 9%, p=0.0001). Total length of hospital stay from endoscopy to discharge was similar in both groups. Time between endoscopic procedure and surgical intervention was significantly shorter in the EUS-BD group (37 days vs 64 days, p=0.0205). Surgery technical success and clinical success were significantly higher in the EUS-BD group compared to the ERCP group (97% vs 83%, 97% vs 75%). Surgery adverse event rates and re-intervention rates after surgery were similar in both groups. Total length of hospital stay from surgery to discharge was significantly higher in the ERCP group (19 days vs 10 days, p=0.0082). Conclusions: Undergoing EUS-BD versus ERCP prior to hepatobiliary surgery is associated with fewer repeat endoscopic interventions prior to surgery, shorter duration between endoscopy and surgical intervention, higher rates of surgical technical and clinical success, and shorter length of hospital stay after surgery. EUS-BD may be a better option for patients with biliary obstruction pending hepatobiliary surgery.

n=145	EUS-BD, n=58	ERCP, n=87	
Age	Mean 66 years	Mean 68 years	
Gender	26 Males	46 Males	
Underlying diagnosis	Malignant=58	Malignant =87	
Diagnosis	CCA=12, PanCa=41, Other Malignancy=1, Other=4	PanCa=58, CCA=22, Gallbladder cancer=2, Other=5	
Failed conventional ERCP?	Yes, n=56	NA	
Abnormal anatomy?	Yes, n=2	Yes, n=4	
Stent location	Hepaticogastrostomy=29, Choledochoduodenostomy=24, Transpapillary via RDV=5	NA	
Type of stent placed	Plastic = 9, Metal =51	Plastic=65, Metal=13	
Endoscopy technical success (stent deployment)	n=58, 100%	n=83, 95%	
Endoscopy clinical success: resolution of obstruction post-procedure	Yes, n=57 (98%)	Yes, n=82 (94%)	
Endoscopy adverse events	Biloma=3, Bleeding = 4, Infection =1, Stent Dislodgement=2 (n=10, 17%)	Infection=2, Bleeding=7, Post-ERCP Pancreatitis=10, Cholangitis=4 (n=23, 26%)	p value 0.2288
Total length of hospital stay from endoscopy to discharge	Mean 6.7 days	Mean 9.25 days	p-value 0.3844
Additional intervention required	Yes, n=5 (9%)	Yes, n=33 (38%)	p- value 0.0001

Table 1

Type of surgery performed	Whipple=41, Diagnostic Lap=2, BD deviation=5, CCY=2, Partial hepatectomy=7, Gastroenterostomy=1	Whipple=56, Diagnostic Lap=4, CCY=2, Partial hepatectomy=14, Aborted Surgery=11	
Time between intial procedure and surgery	Mean 37 days	Mean 64 days	p-value 0.0205
Surgery technical success	Yes, n=56 (97%)	Yes, n=72 (83%)	p-value 0.009
Surgery clinical success (tumor resection, relief of obstruction, etc)	Yes, n=56 (97%)	Yes, n=65 (75%)	p-value 0.0004
Surgery adverse events	Leak=1, Bleeding=2, Abscess=2, Stricture=1 (n=6, 10%)	Sepsis=2, Skin infection=3, Post surgical collection=6, Leak=2, other=5 (n=18, 21%)	p-value 0.1152
Re-stenting after surgery	Yes, n=3 (5%)	Yes, n= 13 (15%)	
Total length of hospital stay from Surgery to Discharge (days)	Mean 10 days	Mean 19 days	p-value 0.0081
Total follow-up from initial intervention	Mean 12.8 months	Mean 6.9 months	
Alive	Yes, n=36 (62%)	Yes, n= 58 (67%)	

Table 2

CONTROL ID: 3689544

SHORT AND LONG TERM EFFICIENCY OF EUS GUIDED BILIARY DRAINAGE USING ELECTROCAUTERY ENHANCED LUMEN APPOSING METAL STENT IN CASE OF FAILED ERCP, A LARGE PROSPECTIVE STUDY OF 118 CASES.

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MP236

ENDOSCOPIC ULTRASOUND- GUIDED BILIARY DRAINAGE AS A RESCUE AND PRIMARY TREATMENT MODALITY- INITIAL EXPERIENCE WITH 88 PATIENTS

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Introduction: Endoscopic ultrasound-guided biliary drainage (EUS-BD) is a relatively new and promising technique, performed in cases where endoscopic retrograde cholangiography (ERCP) has failed or is not possible, with several advantages over percutaneous biliary drainage (PTBD).

Aims & Methods: Our aim was to evaluate the efficacy and safety of EUS-BD procedures performed in our unit over a two-year time period.

The primary endpoint was technical success, secondary outcomes were clinical success, procedure time, length of hospital stay and adverse events.

Results: Eighty eight (88) patients underwent EUS-BD between March 2020 and March 2022- 82 (93,15%) for malignant disease and 6 for benign. Male-to-female ratio was 1:1. The medium age was 67,5 years. Of all patients, 26 (29,55%) had surgically altered anatomy, in 22 (25%) the papilla was inaccessible due to duodenal stenosis, 5 (5,68%) had duodenal stents, 13 (14,77%) had distal bile duct tumor infiltration, in one (1,14%) cannulation failed due to a large duodenal diverticulum. In 35 (40%) the procedure was performed in the same session after unsuccessful ERCP, in 3 (3,4%)- in the same session as an adjunct to ERCP, in 41(47%) EUS BD was chosen as a primary drainage modality without previous ERCP or PTBD attempts. The access was intrahepatic in 65 (74%) and extrahepatic in 23 (26%). The puncture site was the stomach in 64 (73%), the duodenum in 23 (25,86%) and the esophagus in one case (1,14%). Hepaticogastrostomy was performed in 49, choledochoduodenostomy was done in 13, antegrade stenting- in 12, rendezvous- procedure in 10 and in one patient transgastric gallbladder drainage was performed as an only possible biliary drainage modality. The medium procedure time was 69,3 min.

The technical success was 96,6%, the clinical success was 91,8%.

The mean hospital stay was 5 days. Intraprocedural complications were experienced in 6 cases- 3 of them required conversion to PTBD, performed immediately by the same team. Postprocedural adverse events in the first 7 days were noted in 11 patients (12,5%). All were managed conservatively and did not require surgery or intensive care. Ten (10) patients underwent repeated interventions more than one month after the initial procedure- 1 for duodenal obstruction and 10 for recurrent biliary obstruction.

Conclusion: EUS- BD is a safe and effective procedure to achieve biliary drainage in patients with naïve and surgically altered anatomy. It is an intervention of choice when ERCP has failed and in many clinical scenarios could be a suitable primary drainage modality.

Lowering the threshold to perform EUS-BD, doing it in the same session when ERCP fails or as an adjunct to transpapillary drainage demonstrate best results, minimize risks and shorten hospital stay. Mastering PTBD by the same team also improves the outcomes and could sometimes avoid fatal complications.

Disclosure: Nothing to disclose.

MP237

BIODEGRADABLE BILIARY STENTS ARE A USEFUL TOOL IN ENDOSCOPIC TREATMENT OF BILE LEAKS

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Introduction: Biodegradable biliary stents (BDBS) have been introduced in the last few years and studies have shown them to be beneficial in the endoscopic treatment of bile leaks[1] as it could avoid a repeat ERCP for traditional stent removal.

This could be useful in the current climate where access to endoscopy is yet to fully return to pre-pandemic levels. We conducted a multi-tertiary-centre retrospective study looking at outcomes of endoscopic management for post-cholecystectomy bile leaks.

Aims & Methods: All ERCPs performed between 01/01/2020 and 31/12/2021 were reviewed and all cases of bile leaks post-cholecystectomy were included. Patient records and endoscopy reports were analysed.

Results: A total of 52 patients (median age 56.5 ± 19y, 30 females) with post-cholecystectomy bile leak were referred for ERCP.

Treatment included endoscopic sphincterotomy (ES) alone (6); plastic stent (PS) alone (13) or with ES (22); metal stent (SEMS) alone (1) or with ES (1); BDBS with ES (9). ES alone with duct clearance was performed in cases where no high grade leak was seen, minimal drain output and choledocholithiasis was deemed to be the cause of the leak.

All patients with temporary stent placement had a repeat ERCP for removal apart from one who refused and another who was intentionally not repeated due to frailty. Four patients needed 3 ERCPs for on-going leak but none in the BDBS group. Bile leak resolved in all endoscopically treated patients. No severe complications were observed.

Conclusion: BDBS offers a safe and useful alternative to traditional plastic stents for the endoscopic management of post-cholecystectomy bile leaks. Benefits include reducing the risks associated with repeat endoscopy, exposure to hospital environments, redistribution of limited resources and minimising patient cost (time off work, travel and aftercare arrangements). Although our numbers are small, our data indicates the potential cost savings of BDBS.

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Disclosure: Nothing to disclose.

There's no intervention in the control group. We use time of the day as a surrogate of endoscopist fatigue. Colonoscopy procedure start time was therefore divided into two groups. The first group consisted of procedures commenced in the early session per half-day (08:00-11:00 or 13:00-15:00), which was defined as non-fatigue group, and the second group consisted of procedures commenced in the later session per half-day (11:00-13:00 or 15:00-17:00), which was defined as fatigue group. Adjusted odds ratio (OR) with 95 %CIs and corresponding P values were calculated.

Results: A total of 1780 patients were enrolled in this study, among which, 34.83% (620/1780) procedures were randomized into the control group, with 61.61% (382/620) performed at non-fatigue time and 38.39% (238/620) at fatigued time, and 65.17% (1160/1780) procedures were randomized into the AI group, with 61.38% (712/1160) performed at non-fatigue time and 38.62% (448/1160) at fatigued time. In the control group, the ADR at non-fatigue time was significantly higher compared with that of fatigued time (12.83% vs 6.30%, P<0.05).

With the assistance of AI systems, as expected, no statistically significant difference was found in the ADR between the non-fatigue and fatigue time (23.74% vs 20.76%, P=0.238), which demonstrated that AI systems could overcome the limitation of endoscopist fatigue during colonoscopy.

Furthermore, the assistance capabilities of AI systems were compared through OR values. The AI systems had higher assistance capabilities in fatigue group (OR=4.68, 95%CI: 2.66, 8.23) compared with non-fatigue group (OR=1.87, 95%CI: 1.32, 2.66), which demonstrated the potential benefit of using AI to improve the lower ADR during fatigue period.

Conclusion: In conclusion, our results suggest that later session per half-day, as a surrogate of endoscopist fatigue, was associated with decline ADR. Also, we found no such relationship between time of the day and adenoma detection after the assistance of AI systems, which indicating that the AI system has the potential to be an effective tool minimizing the inversely effect of endoscopist fatigue in colonoscopy.

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Disclosure: Nothing to disclose.

P1041

LONG-TERM EFFECTIVENESS OF ARTIFICIAL INTELLIGENCE SYSTEM IN IMPROVING ADENOMA DETECTION RATE: A MULTICENTER SELF-CONTROLLED STUDY

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Introduction: Colorectal cancer (CRC) is the third most common cancer worldwide. Adenoma detection rate (ADR) is a quality measure of screening colonoscopy and associated inversely with the risks of interval CRC. Artificial intelligence (AI) has been successfully applied to medicine and demonstrated its positive impact in colonoscopy. To date, the short-term effectiveness of AI system in increasing ADR had been demonstrated through randomized control trials. However, little is known about the long-term effectiveness of AI system in real clinical practice.

Aims & Methods: The aim of this study was to estimate the long-term efficacy of AI system for colonoscopy through multicenter self-control study. We constructed a real-time computer-aid system based on deep learning for polyp detecting and withdrawal speed monitoring during colonoscopy. Colonoscopy procedures for screening, diagnostic, and surveillance were retrospectively collected from 6 hospitals between 2017 and 2021, including Renmin Hospital of Wuhan University (RHWU), Central Hospital of Wuhan (CHW), the First Hospital of Wuhan (FIRHW), the Fourth Hospital of Wuhan (FOURHW), the First People's Hospital of Yichang (FPHYC), Yichang Central People's Hospital (YCPH).

Pathological results were also collected except for CHW and FIRHW. The ADR and polyp detection rate (PDR) in these hospitals were compared before and after the use of the AI system.

Specially, the ADR and PDR in YCPH were compared between colonoscopy procedures with or without the assistance of AI system during the same time. A total of 7164 and 39160 colonoscopy procedures were collected without and with the use of the AI system in RHWU, respectively, and 12866 and 7508 in CHW, 10759 and 1911 in FIRHW, 4935 and 478 in FOURHW, 6390 and 10843 in FPHYC, 13660 and 7344 in YCPH, respectively.

Results: For adenoma detection, the ADR was significantly increased with the use of the AI system compared with that of without the use of it in RHWU (16.4% vs 9.5%, P<0.001), and FOURHW (3.8% vs 2.2%, P<0.05), FPHYC (2.7% vs 4.7%, P<0.001), respectively. In YCPH, the ADR was found increase from 7.80% without the use of the AI system to 7.98% with the use of it, but this didn't reach statistical significance(P=0.667).

For polyp detection, the PDR was significantly increase with the use of the AI system compared with that of without the use of it in RHWU (40.3% vs 29.1%, P<0.001), CHW (25.2% vs 30.4%, P<0.001), FOURHW (26.5% vs 42.5%, P<0.001), FPHYC (29.8% vs 34.9%, P<0.001), YCPH(30.6% vs 28.7%, P<0.05), respectively. However, no such relational was found in FOURHW (27.6% vs 27.4%, P=0.890).

Conclusion: The AI system significantly improved adenoma and polyp detection through long-term application and has the potential to improve the quality of colonoscopy in clinical practice.

Disclosure: Nothing to disclose.

P0921

CHOLANGIOSCOPY-GUIDED BIOPSY IN THE DIAGNOSIS OF INDETERMINATE BILIARY STRICTURES- DISAPPOINTING RESULTS AFTER 6 YEARS HARD WORK

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Introduction: Indeterminate biliary strictures remain a significant clinical problem despite the advancements of imaging modalities, endoscopy and biopsy techniques. By definition no tumor mass can be detected on imaging. Despite the high suspicion of malignancy the results of biliary forceps biopsy and/or brush cytology are negative or inconclusive. Most of the strictures are malignant but could be benign in up to 15% of cases. Precise diagnosis is crucial for the proper therapy.

Aims & Methods: To access the role of cholangioscopy-guided forceps biopsy in the diagnostic work-up of indeterminate biliary strictures.

Data were collected retrospectively from March 2016 to August 2021. All the patients with indeterminate biliary strictures underwent cholangioscopy with the SpyGlass DS System. After visual assessment of the stricture at least 4 biopsies were taken under direct visual control using the specially dedicated mini forceps.

Results: One hundred and eighty patients (n=180, 111 men, 69 women) underwent cholangioscopy for evaluation of indeterminate biliary strictures for the study period. The biliary stenosis were classified according

to the histology results as follows :72 malignant, 71 benign, 37 inconclusive for malignancy. Final diagnosis was made on the basis of definitive malignant histology, surgical findings, diagnostic laparoscopy or clinical follow-up of at least 6 months. Among the 71 patients with benign histology, the final diagnosis was changed to "malignant" in 50. Among the 37 patients with histology "inconclusive for malignancy", the final diagnosis was malignant in 35.

Conclusion: Despite the significant technological advancements in the cholangioscopy in resent years, making the procedure easier, more accessible and with very good image quality, further improvement of biopsy technique is needed. The biliary strictures still remain a diagnostic challenge for the pancreato-biliary endoscopist due to the low sensitivity of the visually guided sampling.

Disclosure: Nothing to disclose.

P0922

RISK FACTORS FOR POST-ENDOSCOPIC RETROGRADE CHOLANGIO-PANCREATOGRAPHY PANCREATITIS (PEP) IN CHILDREN WITH CHRONIC PANCREATITIS AND ITS PREDICTION USING 4-HOUR POST-PROCEDURE SERUM AMYLASE AND LIPASE LEVELS

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Introduction: Post-endoscopic retrograde cholangiopancreatography (ERCP) pancreatitis (PEP) has a reported incidence of 10-20% in children undergoing ERCP for any indication.[1-2]

Literature on PEP in children with chronic pancreatitis (CP) is scarce. As PEP carries potential risk of morbidity and mortality, early PEP prediction would allow earlier detection and timely management. Serum amylase and lipase levels, measured at 4 hours post-ERCP, predict PEP with good sensitivity and specificity in adults.[3]Literature regarding the same in children is not available.

Aims & Methods: This cross-sectional study was done to identify risk factors for PEP in children with CP and to assess the usefulness of 4-hour post-ERCP serum amylase and lipase levels for early PEP prediction.

Children with CP who were admitted and underwent ERCP between January 2021 and March 2022 were enrolled. The diagnosis of CP was according to INSPPIRE criteria.[4]Definition and severity of PEP was classified according to the consensus criteria.[5]

Detailed history of previous and current ERCP procedures (prior ERCP and PEP, difficult cannulation [>5 attempts], endoscopic sphincterotomy, contrast injection, balloon dilatation, presence of pancreatic duct stone, pancreatic duct stent placement, etc) and complications were noted in a pre-designed proforma. Patients with PEP were given standard treatment as per protocol. Serum amylase and lipase levels before the procedure, at 4 hours and 24 hours after the procedure were measured.

Univariate and multivariate analysis was done to compare patients with and without PEP. The receiver operating characteristic (ROC) analysis was done to determine the predictive efficacy of 4-hour post-ERCP amylase and lipase levels for diagnosis of PEP.

Results: Total 62 ERCP procedures were done in 30 children (27 boys). Eight children had PEP. One child who underwent ERCP 3 times, had PEP twice. Thus, PEP occurred in 9(14.5%) out of 62 ERCP procedures (5 mild, 2 moderate, 2 severe). There was no mortality. In the univariate analysis, endoscopic sphincterotomy (p 0.04), difficult cannulation (p 0.004) and prior PEP (p 0.036) were identified as risk factors while prior ERCP (p 0.04) was protective. In the multivariate analysis, difficult cannulation [Odd's ratio 5.83, 95% confidence interval (CI) 1.329-25.592; p 0.008] was the sole independent risk factor for PEP (Table 1).

On ROC analysis, 4-hour post-ERCP serum amylase [area under the curve (AUC) 0.930, 95% CI 0.858-0.999, p < 0.001] and lipase level (AUC 0.948,95% CI 0.890-0.998, p <0.001) showed good test performance as predictor of PEP. A 4-hour serum amylase of 298 U/L [upper normal limit(UNL) 90 U/L] showed sensitivity of 90%, specificity of 84.2%, positive predictive value (PPV) of 50%, negative predictive value (NPV) of 98%, comparable to 4-hour serum lipase of 186 U/L (UNL 40 U/L; sensitivity 90%, specificity 89.5%, PPV 60%, NPV 98%).

Variables	ERCP sessions with PEP, n=9	ERCP sessions without PEP, n=53	Univariate p value	Multivariate p value	Adjusted Odds ratio (95% Confidence interval)
Prior ERCP	3/9(33.3%)	39/53(73.6%)	**0.041**	0.728	
Prior post-ERCP pancreatitis	2/9(22.2%)	2/53(3.7%)	**0.036**	0.698	
Endoscopic sphincterotomy	7/9(77.8%)	16/53(30%)	**0.041**	0.076	
Difficult cannulation (>5 attempts)	8/9(88.9%)	13/53(24.5%)	**0.004**	**0.008**	**5.832 (1.329-25.592)**
Minor papilla cannulation	2/9(22.2%)	7/53(13%)	0.907		
Pancreatogram	9/9 (100%)	53/53(100%)	1		
Stricture dilatation	7/9(77.8%)	37/53(70%)	0.638		
Pancreatic duct stent placement	7/9(77.8%)	37/53(70%)	0.386		
Pancreatic duct stone	6/9 (60%)	23/53(38.3%)	0.22		

Table 1: Logistic regression analysis of procedure-related risk factor for post-ERCP pancreatitis (PEP) in children with chronic pancreatitis.

Conclusion: PEP complicated 14.5% of ERCP procedures in children with CP. On multivariate analysis, difficult cannulation significantly increased risk of PEP. Post-ERCP 4-hour serum amylase and lipase have good sensitivity and specificity for predicting PEP early.

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Disclosure: Nothing to disclose.

Conclusion: This study highlights the efficacy and safety of EUS-FNA/FNB as a minimally invasive procedure for diagnosing and staging of peri-esophageal parenchymal lung lesions. The diagnostic yield of EUS-FNB was superior to EUS-FNA.
Disclosure: Nothing to disclose.

P0933

ENDOSCOPIC ULTRASOUND-GUIDED FINE NEEDLE BIOPSY- PROMISING RESULTS WITH NEWLY DESIGNED NEEDLE WITH MULTI-BLADE THREE-PRONG TIP

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Introduction: Endoscopic ultrasound-guided fine needle core biopsy (EUS-FNB) is currently the procedure of choice to obtain samples to reach the definitive diagnosis of lesions of the gastrointestinal tract and of surrounding organs. It has the advantage of providing well preserved tissue for histologic grading and subsequent molecular biological analysis.
Aims & Methods: The aim of this study was to assess the performance of EUS-FNB usinga new needle with multi-blade three-prong tip for histologic diagnosis of lesions, accessible for endoscopic ultrasound- guided biopsy. Data was collected retrospectively from April 2021 to October 2021. All the patients underwent endoscopic ultrasound with a linear scope (Fujifilm EG-580UT) and fine needle biopsy using a new needle with multi-blade three-prong tip-22G Trident™ (Micro-Tech Endoscopy).
Results: Forty nine patients (24 men, 25 women) underwent EUS-guided biopsy during the study period. Pancreatic ductal adenocarcinoma was proven in 25. Only 2 patients with solid pancreatic lesions had false negative histology. Gastric adenocarcinoma(after negative forceps biopsy) was proven in 2. Metastatic paraesophageal lymph nodes were proven in 6. Liver metastasis from pancreatic cancer were proven in 2. Gastric, esophageal and colonic GIST were proven in 7 patients. Gastric lipoma was proven in 1. Benign pancreatic lesions (pseudocysts) were proven in 2. Mediastinal lymphoma was proven in 2. Median number of needle passes was 3,45 (2-5).
No complications were observed during the first 48 hours and after 30 days follow-up. The procedure yelded tissue for histologic diagnosis in 95,92% of cases. Imunochemical analysis was possible in all where needed.
Conclusion: Endoscopic ultrasound-guided fine needle biopsy using the new needle with multi-blade three-prong tip is safe and highly effective. Histologic diagnosis is possible in nearly 100% in all accessible areas.
Disclosure: Nothing to disclose.

P0934

ENDOSCOPIC ULTRASONOGRAPHIC FINDINGS OF SUBEPITHELIAL LESION IN THE UPPER GASTROINTESTINAL TRACT WITH AN INCREASE IN SIZE

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Introduction: Endoscopic ultrasonography (EUS) is beneficial modality for evaluating subepithelial lesion (SEL) in the upper gastrointestinal (GI) tract[1]. It can provide useful information such as size, layer of origin, echogenicity and specific foci of SEL[2]. One of the most worrisome characteristics of SEL is its large size[3]. Therefore, it is helpful to predict an increase in size of SEL in deciding proper follow-up and management strategy.
Aims & Methods: We aimed to figure out EUS findings of SEL with an increase in size at the first examination. Medical records of 2539 patients with SEL in the upper GI tract (esophagus, stomach, duodenum) detected in our hospital between 2004 and 2016 were reviewed retrospectively. We analyzed 672 of SELs which were evaluated by EUS at the first detection and were followed-up over at least 36 months.
We evaluated size, echogenicity, border, anechoic foci, calcification, deep attenuation, septation and involving layer of SEL on EUS. The size of SEL was measured by visual estimation compared to size of biopsy forceps. We defined 'an increase in size' as 25% increase in the longest diameter of SEL. We performed Cox proportional hazards regression and controlled relevant variables in a regression analysis.
Results: SEL in the esophagus accounted for 22.6% (152/672), 64.0% (430/672) of SEL was in the stomach and 13.4% (90/672) of SEL was in the duodenum. Mean initial diameter of SEL was 10.7±4.1mm (range, 3–20 mm). During the mean follow-up period of 68 months (range, 36–190months), 14.4% (97/672) of SEL showed an increase in size.
There was a difference in age (age 56.8±10.6 VS 54.2±10.6, P=0.03) and initial size (11.7±4.2mm VS 10.5±4.1mm, P=0.01) at the time of diagnosis of SEL in the upper GI tract between a group with an increase in size and a group without an increase in size. An increase in size of SEL was more frequently observed in the stomach than in the esophagus and duodenum (P<0.01).
Cox regression analysis showed that homogeneity of echo, border, septation and deep attenuation of SEL are not related to an increase in size. Anechoic foci and calcification of SEL are negatively correlated with an increase in size and deep involving layer (4th layer) is positively correlated with an increase in size.

Variables	Crude odds ratio	95% CI	P-value	Adjusted odds ratio	95% CI	P-value
Age	1.039	1.018-1.061	<0.001	1.039	1.018-1.061	<0.001
Initial diameter in EUS	1.126	1.074-1.181	<0.001	1.112	1.063-1.164	<0.001
Homogeneity (Homogenous/ Heterogenous)	Reference/1.146	0.475-2.764	0.762			
Border (Indistinct / Distinct)	Reference/0.793	0.289-2.173	0.652			
Anechoic foci	0.381	0.122-1.189	0.096	0.326	0.129-0.827	0.018
Calcification	0.306	0.092-1.012	0.052	0.297	0.093-0.949	0.040
Deep attenuation	0.514	0.121-2.189	0.368			
Septation	0.444	0.153-1.287	0.135			
Involving layer (Superficial: 1-3rd layer/ Deep:4th layer)	Reference/ 1.644	1.038-2.604	0.034	1.870	1.212-2.884	0.005

Table.

Conclusion: SEL in older age, with larger initial size and in the stomach tends to show an increase in size. Also, SEL involving deep layer, absence of anechoic foci and absence of calcification on EUS is more likely to increase in size. Therefore, short-term follow-up and endoscopic or surgical management have to be considered in upper GI SEL presenting such characteristics on EUS.

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Abstracts | ESGE Days 2022
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ENDOSCOPIC ULTRASOUND- GUIDED FINE- NEEDLE BIOPSY USING A NEWLY DESIGNED NEEDLE WITH MULTI-BLADE THREE-PRONG TIP- INITIAL EXPERIENCE

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Also available at eRef (https://eref.thieme.de/10.1055/s-0042-1745218)

Congress Abstract Full Text (/products/ejournals/html/10.1055/s-0042-1745218)

Aims To assess the performance of EUS-FNB using a new needle with multi-blade three-prong tip for the histologic diagnosis of lesions, accessible for endoscopic ultrasound- guided biopsy.

Methods Data was collected retrospectively from April 2021 to October 2021. All the patients underwent endoscopic ultrasound with a linear scope (Fujifilm EG-580UT) and fine needle biopsy using a new needle with multi-blade three-prong tip- 22G Trident (Micro-Tech Endoscopy).

Results Forty nine patients were included.Pancreatic ductal adenocarcinoma was proved in 25. Two pattens with pancreatic lesions had false negative histology. Gastric cancer after negative forceps biopsy was proved in 2. Metastatic paraesophageal lymph nodes- in 6, mediastinal lymphoma in 2; benign pancreatic lesions (pseudocysts) in 2. Liver metastasis were proved in 2. Gastric, esophageal and sigmoid GISTs were proved in 7, gastric lipoma- in 1. The median number of needle passes was 3,45. No complications were observed during the first 48 hours and after 30 days follow-up. The procedure provided tissue for histologic diagnosis in 95,92% of cases. Imunochemical analysis was possible in all where needed.

Conclusions Endoscopic ultrasound-guided fine needle biopsy using the new needle with multi-blade three-prong tip is safe and highly effective. Histologic diagnosis is possible in nearly 100% in all accessible areas.

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9 3 7997BIqAkw1biALsyxwZtowiqRAjCsJDqBQAUUAwtEBhA6uCnZXAT6wqQAIBQBOBECHAFGDAIAABIAkIiAkCPBAIACIBAACABUIhAAxsAqsALAwCAAUA0LFGKAIQ:
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ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY IN THE MANAGEMENT OF IATROGENIC BILE DUCT INJURY

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Also available at eRef (https://eref.thieme.de/10.1055/s-0042-1745288)

Congress Abstract (/products/ejournals/abstract/10.1055/s-0042-1745288) Full Text

Aims The aim of this study was to assess the role of endoscopic retrograde cholangiopancreatography (ERCP) in the management of iatrogenic bile duct injuries.

Methods Data was collected retrospectively from April 2015 to November 2021.All the patient included in the study had bile duct injuries caused by gastrointestinal surgery.

Results We present a case series of fifty four patients (N=54, 22 men, 32 women, mean age 62.7).Twenty three of the bile duct injuries occurred due to conventional cholecystectomy, twenty four by laparoscopic cholecystectomy, four by echinococcectomy, two by metastasectomy and one by trauma of the liver.Thrty seven patients had bile leak only (68.5%) : eighteen lessions on ductus cysticus, four on ductus choledochus, eight on ductus hepaticus communis, three on ductus hepaticus sinister and four on ductus hepaticus dexter. Seven patients had postoperative biliary stenosis (12.9%), nine patients had bile duct obstruction (16.6%) and one patient had both bile leak and biliary stenosis (1.8%).Thirty six of the patients were successfully treated by ERCP and eighteen of them were surgically treated .The type of IBDI was a statistically significant prognostic factor in determining the success rate of non-surgical treatment. In addition, a shorter time to diagnosis of BDI after the operation correlated significantly with higher success rates in the treatment.Techical and long-term clinical success was achieved in 66.6%.

Conclusions Management of bile duct injury requires a multidisciplinary team approach incorporating endoscopists, hepatobiliary surgeons and depends on the timing of recognition of injury, the extent of bile duct injury and patient's condition.

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Abstracts | ESGE Days 2022
ESGE Days 2022 Digital poster exhibition

ENDOSCOPIC MANAGEMENT OF OESOPHAGEAL PERFORATIONS AND LEAKS- 5 YEARS SINGLE CENTRE EXPERIENCE

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Also available at eRef (https://eref.thieme.de/10.1055/s-0042-1745092)

Congress Abstract Full Text (/products/ejournals/html/10.1055/s-0042-1745092)

Aims The aim of this study is to assess the technical success and outcome of different endoscopic treatment modalities in patients with esophageal perforations.

Methods

- Data was collected retrospectively from May 2017 to September 2021.
- We present a case series of 10 patients (N=10, 9 men, 1 woman) treated in our unit with iatrogenic and spontaneous oesophageal perforations or anastomotic dehiscences after oesophageal surgery.

Results

- The most common etiology for perforation was iatrogenic or insufficiency of esophagogastric or esophagojejunal anastomosis.
- All of the patients underwent Computed tomography (CT) of the chest and gastrodoudenoscopy.
- Patients were categorized into four treatment groups: 3 primary closures (endoscopic clip placement), 1 primary diversion (stent placement), 5 combination therapy (endoscopic clip closure, followed by stent placement), and 1 endoscopic vacum terapy.
- Techical and long-term clinical success was achieved in 90% of the patients.
- There was one death due to sepsis and multiple organ failure.
- None of the patients required surgical repair.

Conclusions Endoscopic management of acute esophageal perforation is emerging as the primary treatment modality and is less invasive and morbid than surgery. Combination strategies including OTSC clip-closure followed by stenting demonstrates best results with low morbidity and mortality.

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Abstracts | ESGE Days 2022
ESGE Days 2022 Oral presentations
14:00–15:00 Saturday, 30 April 2022 Club E. Polypectomy including cold snare

HOT VS COLD EMR FOR THE TREATMENT OF SESSILE COLORECTAL LESIONS OVER 10 MM

I. Boeva , P. Karagyozov , I. Tishkov

› Author Affiliations

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Congress Abstract Full Text (/products/ejournals/html/10.1055/s-0042-1744824)

Aims We aim to compare cold and hot snare endoscopic mucosal resection (CSP-EMR, HSP-EMR) in the management of sessile and flat colorectal polyps larger than 10 mm.

Methods Analysed data included endoscopic procedures from January 2019 to December 2020. A total of 164 polypectomies of flat lesions were performed in 108 patients. Lesions were classified according to Paris and J-NET classifications. Both techniques consisted of submucosal injection, followed by en bloc or piece-meal resection. Technical success was defined as complete endoscopic resection. Efficacy was established as the absence of local occurrence during the first follow-up colonoscopy. Adverse events following the procedures were collected and analysed.

Results 79 lesions (in 51 patients) were treated with HS-EMR and 85 lesions (in 57 patients) with CS-EMR. The average polyp size was 17.0 mm in the CS group and 18.5 mm in HS group ($p>0.05$). Technical success was achieved in 100% in the hot snare and 98.8% in CS-EMR ($p>0.05$). Local recurrence was detected in 3.52% (3 lesions) after CS-EMR and in 5.06% (4 lesions) after HS-EMR ($p>0.05$). No perforation was observed in the two groups. Delayed bleeding was observed in two cases (2.53%) in the HS group, no bleeding was encountered in the CS group ($p>0.05$). Post-polypectomy syndrome occurred in 0.57% in the CS and 7.8% in the HS group ($p<0.05$).

Conclusions CS-ERM may have similar efficacy to HS-EMR in the treatment of sessile and flat lesions over 10 mm. CS-EMR is a safe treatment option and may offer certain advantages regarding adverse events.

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Related Articles

COLD SNARE PIECEMEAL ENDOSCOPIC MUCOSAL RESECTION (CSP-EMR) OF LARGE SESSILE COLONIC POLYPS ≥20 MM IS FEASIBLE, SAFE AND EFFECTIVE
D Mangira et al., 2019

A prospective comparison of cold snare polypectomy using traditional or dedicated cold snares for the resection of small sessile colorectal polyps
Jeremy P. Dwyer et al., 2017

Diminutive colorectal polyp resection comparing hot and cold snare and cold biopsy forceps polypectomy. Results of a pilot randomized, single-center study
Victoria Gómez et al., 2015

Cold polypectomy for nonampullary duodenal adenoma
Daisuke Maruoka et al., 2015

EXTENDED COLD SNARE POLYPECTOMY FOR SMALL COLORECTAL POLYPS INCREASES THE R0 RESECTION RATE
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IDDF2020-ABS-0173 Efficacy and safety of the endoscopic resection of 10- To 20-Mm non-pedunculated colorectal polyps: a systematic review and pooled analysis
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Endoscopy 2022; 54(S 01): S229
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Abstracts | ESGE Days 2022
ESGE Days 2022 Digital poster exhibition

THE ROLE OF THE CHOLANGIOSCOPY- GUIDED BIOPSY IN THE DIAGNOSIS OF INDETERMINATE BILIARY STRICTURES

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› Further Information

Congress Abstract Full Text (/products/ejournals/html/10.1055/s-0042-1745217)

Aims The aim is to asses the role of cholangioscopy- guided biopsy in the diagnosis of indeterminate biliary strictures.

Methods Data was collected retrospectively from March 2016 to August 2021. All the patients with indeterminate biliary strictures underwent single-operator cholangioscopy with the SpyGlass DS system. The visual aspect of the stricture was assessed and at least 4 biopsies were taken under direct visual control using the SpyBite forceps.

Results One hundred and eighty patients (N=180, 111 men, 69 women) with undeterminate biliary strictures underwent peroral cholangioscopy during the study period. The biliary stenosis were classified into three categories based on the type *of* histology *results* : 72 malignant lesions, 71 benign lesions, while 37 were inconclusive for malignancy. Final diagnosis was made on the basis of definitive malignant histology, surgical findings, diagnostic laparoscopy with biopsy samples or clinical follow-up of at least 6 months. Among the 71 patients with benign histology the final diagnosis was changed to "malignant" in 50. Among the 37 patients with histology result "inconclusive for malignancy" the final diagnosis was malignant in 35.

Conclusions Despite the significant advancements in the cholangioscopy in resent years, making the procedure easier, more accessible and with very good image quality, further improvement of biopsy technique is needed. The biliary strictures still remain a challenge for the pancreato-biliary endoscopist due to the low sensitivity of the visually guided sampling.

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9 3 7997BIgAkw1biALsyxwZtowiqRAjCsJDqBQAUUAwtEBhA6uCnZXAT6wqQAIBQBOBECHAFGDAIAABIAkIiAkCPBAIACIBAACABUIhAAxsAqsALAwCAAUA0LFGK

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Abstracts | ESGE Days 2023
ePoster

Comparison of two types of needles for endoscopic ultrasound – guided fine needle biopsy in solid pancreatic masses

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Congress Abstract | Full Text (/products/ejournals/html/10.1055/s-0043-1765698)

Aims Comparing the diagnostic accuracy of two types of 22 gauge biopsy needles for endoscopic ultrasonographic (EUS) fine-needle biopsy (FNB) and associated predictive factors in the diagnosis of pancreatic masses. We compared the performace of Franseen tip needle (FN) with a newly designed multi-blade three-prong tip needle (TPTN).

Methods We performed retrospective analysis. We identified patients with solid pancreatic lesions who underwent EUS-FNB between 2020 and 2022. We calculated diagnostic accuracy and related factors. We compared sensitivity, specificity, positive and negative predictive value and diagnostic accuracy of the two needle types using as the gold standard criterion either the definitive malignant histology, surgical resection or at least 6 months clinical follow – up.

Results We identified 219 patients during the study period. 102 (46.6%) were biopsied with TPTN and 117 (53.4%)-with FN. The obtained specimens were adequate in all cases. No adverse events related with the procedure were noted. The multivariate analysis showed that lesion size and number of passes were the factors influencing diagnostic sufficiency ($P < 0.05$). The type of a biopsy needle did not affect diagnostic adequacy (OR 0.89, 95% CI 0.49-0.157, P 0.600). For FN we calculated sensitivity (97.9%), specificity (95.2%), diagnostic accuracy (97.4%), positive predictive value (98.9%), and negative predictive value (90.9%). Respectively for TPTN – sensitivity (97.7%), specificity (100%), diagnostic accuracy (98.3%), positive predictive value (99.8%), and negative predictive value (89.2%).

Conclusions The type of the needle does not affect the diagnostic accuracy of EUS-FNB. The only factors influencing diagnostic sufficiency are size of the lesion and number of needle passes.

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Abstracts | ESGE Days 2023
ePoster

Same-session endoscopic ultrasound-guided fine needle biopsy and endoscopic retrograde cholangiopacreatography "one stop shop" in the management of malignant distal bile duct obstruction – single center experience

Y. petkova , P. Karagyozov , N. Shumka , V. Mitova

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Congress Abstract | Full Text (/products/ejournals/html/10.1055/s-0043-1765531)

Aims Endoscopic ultrasound(EUS) and endoscopic retrograde cholangiopancreatography (ERCP)are the two mainstream modalities for diagnostic and therapeutic approach for patients with pancreatobiliary diseases.Our aim was to evaluate same-session EUS-FNB/ERCP in terms of technical success, adequacy of histology and adverse events.

Methods We retrospectively analyzed patients with distal biliary obstruction who underwent same-session EUS-FNB/ERCP between January 2021 and September 2022.The primary endpoints were diagnostic sensitivity of histology and technical success,secondary endpoints- adverse events and procedure time.

Results For the study period 120 patients were identified.Procedures were performed by single endoscopist under propofol sedation.Sensitivity of EUS-FNB was 94.17%,sample adequacy – 95,83%. Effective biliary drainage was achieved in all cases- in 93,3% by ERCP, in 5% by EUS-guided biliary drainage(EUS-BD),in 0,83% by combination of ERCP and EUS-BD and in 0,83%by combination of EUS-BD and percutaneous biliary drainage.Adverse events occurred in 4.17%(n=5)-post-ERCP pancreatitis–all cases classified as mild.No patients were admitted to the ICU. The mean procedure time was 57,5 minutes ([Fig. 1]).

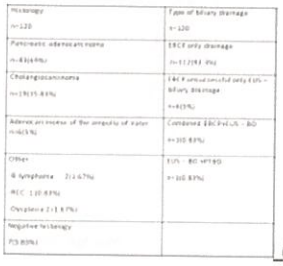

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Fig. 1

Conclusions Same-session EUS- FNB/ERCP is safe and effective approach in cases with suspected malignant distal bile duct obstruction.It combines high technical success in achieving biliary drainage and high diagnostic sensitivity of obtained histology.Mastering EUS and ERCP and performing them in the same session demonstrates best results and allows re-conversion to EUS and biliary drainage when ERCP fails

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Abstracts | ESGE Days 2023
ePoster

Endoscopic ultrasound- guided biliary drainage- initial experience with 112 patients

N. Shumka , P. Karagyozov , I. Tishkov , Y. Petkova , V. Mitova

› Author Affiliations

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Also available at eRef (https://eref.thieme.de/10.1055/s-0043-1765529)

Congress Abstract | Full Text (/products/ejournals/html/10.1055/s-0043-1765529)

Aims We aimed to evaluate the efficacy and safety of the first endoscopic ultrasound-guided biliary drainage procedures performed in our unit while evaluating the technical and clinical success, procedure time, hospital stay, and adverse events.

Methods A retrospective study was performed between March 2020 and November 2022 in all EUS-BD procedures performed by a single endoscopist in a tertiary referral center.

Results During the study period 112 patients underwent EUS-BD – 104 (92.8%) for malignant disease and 8 (7.14%) for benign. In 47% EUS-BD was chosen as a primary drainage modality without attempting ERCP. In all other cases the procedure was performed after unsuccessful ERCP. Technical success was achieved in 96,6% of the patients, clinical success- in 89,19 %. The medium procedure time was 54,8 min. The mean hospital stay was 5 days. Intraprocedural complications were experienced in 6 cases- 3 of them required conversion to PTBD, performed immediately by the same team. Postprocedural adverse events in the first 7 days were noted in 15 patients (13,5%). Only one required admission in intensive care unit.

Conclusions EUS- BD is a safe and effective procedure to achieve biliary drainage and in many clinical scenarios could be chosen as a primary drainage modality. Lowering the threshold to perform EUS-BD, doing it in the same session when ERCP has failed or as an adjunct to transpapillary drainage demonstrates best results and shortens hospital stay. Mastering PTBD by the same team also improves the outcomes and could avoid fatal complications.

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Introduction: Endoscopic ultrasound guided gallbladder drainage (EUS-GBD) is a proven safe and efficacious therapeutic option for non-surgical patients with acute cholecystitis. Data on the long-term outcomes of patients after EUS-GBD are limited. In this study, we aim to evaluate the long-term efficacy and safety of EUS-GBD. Methods: A retrospective chart review of patients who underwent EUS-GBD from 8 international centers from 2017 to 2022 was performed. Demographic information, peri-procedural data, and follow-up data were collected. Results: 182 patients were included (mean age 69, 47%M) (Table 1). The most common etiologies of cholecystitis were gallstones and malignancy. Technical success was 99% (n= 180). Clinical success was 86% (n=157) with mean time of resolution of 5.9days. Overall adverse event rate was 7% (n=13). The average follow post EUS-GB was 255 days (1-1628). 93 (51%) of patients had follow > 90 days, 78 (43%) >120 days, 70 (38%) >180 days, and 41 (23%) >1 year. EUS-GB stents were removed in 62 (34%) of patients and left in place indefinitely in the remaining 120 (66%). Ultimate resolution of symptoms was observed in 62.6% (N=114) of patients. Conclusion: Our study suggests that EUS-GB is associated with long-term resolution of cholecystitis symptoms. Additional studies are needed to confirm these initial results.

Gender (M/F)	85M (47%)/97F (53%)
Age	69.4 (n=182)
Etiology of Cholecystitis (Gallstones, Acalculous, Malignancy, Other = Please list)	Gallstones (n= 86, 47%), Malignancy (n=71,39%), Acalculous (n=15, 8%), ACC (n=15, 3%),Pancreatic Cancer (n=3, 2%)
Charleson Co-Morbidity Index (average)	6.4 (n=133)
Technical Success (Y/N)	Yes (n=180, 99%)
Peri-procedural Adverse Events (Y/N)	No (n=169, 93%)
Immediate (<24) Procedural Adverse Events (including migration) (Please list)	Fever (n=3, 2%), Bleeding (n=2, 1%), Abdominal Pain (n=2, 1%), Sepsis (n=1, .5%), Melena (n=1, .5%), Cholecystitis (n=1, .5%)
Delayed (>24hrs) Post-Procedural Adverse Events (including migration) (Please list)	Bleeding (n=3, 2%), Sepsis (n=3, 2%), Stent migration/dislodged (n=4, 2%), Infection (n=2, 1%), Abdominal pain (n=2, 1%), Choledocolithiasis (n=2, 1%) Duodenal obstruction (n=1, .5%), Pancreatitis (n=1, .5%)
Clinical Resolution of Cholecystitis Symptoms (Y/N)	Yes (n=157, 86%) No (n=25, 14%)
Time to Resolution of Symptoms Post-Procedure (days)	5.9 (n=182)
Hospital Readmission for Cholecystitis or Procedure-Related Reason (Y/N)	No (82%)
Total Length of Hospital Stay from EUSGLB to Discharge (average in days)	7 (n=120)
~~Total Length of Hospital Stay (average in days)~~	~~10 (n=116)~~
Average Follow-up Time (days)	255
Patients with >90 Day Follow-Up	51% (n=93)
Patients with >120 Day Follow-Up	43% (n=78)
Patients with >180 Day Follow-Up	38% (n=70)
Patients with >365 Day Follow-Up	23% (n=41)
Ultimate Management of Patient (resolved after EUSGLB, not resolved, lost to followup, death etc.	Resolved (N= 114, 62.6%)

Mo1467
ASGE Endoscopic Ultrasound - EUS III
MID TERM EVALUATION OF EUS-GUIDED GASTROENTEROSTOMY: AN INTERNATIONAL COLLABORATIVE STUDY

Haroon Shahid, Andrew Canakis, Amy Tyberg, Dillon Miller, Romy Bareket, Conan Chen, Monica Gaidhane, Petko Karagyozov, Avik Sarkar, Jessica Widmer, Everson Artifon, Prashant Kedia, Salil Chowdhury, Divya Chalikonda, Vincent Dioguardi, David Loren, Thomas Kowalski, Alexander Schlachterman, Anand Kumar, Austin Chiang, Domenica Cunto, Carlos Robles-Medranda, Michel Kahaleh

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David Loren: Consulting: Boston Scientific, Olympus America, Ambu; Thomas Kowalski: Consulting: BSCI; Alexander Schlachterman: Consulting: Olympus, FujiFillm, Lumendi, ConMed, Medtronic; Anand Kumar: Consulting: Olympus; Austin Chiang: Consulting: Boston Scientific, Exact Sciences, Olympus, Moderna, YouTube; Employment: Medtronic; Domenica Cunto: NO financial relationship with a commercial interest; Carlos Robles-Medranda: Consulting: Pentax Medical, Boston Scientific, Steris, Medtronic, Motus, Micro-tech, G-Tech Medical Supply, CREO Medical, EndoSound; Management Position: Mdconsgroup; Michel Kahaleh: Consulting: Creo, Microtech, Boston Scientifc, Medtronic, Apollo; Grant/Research Support: Boston Scientific, Medtronic, Cook, Fujinon, Olympus; Speaking and Teaching: Abvvie.

Background: EUS-guided gastroenterostomy (EUS-GE) is a minimally invasive therapy for patients with gastric outlet obstruction, which has been shown to have short term efficacy without the risks of surgical bypass. However, there is limited data on mid-term follow up outcomes. In this study, we collected 6 month follow up data on patients who underwent EUS Guided Gastrojejunostomy for benign and malignant etiologies, with the objective to show the shift in paradigm in their management algorithm. Methods: Consecutive patients from 7 international, tertiary care centers who underwent EUS-GE between 2018 to 2022 were extracted from a dedicated registry in a retrospective manner. Demographic characteristics, procedure related information and follow up data was collected. Primary outcome was the 6-month data on clinical resolution of gastric outlet obstruction. Results: A total of 91 patients were included: 71 (78%) malignant cases and 20 (22%) benign cases (TABLE 1 and 2). The characteristics of the patients undergoing EUS-GE is shown in Table 1. The mean age of the cohort was 65 (n=91) years. Technical success was 98% (n=89), clinical success was 90% (82/91), average procedure time was 47 minutes (n=45), and hospital length of stay was 5.86 days. Prior to 6 month follow up, mortality or transition to hospice rate was 43% (n=63), unrelated to procedure. Of those who reached 6 month follow up (n = 36), 72% had clinical resolution, 14% showed no change, 11% underwent additional interventions, and 3% had recurrence of their gastric outlet obstruction. Conclusion: The majority of patients with gastric outlet obstruction who undergo EUS-Guided gastroenterostomy showed clinical resolution at 6 month follow up. Long term follow-up data after 6 months is difficult to obtain given the high rate of mortality and transitions to hospice associated with malignant etiologies. Further prospective studies are necessary to obtain long-term data regarding EUS-GE for benign etiologies.

N=91	(N, %)
Mean Age (Years)	65 (n=91)
Sex (F/M)	F 35(38%)/M 56(62%)
Indication (malignant/benign)	Malignant 71(78%)/ Benign 20(22%)
Altered anatomy (Y/N)	Y 24(26%) N 67(74%)
Bridge to Surgery (Y/N)	Y 6(7%) N 85 (93%)
Procedure Technique (direct puncture, assisted - catheter to inflate bowel, reverse GJ, etc)	Direct puncture 25(29%), Assisted-Catheter 61(71%), Reverse GJ 0(0%) (n=86)
Diameter of LAMS	20mm 64(76%) 15mm 20(24%) (n=84)
Cautery-enhanced LAMS	89(98%)
Technical Success (Successful LAMS deployment)	89(98%)
Stent misdeployment during deployment	6(7%)
Total Procedure Time (average in minutes)	47 min (n=45)
Total hospital length of stay (average days post-procedure)	5.86 (n=91)
Immediate Adverse Events (<24hrs)	10(12%) (n=86)
Short-term Adverse Events (<30 days)	10(12%) (n=85)
Long-term Adverse Events (>30 days)	12(16%) (n=75)
Clinical Success (Tolerating PO diet post-procedure at 48 hours) (Y/N)	82/91 (90%)
Tolerating diet after LAMS removal? (Y/N)	7(50%) (n=14)
Average follow-up time post-LAMS deployment (months)	4.63 (n=61)
If LAMS removed, average follow-up time since LAMS removal (months)	7.8 (n=5)
Patients for whom follow up data is available at 6 months	63 (69%)

Etiology

Pancreatic Cancer 38 (41%)
Gastric Cancer 9 (10%)
Duodenal Cancer 7 (8%)
Colon Cancer 3 (3%)
Cholangiocarcinoma 2(2%)
Hilar Cancer 2(2%)
Gallbladder Cancer 1(1%),
Esophageal Cancer 1(1%)
Appendiceal Cancer 1(1%),
Testicular Cancer 1(1%),
Lymph node Metastasis 1(1%),
Peritoneal Adenocarcinoma 1(1%),
Papillary Cancer 1(1%),

Groove Pancreatitis 4 (4%)
Chronic Pancreatitis 4 (4%)
Chronic Duodenitis 1(1%)
Duodenal Stricture 3(3%)
SMA syndrome 1(1%)
Pancreatic Cyst 1(1%)
Caustic Ingestion 2(2%)
(1%), Duodenal Ulcer 1(1%)

Mo1466

ASGE Endoscopic Ultrasound - EUS III

OPTIMIZING ENDOSCOPIC ULTRASOUND SHEARWAVE ELASTOGRAPHY TECHNIQUE: THE PRESSURE IS ON!

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Institutions: Brigham and Women's Hospital, USA. Disclosure compliance: I understand. Participant disclosure: Raj Shah: NO financial relationship with a commercial interest; Thomas Wang: NO financial relationship with a commercial interest; Marvin Ryou: Consulting: GI Windows, EnteraSense, Boston Scientific, Medtronic, Fujifilm; Grant/Research Support: Olympus, Cook.

Introduction: Endoscopic ultrasound shear wave elastography (EUS SWE) has shown significant promise over traditional Fibroscan for the work up of non-alcoholic fatty liver disease (NAFLD), particularly in patients with obesity given the avoidance of measurements across a thick abdominal wall. However, with EUS SWE, due to the transducer's close proximity to the liver, the degree of pressure applied during the exam may be a significant factor. Herein, we report the impact of pressure during EUS SWE. Methods: We conducted a single operator, single center prospective study of patient with a BMI of at least 25 (overweight or obesity) who underwent EUS SWE for the work up of NAFLD. Three categories for pressure were defined apriori: low (minimum pressure to obtain an acceptable B mode image), medium (45 degree upward rotation with endoscopic big wheel) and high (90 degree upward rotation with endoscopic big wheel). Standard technique for EUS SWE was conducted across

elastography (EUS-EG) has emerged as a non-invasive complementary diagnostic method for evaluating tissue elasticity, and is effective for differential diagnosis of pancreatobiliary diseases. However, the diagnostic performance of EUS-EG have not yet been investigated in differential diagnosis of GB polyps. Thus, we aimed to investigate the diagnostic performance of EUS-EG for differential diagnosis of GB polyps. Methods: Patients with GB polyps were prospectively enrolled from June 2020. EUS-EG and semi-quantitative evaluation of the strain ratio (SR) had been performed for differential diagnosis of GB polyps. Until November 2022, a total of 85 patients were enrolled. Among them, 47 eligible patients were divided into two groups based on the final diagnosis after operation – non-neoplastic (n=28) and neoplastic (n=19; 10 patients with benign neoplastic polyps and 9 with malignant polyps). Patient demographics, EUS characteristics, and SR value were compared. The receiver-operating characteristic curve with the maximum Youden index was analyzed to obtain the optimal cutoff SR value that discriminates neoplastic and non-neoplastic GB polyps. Results: The median SR value for neoplastic polyp (32.17, IQR 20.64-64.88) is significantly higher than non-neoplastic polyp (5.32, 2.27-13.15; p<0.001). There are also significant differences in SR values between non-neoplastic, benign neoplastic (21.36, 10.15-40.35), and malignant polyps (46.49 29.38-94.45, Figure 1). The optimal cut-off value for differential diagnosis between neoplastic and non-neoplastic polyp was 18.4. In univariate logistic regression analysis, age >50 years, male sex, polyp size (per 1mm increase), sessile shape, absence of hyperechoic foci and SR value >18.4 showed statistical significance in predicting neoplastic polyp. In multivariate logistic regression, SR value >18.4 (odds ratio 19.350, 95% confidence interval 2.021-185.225) was independent predictor of neoplastic polyp. Conclusions: EUS-EG and SR vale can be used as a supplementary diagnostic method in the differential diagnosis of GB polyps. (Clinical trial registration number: https://clinicaltrials.gov: NCT04416763)

Table 1. Baseline characteristics

Variables	Non-neoplastic (n=28)	Neoplastic	
		Benign (n=10)	Malignant (n=9)
Age	48 (41-64)	62 (41-70)	70 (63.5-76.5)
Sex			
male	6 (21.4%)	5 (50.0%)	5 (55.6%)
female	22 (78.6%)	5 (50.0%)	4 (44.4%)
Size of polyp (mm)	11 (10-13)	16 (10.5-20)	25 (12-29)
Echogenicity			
Hyperechoic spots	16 (57.1%)	2 (20.0%)	3 (33.3%)
Hypoechoic foci	7 (25.0%)	6 (60.0%)	4 (44.4%)
Shape			
Pedunculated	21 (75.0%)	6 (60.0%)	2 (22.2%)
Sessile	7 (25.0%)	4 (40.0%)	7 (77.8%)
Vascular stalk on doppler	3 (10.7%)	0 (0%)	4 (44.4%)
SR value	5.32 (2.27-13.15)	21.36 (10.15-40.35)	46.49 (29.38-94.45)

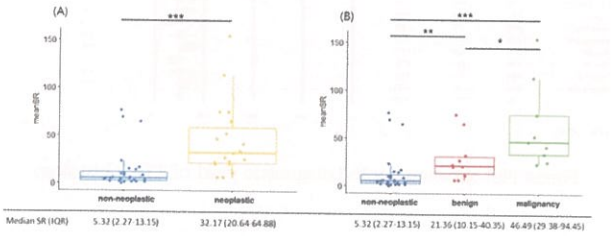

Figure 1. Boxplots with median SR value (horizontal bar) and interquartile range (box). (A) Comparison of SR values between non-neoplastic polyp and neoplastic polyp and (B) non-neoplastic polyp, benign neoplastic polyp and malignant neoplastic polyp (*** p<0.001; ** p<0.01; * p<0.05)

Mo1469

ASGE Endoscopic Ultrasound - EUS III

EFFICACY AND SAFETY OF EUS-GUIDED PANCREATIC DRAINAGE: A MULTICENTER INTERNATIONAL STUDY

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Disclosure compliance: I understand. Participant disclosure: Amy Tyberg: Consulting: Boston Scientific, Ambu Inc, MicroTech; Romy Bareket: NO financial relationship with a commercial interest; Avik Sarkar: NO financial relationship with a commercial interest; Haroon Shahid: NO financial relationship with a commercial interest; Muhammad Baig: NO financial relationship with a commercial interest; Paul Muna Aguon: NO financial relationship with a commercial interest; Monica Gaidhane: NO financial relationship with a commercial interest; Dillon Miller: NO financial relationship with a commercial interest; Sophia Pimpinelli: NO financial relationship with a commercial interest; Abhishek Chouthai: NO financial relationship with a commercial interest; Conan Chen: NO financial relationship with a commercial interest; Petko Karagyozov: NO financial relationship with a commercial interest; Salil Chowdhury: NO financial relationship with a commercial interest; Vincent Dioguardi: NO financial relationship with a commercial interest; Divya Chalikonda: NO financial relationship with a commercial interest; Thomas Kowalski: Consulting: BSCI; David Loren: Consulting: Boston Scientific, Olympus America, Ambu; Anand Kumar: Consulting: Olympus; Austin Chiang: Consulting: Boston Scientific, Exact Sciences, Olympus, Moderna, YouTube; Employment: Medtronic; Alexander Schlachterman: Consulting: Olympus, FujiFillm, Lumendi, ConMed, Medtronic; Prashant Kedia: Consulting: boston scientific, olympus, medtronic; Iman Andalib: NO financial relationship with a commercial interest; Raquel Del Valle: NO financial relationship with a commercial interest; Maria Egas-Izquierdo: NO financial relationship with a commercial interest; Carlos Robles-Medranda: Consulting: Pentax Medical, Boston Scientific, Steris, Medtronic, Motus, Micro-tech, G-Tech Medical Supply, CREO Medical, EndoSound; Management Position: Mdconsgroup; Michel Kahaleh: Consulting: Creo, Microtech, Boston Scientifc, Medtronic, Apollo; Grant/Research Support: Boston Scientific, Medtronic, Cook, Fujinon, Olympus; Speaking and Teaching: Abvvie.

Background: EUS guided pancreatic duct drainage (EUS-PD) is a novel procedure for drainage of the pancreatic duct when conventional endoscopic retrograde pancreatography (ERCP) is not feasible. Previously reported technical success rates are over 70% with variable clinical success rates. In this study, we aim to evaluate the pain scores of patients who underwent EUS-PD. Methods: Retrospective chart review was performed on patients who underwent EUS-PD between 2015 and 2022 across 5 international centers. The primary outcomes were technical success and clinical success, defined as post-procedural improvement in pain scores. The secondary outcomes were length of stay, reoccurrences of pain, and adverse events. Pain was measured using the Cambridge Classification Score and a standard pain scale of 1-10. Results: 43 patients were included in the study from 5 international centers. Most common causes of pancreatitis were ETOH (35%) and pancreatic stricture (19%). The most common causes of failed ERCP were unsuccessful cannulation (27%), inability to visualize (18%) or inability to pass stent (18%) (Table 1). Average preprocedural Cambridge Classification Score was 3.67. Average procedural time was 67 minutes. Technical success was 93% with 8% experiencing adverse events including bleeding, pancreatitis. 77% of patients achieved clinic resolution of symptoms within 30 days. Average pain scale prior to EUS-PDD was 5.79 and decreased to 1.22 after EUS-PDD (p=0.00003). The average length of stay was 5.95 days. Average follow up was 14.07 months (n=41). 20 patients required reintervention. Conclusion: EUS-PD for patients requiring pancreatic duct drainage after unsuccessful conventional ERCP is safe and efficacious and lower significantly patient pain scores.

N=43	
Gender	Male 24(56%), Female 18(42%), Other 1(2%)
Age	59 (n=43)
Inpatient or Outpatient?	Inpatient 20(47%) /Outpatient 23(%53)
Malignant/Benign Disease	Malignant 6(14%)/Benign 37(86%)
Anatomy (Altered or Normal)	Altered 19(44%)/ Normal 24(56%)
Cambridge Classification before EUS-PD	3.67
Pain Score prior to EUS-PD	5.79
Technical Success - Drainage of PD (Yes/ No)	Yes 40 (93% (40))/No 3 (7%)
Stent Placement (Transluminal or Transpapillary/Transanastomotic, None)	Transluminal 37(88%) /Transpapilary 3(7%)/ None 2(5%) (n=42)
Total Procedure Time (min)	67 minutes
Procedural Complications (Perforation, Bleeding, Pain, stent mis deployment, stent migration, etc.)	Bleeding 1(2%), None 39(91%), Pancreatitis 1(2%),
Post-Procedure Complications (perforation, peritonitis, bleeding, infection, post ERCP pancreatitis, stent migration, pneumoperitoneum, cholangitis, etc)	Abdominal Pain 3(8%), Post-ERCP Pancreatitis 7(18%), Hematemesis 1(3%), None 27(71%) (n=38)
Pain Score after EUS--Guided PD	1.22
Reintervention required?	Yes 20(48%)/No 22(52%) (n=42)
Total Hospitalization Duration (days)	5.95 (n=43)
Total Length of Follow-up (Months)	14.07 (n=41)

Table 1: Study characteristics.

Mo1449

ASGE Endoscopic Ultrasound - EUS III

EFFICACY AND SAFETY OF EUS-GUIDED THROUGH-THE-NEEDLE MICRO FORCEPS BIOPSY SAMPLING IN PANCREATIC CYSTIC LESIONS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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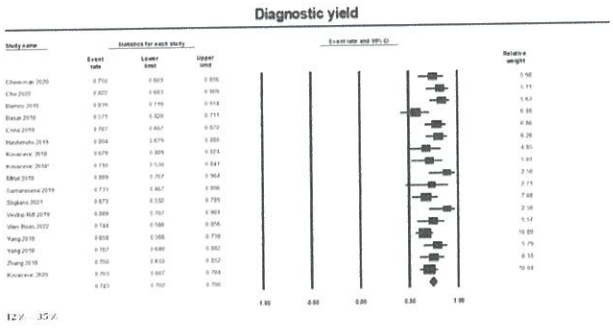
Background & Aims: Predicting malignant potential of pancreatic cysts poses a significant diagnostic dilemma, especially with rising incidence secondary to better imaging techniques. It is paramount to identify such cysts early, with high accuracy and minimally invasive techniques. Endoscopic ultrasound (EUS) guided through-the-needle biopsy (TTNB) was introduced as a new diagnostic tool to better establish pancreatic cyst histotype. In this meta-analysis, we aim to study the pooled rates of clinical outcomes with EUS guided TTNB of pancreatic cysts. Methods: Multiple databases including MedLine, Embase, Web of Science were searched in Nov-2022 for studies reporting on the clinical outcomes of EUS-guided TTN biopsy of pancreatic cysts. Outcomes of interest were technical success, diagnostic yield and adverse events. Standard meta-analysis methodology was employed using the random-effects model, and heterogeneity was assessed using the I2% statistics. Results: Seventeen studies (831 patients) were included. The mean age was 65 years (range, 54-70). 455 (54.8%) of the patients were females. The mean cystic size was 25-45 mm. 41.8% of the cysts were located in the head and/or neck and/or uncinate process and 58.2% in the body and/or tail. The pooled rate of technical success was 92.4% [(95% confidence interval (CI) 88.4-95.1; I2 = 47%]. Cysts were broadly divided into mucinous and nonmucinous. Mucinous cysts were further sub-classified into intraductal papillary mucosal neoplasm and mucinous cystic neoplasm. The pooled rate of mucinous cyst detection was 52.1% [46.9-57.4; I2 = 53%], serous cystadenoma was 11.2% [7.9-15.4]; I2 = 60%], solid pseudopapillary neoplasm was 2.3% [1.1-4.8; I2 = 0%] and pseudocyst was 8.5% [5.1-13.8; I2 = 63%]. The overall diagnostic yield was 74.3% [70.2-78; I2 = 35%]. The pooled adverse events rate was 9.3% [6.7-12.8]; I2 = 40%], with no mortality. The concordance rate with surgery was 85.3% [77.4-90.8; I2 = 0%]. Pooled results are summarized in Table-1. Conclusion: On meta-analysis, we demonstrated that EUS-guided TTNB of pancreatic cysts is a safe procedure with high technical success, diagnostic yield and concordance with surgical biopsy. EUS-guided TTNB does not feature in the diagnostic algorithm for pancreatic cysts at this time. Further prospective and comparative studies are required to establish it's role.

Outcomes	Pooled rate (95% confidence interval)	I2% heterogeneity
Technical success	92.4% (88.4-95.1), 15 studies	47%
Overall diagnostic yield	74.3% (70.2-78); 17 studies	35%
Mucinous cyst	52.1% (46.9-57.4); 17 studies	53%
Serous cystadenoma	11.1% (7.9-15.4); 17 studies	60%
Solid pseudopapillary neoplasm	2.3% (1.1-4.8); 6 studies	0%
IPMN	39.5% (29.2-50.8); 13 studies	84%
NET	4.9% (3.2-7.5); 9 studies	0%
Pseudocyst	8.5% (5.1-13.8); 13 studies	63%
Patients undergoing surgery	20.3% (16.3-25); 15 studies	51%
Concordance with surgery	85.3% (77.4-90.8); 13 studies	0%
Adverse events	9.3% (6.7-12.8); 15 studies	40%
Publication bias: Present (Egger's 2-tailed p-value = 0.009)		
IPMN: intraductal papillary mucinous neoplasm, NET: neuroendocrine tumor.		

Summary of pooled reports for outcomes of the EUS-TTNB histology



Forest Plot showing pooled diagnostic yield of TTNB histology

Mo1456

ASGE Endoscopic Ultrasound - EUS III

EFFICACY AND SAFETY OF LUMEN-APPOSING METAL STENTS WITH AND WITHOUT SIMULTANEOUS DOUBLE-PIGTAIL PLASTIC STENTS FOR DRAINING PANCREATIC FLUID COLLECTIONS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Institutions: Indiana University, USA; The University of Toledo, USA; Allegheny Health Network, USA; Brown University, USA; SBH Health System, USA; University of Missouri Kansas City, USA; Central Michigan University, USA. Disclosure compliance: I understand. Participant disclosure: Azizullah Beran: NO financial relationship with a commercial interest; Mohammad Shaear: NO financial relationship with a commercial interest; Sami Ghazaleh: NO financial relationship with a

PP1450

WEEKEND ERCP HAS SIMILAR OUTCOMES TO WEEKDAY PROCEDURES – DATA ANALYSIS FROM THE HUNGARIAN ERCP REGISTRY

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Introduction: Endoscopic retrograde cholangiopancreatography (ERCP) is essential in the minimally invasive management of biliary and pancreatic disorders. In certain indications, not delaying and carrying out ERCP during the weekend can be important to improve outcomes.

Aims & Methods: We aimed to analyze the outcomes of ERCP performed during weekends and holidays with regular weekday ERCPs. 3260 ERCP cases from 7 tertiary centers were analyzed from the Hungarian ERCP Registry database. 116 ERCPs were performed during weekends or holidays, and 3144 during weekday working hours.

The main outcomes were successful biliary cannulation, difficult biliary cannulation, and adverse event rates. Chi-square and Fisher's exact tests were performed as appropriate. Propensity score matching was also performed and the comparisons were also performed in the matched groups.

Results: Weekend ERCPs were mostly carried out for the indication of acute cholangitis and acute biliary pancreatitis (70% of weekend cases), while in the weekday group, only 32% of cases were done for these indications. No difference was found between weekday and weekend ERCPs in the rate of successful biliary cannulation (2891/3144, 92.0% vs. 106/116, 91.4%), difficult biliary cannulation (32.0% vs. 33.6%), and advanced cannulation method use (26.2% vs. 31.0%) ($p>0.05$).

There was a significantly higher number of ASGE grade 3 difficulty cases when ERCP was carried out urgently (30.3% vs. 56.0%, $p<0.01$), but we found no increase in the number of adverse events (post-ERCP pancreatitis, bleeding, perforations) in the ERCPs carried out during weekends. Additionally, no significant differences were detected between the propensity-matched groups in the outcomes above.

Conclusion: ERCPs carried out during the weekend, no difference was found regarding outcomes compared to weekday ERCPs despite having more difficult procedures.

Disclosure: Nothing to disclose.

PP1451

ENDOBILIARY RADIOFREQUENCY ABLATION IN THE MANAGEMENT OF MALIGNANT BILIARY OBSTRUCTION – SINGLE CENTER EXPERIENCE

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Introduction: Malignant biliary obstruction/MBO/is generally managed by biliary stenting however major following problem is stent patency. Recent studies show the advantages of endoscopic retrograde cholangiopancreatography-guided intraductal radiofrequency ablation/ ERCP ID-RFA/ as adjunctive therapeutic modality.

Aims & Methods: Aims: To evaluate the efficacy and safety of ID-RFA in terms of stent patency,symptom–free survival and adverse events/ AE/.Primary endpoints–evaluating the period of stent patency and survival;secondary endpoints-assessing AE.

Methods: We performed retrospective analysis of a prospective database including all consecutive patients who underwent ID-RFA for the period July 2021 – December 2022.17 procedures in 16 patients who were unresectable or poor surgical candidates were performed followed by stenting in the study period.

Results: Endobiliary RFA/EB-RFA /catheter (ELRA, STARmed, Taewoong Medical) and RF generator system (VIVA combo, STARmed) were used in 15 of the procedures. In two cases ID-RFA was performed with Habib EndoHPB catheter/Boston Scientific.

After passing a guidewire the catheter was positioned at the targeted lesion, followed by 120 s of ablation (target temperature 80°C, 7–10 W,temperature control mode)–in two to three sessions,unilaterally or bilaterally depending on the type and lenght of the stenosis verified by the proceding cholangiogram.

The mean period of stent patency defined as time between the date of the procedure and the last follow up of the patient without signs of stent occlusion was 144,36 ± 89.3 days. In this period all of the patients were symptom–free with good quality of life and without any signs of cholangitis.

The indications were:10 patients with CCA,two patients/n=2-12.5%/ with intraductal extension of papillary adenoma-both poor surgical candidates -one with HGD;one with HGD with intramucosal carcinoma who underwent endoscopic snare papillectomy /ESP/ followed by endoscopic ID-RFA and placement of stents,2 patients with gallbladder cancer, 2 patients with bile duct occlusion due to metastasis.

In 9 of the patients with CCA /90% of patients with CCA ;56,25 % of the total number/chemotherapy with Cisplatina/Gemcitabine followed with no interruption of the courses during the period of treatment; one refused chemotherapy.

In three of the patients/18.75%/ we performed ID RFA in order to prolong stent patency in occluded by tumor ingrowth metal stents. The rate of the AE was 18.75%/n=3/ - 1 patient with self-limited bleeding;1 patient with postprocedural cholangitis and 1 patient with liver abcess – managed percutaneously.

There were no deaths or ICU admissions. We experienced two stent occlusions – in one in patient with papillary adenoma with HGD–on day 169– managed with second session of ID- RFA followed by metal stent placement - asymptomatic up to the last follow up,the second with tumor ingrowth from endobiliary metastasis in previously placed metal stent -the patency after RFA was 116 days – managed with metal stent in stent placement.

Results: 68 patients were recruited of whom 55 completed RFA ablation of their cyst. Anatomical concerns (i.e., blood vessel, main duct proximity) precluded RFA in 12 patients. 18/55 patients (33%) underwent a second ablation. Follow up imaging data were available for 46 (84%) patients and showed a <20% reduction in cyst size in 18 patients, 20-49% in 4 patients, 50-79% in 5 and 80-100% size reduction in 18 patients. For one patient, doubling in cyst size was recorded at the 12-month follow-up. Excluding one case of scope-induced small bowel perforation (Clavien-Dindo; ClvD grade 3), other adverse events were mild (ClvD 0-2) and expected (transient abdominal pain, bloating, sore throat, nausea/vomiting). One patient experienced a self-limiting, post procedure grand mal seizure on a background of epilepsy.

Conclusion: EUS-RFA was well tolerated in most cases. Our data indicate that the procedure is relatively safe. The response ranged from a <20% reduction in size to complete cyst resolution.

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Disclosure: No conflict of interest

PP1582

IPMN PROGRESSION OVER TIME: THE ROLE OF LIFESTYLE AND MEDICATIONS

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Introduction: IPMNs are mucin-producing subtypes of pancreatic cysts considered a potential precursors of pancreatic cancer accounting for 8% of all pancreatic malignancies. The molecular mechanisms and biological factors involved in the progression of IPMN are still unknown. In previous studies, modifiable risk factors (e.g., smoking) and protective factors (e.g., ACE inhibitors) have been investigated to slow down or prevent the IPMN progression.

The aim of this study is to investigate the association between modifiable lifestyle factors (smoking and alcohol consumption) and the use of commonly prescribed medications (aspirin, ACE-inhibitors, angiotensin-II-receptor antagonists, and statins) and the progression of IPMN.

Aims & Methods: This was a monocentric retrospective cohort study. The study included patients who underwent radiological and clinical examinations at time 0 and at the 3-year follow-up visits. Demographic data (sex, age, weight, and height), IPMN characteristics (type of IPMN and radiological characteristics at baseline), lifestyle factors (smoking and alcohol consumption), and medication use (aspirin, ACE -I, ARBs, and statins) were recorded.

Clinical and radiological characteristics were recorded at the 3-year follow-up to detect progression of IPMN (defined as the presence of high-risk stigmata and/or features of concern). Statistical analysis was performed using SPSS 20. Descriptive data are presented as mean±standard deviation and median with range or percentage.

Categorical data were compared using the χ_2 test. Multivariate logistic regression analysis was performed to adjust for confounding factors (age, sex, and IPMN subtype). A p value < 0.05 was considered statistically significant.

Results: 126 patients were included in the study. Patient characteristics are summarized in Table 1. Smoking (p 0.036; OR 5.7, IC95% 1.11-29.04), heavy alcohol use (p 0.027; OR 4.8, IC95% 1.10-9.50), and use of ARB (p 0.048; OR 3.52, IC95% 1.85-14.50) were associated with progression of IPMN. Statin use was associated with a lower risk of IPMN progression (p 0.043; OR 0.154, IC95% 0.021-0.978). Body weight, aspirin, ACEi, and low alcohol intake were not statistically associated with IPMN natural history.

Demographics:	
No. of patients, n	126
Age (years), mean ± SD	65 ± 11
Sex (men), n (%)	46 (36,5%)
Type of IPMN:	
Main duct-IPMN, n (%)	106 (84%)
Side Branches-IPMN, n (%)	7 (5.5%)
Mixed type-IPMN, n (%)	13 (10,5%)
BMI:	
18-25	65 (56%)
25-30	40 (34,5%)
30-35	7 (6%)
35-40	4 (3,5%)
>40	0
Alcohol intake:	
Low-dose (<2 units/day)	88 (69,8%)
High-dose (>2 units/day)	17 (13,5%)
Smoking habit:	24 (19%)
Drugs intake:	
ACE-I	21 (16,5%)
Aspirin	26 (20,5%)
Sartans	34 (26,9%)
ARB	34 (26,9%)

Table 1. Patients' characteristics.

Conclusion: With the limitations resulting from the small sample size and retrospective design of the study, smoking, heavy alcohol consumption, and ARBi use appear to be risk factors for progression of IPMN. In contrast, statin use was found to be a protective factor for IPMN progression. Prospective studies are needed to confirm these preliminary data.

Disclosure: Nothing to disclose.

PP1583

COMPARATIVE ANALYSIS OF GLUCOSE AND CEA LEVELS FOR THE DIAGNOSIS OF PANCREATIC CYSTS: INSIGHTS FROM EUS-FNA

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Introduction: Pancreatic cysts are a common finding in imaging studies, and, considering the different malignant potentials of mucinous and non-mucinous cysts, it is necessary to develop accurate methods and algorithms to differentiate between them. We conducted this study to compare the diagnostic performance of glucose levels and CEA levels in the diagnosis of mucinous pancreatic cysts.

Aims & Methods: We conducted a retrospective study of patients who underwent EUS-FNA of pancreatic cystic lesions between September 2020 and March 2023 at a tertiary referral center. We included patients whose glucose and CEA levels had been measured. Indicators of mucinous cysts include glucose levels less than 2.7 mmol/l and CEA levels greater than 192 ng/ml. It was compared to the final pathology (obtained after surgery or by EUS-FNB) result to determine their accuracy.

Results: A total of 31 patients were included in the study, 13 males and 18 females. The mean age was 55.7 years. Of the 31 patients, 12 (38.7%)

were diagnosed with mucinous cysts (6 mucinous cystic neoplasms, 6 intraductal papillary mucinous neoplasms), and 19 (61.2%) were diagnosed with non-mucinous cysts (9 serous cystic neoplasm, 8 pseudocysts, 1 solid pseudopapillary neoplasm, and 1 lymphoepithelial cyst). There was a female prevalence in patients with mucinous cysts (8 females and 4 males) with a mean age of 59,6 years. From the cyst fluid analysis, the sensitivity, specificity, and accuracy of glucose in diagnosing mucinous cysts were 91.7%, 89.5%, and 90.3%, respectively. CEA's sensitivity, specificity, and accuracy were 81.8%, 85.0%, and 83.9%, respectively.

	Non-mucinous	Mucinous
Gender (%male)	47.3%	33.3%
Age (Median)	50.2	58.3
Cyst location		
head	9	3
body	2	5
tail	8	4

Conclusion: In the diagnosis of pancreatic cystic lesions, glucose levels have high diagnostic performance with high sensitivity and accuracy. In contrast, CEA levels have a lower diagnostic performance. The findings of our study support the use of EUS-FNA and glucose levels in the diagnosis of pancreatic cystic lesions, as well as EUS-FNB to obtain histological specimens for a more accurate diagnosis of pancreatic cysts.
Further studies are needed to validate these findings and explore the potential of other biomarkers in diagnosing and managing pancreatic cystic lesions.
Disclosure: Nothing to disclose.

PP1584

PERFORMANCE OF INTRA-CYSTIC GLUCOSE MEASUREMENT FOR THE CHARACTERIZATION OF PANCREATIC CYSTIC LESIONS

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Introduction: Endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) is essential for the classification of pancreatic cystic lesions (PCLs). Recently, glucose measurement in pancreatic cystic fluid (PCF) has been suggested as an alternative to PCF carcinoembryonic antigen (CEA) level as a predictor of mucinous cystic lesions (MCLs) [1].
An accurate detection and differentiation of MCLs versus non-mucinous cystic lesions (NMCLs) is highly important due to the distinctive malignant potential of each type of PCLs.
Aims & Methods: This study aims to evaluate the diagnostic performance of intra-cystic glucose in distinguishing between MCLs and NMCLs and to analyze the possibility of on-site glucose measurement with a standard glucometer.
Patients with PCLs who underwent EUS-FNA with intra-cystic glucose measurement between 2017 and 2022 were included. Final diagnosis of MCL or NMCL was based on the operative specimen, intra-cystic biopsy or, if this data was unavailable, final diagnosis was based on multidisciplinary evaluation. The diagnostic performance of glucose versus CEA in PCF for the differentiation between MCLs and NMCLs was compared. A cut-off of <50 mg/dL was used for the diagnosis of MCLs.
Additionally, the agreement between on-site glucose determination with a standard glucometer and laboratory glucose measurement was assessed.
Results: A total of 78 patients were included, of which 48 were female (61.5%). The median age of 64 years (IQR 52-72). MCLs accounted for 56.4% (n=44) of all PCLs, which were predominantly located in the head of the pancreas (n=25, 32%). The median diameter of the PCLs were 31 mm (IQR 26-43). The median values of glucose and CEA were 20 mg/dL (IQR 20-94) and 39 ng/mL (IQR 2-439), respectively.
Intra-cystic glucose had a sensitivity and specificity of 93.2% and 76.5%, respectively for the diagnosis of MCLs (versus 55.6% and 87.5%, respectively, for CEA). The area under the curve was 0.870 for glucose (versus 0.806 for CEA). An excellent correlation was observed between on-site and laboratory glucose measurement (Intraclass correlation coefficient: 0.947).
Conclusion: The measurement of intra-cystic glucose in PCF showed superior performance to CEA in distinguishing between MCLs and NMCLs, with excellent correlation between on-site and laboratory glucose measurement. Thus, on-site intra-cystic glucose appears to be an excellent biomarker for the characterization of PCLs due to its low cost, high availability, and the need for a minimal volume of PCF for its determination.
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Disclosure: Nothing to disclose.

PP1585

TESTING NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN (NGAL) IN ASSOCIATION WITH GLUCOSE IN THE INTRACYSTIC FLUID IS USEFUL FOR DIFFERENTIATION MUCINOUS FROM NON-MUCINOUS PANCREATIC CYSTS

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Introduction: The undetermined pancreatic cystic neoplasms represent 20-30% of the total number of pancreatic cystic lesions(PCL). The diagnostic accuracy of endoscopic ultrasound (EUS) morphology is 51%. Endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) should be performed for differentiating between mucinous and non-mucinous pancreatic cysts when the characterization of the cyst cannot be made on the basis of non invasive imaging techniques.

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Abstracts | ESGE Days 2024
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Endoscopic ultrasound-guided radiofrequency ablation of pancreatic tumors- initial experience of single center

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› Author Affiliations

› Further Information

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Aims The mainstay treatment for pancreatic tumors is surgery. However adverse events and post -operative mortality are a concerning issue. Endoscopic ultrasound-guided radiofrequency ablation/EUS RFA/ is a novel technique for local destruction, applicable for pancreatic neuroendocrine tumors /PanNEN/, locally advanced adenocarcinoma and cystic pancreatic neoplasms.Our aim was to evaluate the technique in terms of efficacy and safety. Primary endpoint was complete response rate defined as disappearance of lesions or no signs of vital tissue on imaging studies during follow up. The secondary endpoint was the assessment of adverse events/AE/ associated with the procedure.

Methods Retrospective analysis of a prospective database including all consecutive patients who were treated with EUS RFA for the period August 2022 – October 2023 in a single tertiary center. We evaluated electronic patient records and gathered data on patients' baseline characteristics, procedure characteristics and outcomes.The follow up of the group included imaging studies/computed tomography and contrast enhanced EUS/ done on the third and on the sixth month after the procedure.

Results Eight sessions of RFA in five patients were performed. Male to-female ratio 3:2, the mean age was 72.2 years. The procedures were performed with EUS–guided RFA 19 G Needle. The group included three patients with neuroendocrine tumors – two with non-functional pNEN – G1 grade of differentiation and one with insulinoma;one patient with metastasis from renal cell carcinoma, and one patient with pancreatic ductal adenocarcinoma. The mean size of the lesions was 22mm±10.06mm. The technical success rate which we defined as successful puncture of the lesion and application of alternating current was 100%. Clinical success at the 6th month was achieved in 80% of the patients. In three of the patients, we performed a second session on the third month during follow-up. We found no correlation between response rate and functional status of neuroendocrine tumors as well as no association of procedure outcome and location of lesions. In terms of efficacy, we found a negative correlation between lesion size and response rate. We observed the resolution of symptoms due to hormonal hypersecretion in the case of insulinoma in the first 24 postprocedural hours with no events of hypoglycemia. No early or late adverse events were reported in the observed group

Conclusions EUS RFA is highly effective and safe mini-invasive technique for treating pancreatic tumors, especially PanNENs.It could be offered to selected patients as an alternative to surgical treatment for patients with neuroendocrine tumors and cystic lesions according to published studies.The procedure can be applied as an adjunctive treatment to locally advanced ductal adenocarcinoma but more data are needed.

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Abstracts | ESGE Days 2024
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Endobiliary radiofrequency ablation – a promising new tool to prolong stent patency in patients with malignant biliary obstruction

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› Author Affiliations

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Congress Abstract | Full Text (/products/ejournals/html/10.1055/s-0044-1783568)

Aims The main approach for the management of unresectable malignant biliary obstruction is ERCP with stenting followed by palliative chemotherapy. However, a major concern is the rate of recurrent biliary obstruction/RBO/. Endobilliary radiofrequency ablation (EB-RFA) is a new endoscopic technique that can be an adjunctive tool in prolonging the period of stent patency and patient survival.The primary endpoints were to evaluate the correlation between the period of stent patency,type of placed stents and subsequent chemotherapy in patients with malignant biliary obstruction/MBO/treated with EB-RFA. Secondary endpoints were the overall efficacy and safety of the procedure in terms of survival and adverse events/AE/.

Methods We performed a retrospective analysis of a prospective database including all consecutive patients who underwent EB-RFA for the period July 2021 – November 2023.26 procedures in 24 patients who were unresectable or poor surgical candidates were performed. Endobiliary RFA/EB-RFA /catheter (ELRA, STARmed, Taewoong Medical) and RF generator system (VIVA combo, STARmed) were used in 24 of the procedures. After passing a guidewire the catheter was positioned at the targeted lesion, followed by 120 s of ablation (target temperature 80°C, 7–10 W, temperature control mode.

Results The patients were divided in two groups of patients depending on the type of stent placed – 7 patients with plastic stents after RFA,and 17 patients with metal. The mean period of stent patency defined as the time between the date of the procedure and the last follow-up of the patient without signs of stent occlusion was 261.50 (142.50+/-312.75) days. For the group with plastic stents, the period was 196.57±101.83 days, and 260.29±132.05 days for the group with metal stents – the difference was not statistically significant. In 15 patients/62,5%/ there was chemotherapy with Paclitaxel/Gemcitabine after the procedure – in 2 patients with plastic stents/8,3%/ and 13 patients /54,2%/with metal. We found an association between the period of stent patency and symptom-free survival and placement of metal stents followed by chemotherapy – Pearson $\chi 2$ test=4.854, p=0.028. The longest period of stent patency is observed in patients who receive metal stents and chemotherapy after EB-RFA. The rate of the AE was 18.75%/n=3/ – one patient with self-limited bleeding; one patient with postprocedural cholangitis and one patient with postprocedural biloma. There were no deaths or ICU admissions. We experienced four episodes of RBO – two managed with a second session of RFA and two only with stent exchange.

Conclusions ID-RFA combined with the placement of metal stents followed by chemotherapy is a promising tool to improve outcomes in patients with MBO with high efficacy and a good safety profile. Therefore ID-RFA can be proposed as adjunctive treatment in patients with MBO although more randomized studies are needed.

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Abstracts | ESGE Days 2024
Moderated Poster
EUS guided biliary 27/04/2024, 12:00 – 13:00 Science Arena: Stage 2

Adverse events associated with endoscopic ultrasound-guided biliary drainage

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› Further Information

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Aims Endoscopic ultrasound – guided biliary drainage (EUS-BD) has become widely accepted over the past several years for complicated biliary drainage when conventional endoscopic retrograde cholangiopancreatography (ERCP) is not successful or feasible due to a variety of constraints.The success rate of the procedure is between 90% and 97% and the complication rate is less than 10%.The aim of our study is to evaluate the safety and efficasy of EUS-BD performed in our unit while assessing the risk of complications associated with the procedure.

Methods We performed retrospective analysis of a prospective data base from March 2020 to October 2023. The patients underwent endoscopic ultrasound biliary drainage using linear scope (Fujifilm EG- 580UT). Several procedures are possible. The procedure was tailored to the individual patient's anatomy .

Results We identified 140 patients who underwent EUS-BD during the study period (men- 75, women- 65) – 130 (92.8%) with malignant and 10 (7.1%) with benign disease. The medium age of the patients was 66.3 years. The technical success was 96.6%. Adverse events were detected in 39 patients (27.9%) The various complications that have been reported were classified into early (periprocedural) and late (postprocedural)- a week after

Periprocedural adverse events were detected in 7 (5%) patients: 2 (1,4%) with bleeding, 2 (1,4%) stent migration, 1(0,7%) with biloma, 1 (0,7%) blood vesels canulation and 1 (0,7%) with false tract creation.Postprocedural complications are deteced in 30 (21.4%): 21 (15%) with cholangitis, 3 (2.1%) with abdominal pain, 3 (2.1%) with bleeding, 3 (2.1%) with pancreatitis.There were 2 deaths related to the procedure (1.4%) in patients with advanced oncologic disease.

All cases were managed conservatively and did not require surgery, intensive care or interventional radiology. Three (2,1%) of the periprocedural complications were solved by performing PTBD immediately after EUS-BD by the same team.

Conclusions EUS-BD is effective tool for biliary drainage both in naïve patients and those with altered biliary anatomy. Along with the possibility of emergency PTBD, it has favourable technical and clinical success rate and safety profile and therefore the potential to shift the current paradigms that define management of complicated biliary obstruction.

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ENDOSCOPIC ULTRASOUND-GUIDED BILIARY DRAINAGE FOLLOWING FAILED ERCP: EXPERIENCE FROM A UK TERTIARY REFERRAL CENTRE 2016-2019
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Endoscopy 2024; 56(S 02): S246-S247
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Abstracts | ESGE Days 2024
Moderated Poster
EUS guided biliary 27/04/2024, 12:00 – 13:00 Science Arena: Stage 2

Endoscopic ultrasound-guided choledochoduodenostomy versus endoscopic ultrasound-guided hepaticogastrostomy in the treatment of malignant biliary obstruction – a comparative study of single center experience

Y. Petkova , P. Karagyozov , N. Shumka

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Aims Endoscopic retrograde cholangiopancreatography is the standard procedure for treating unresectable malignant biliary obstruction/MBO/, however, it has a failure rate of 3% up to 12% and a rate of complications up to 6,85%. Endoscopic ultrasound-guided biliary drainage/EUS – BD/ is a feasible alternative in palliation of MBO, applicable especially with patients with inaccessible papillae due to local invasion or surgically altered anatomy. Several techniques are available, among them hepaticogastrostomy /EUS – HGS/ and choledochoduodenostomy/EUS – CDS/ are most commonly performed.Aim:To compare the most commonly used transluminal techniques for endoscopic ultrasound-guided biliary drainage in terms of efficacy, safety, and stent patency.

Methods Retrospective analysis of a prospective database of patients undergoing EUS -BD in a single tertiary referral center. Medical records were reviewed, extrapolating data about patients` baseline characteristics, indications, procedure characteristics, and outcomes. A total of 143 EU–BD procedures were performed. 87 patients were included in the EUS-HGS group- 93,1%(n=81) with malignant biliary obstruction and 6.9%(n=6) with benign underlying disease. Of 21 patients included in the EUS–CDS group 95,24% (n=20) had underlying malignancy against one patient with benign disease.

Results Considering the application of EUS – BD as a first choice of drainage procedure for patients with surgically altered anatomy we had 42 patients in the HGS group (48.28%) against 19.05%(n=4) for the CDS group. Evaluating results in terms of technical success rate, defined as successful stent placement – we found a 97,7% success rate for the EUS-HGS group and 95,24% in the EUS–CDS group. We defined clinical success as a drop in the bilirubin levels by one-half in the first week following the procedure. The results between the two groups were not significantly different – 80.46% for the HGS against 80,95% for the CBS group. Concerning adverse events, we found a ratio of 8.05% for the patients undergone HGS and 4,76% for EUS – CDS with no significant difference. The most common AE found were stent migration/n=3/; bleeding/n=2/ and cholangitis/n=2/. Defining AE according to ASGE lexicon we experienced two severe AE/death due to cholangitis with acute kidney injury/ in patients with HGS. The rate of recurrent biliary obstruction and need for reinterventions was slightly higher for the HGS group – 5.75% /n=5/ against no case of stent occlusion in the CDS group.

Conclusions HGS and CDS for biliary drainage have comparable technical and clinical success rates, adverse events, and overall survival. Both techniques are valid alternatives after failed ERCP or as a first choice for biliary drainage especially in surgically altered anatomy, based on patients' characteristics.

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Abstracts | ESGE Days 2024
ePoster

Diagnostic Accuracy of Different Cholangioscopy-Guided Biopsy Techniques for the Diagnosis of Indeterminate Biliary Duct Strictures

D. M. de Jong , P.J. F. De Jonge , P.M. C. Stassen , P. Karagyozov , J. J. Vila , I. Fernandez-Urien , M. W. James , S. Vasan Venkatachalapathy , K. Oppong , A. Anderloni , A. Repici , R. Gabbiadini , D. Joshi , M. Ellrichmann , M. L. Kylänpää , M. Udd , F. Van Der Heide , P. Hindryckx , G. Corbett , K. Basiliya , V. Cennamo , S. Landi , S. Phillpotts , G. Webster , M. J. Bruno

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Aims Indeterminate biliary duct strictures (IBDS) are a difficult diagnostic challenge. Digital single operator cholangioscopy (d-SOC) has improved diagnostic yield by the ability to obtain targeted intra-ductal biopsies by direct mucosal visualization. However, the optimal biopsy technique remains unclear. The aim of this study was to compare the diagnostic yield of d-SOC guided single standard biopsies to those obtained via bite-on-bite-biopsy (BBB) technique in patients with IBDS.

Methods This international, multicenter, prospective cohort study included patients with a diagnosis of IBDS who underwent d-SOC from November 2020 to August 2022. During d-SOC, in every patient sampling of the stricture(s) was performed by firstly obtaining at least 4 single biopsies, and secondly obtaining at least 1 BBB. Definite diagnosis of the IBDS was based on pathology outcomes (biopsies or surgical resection specimens) and clinical follow-up of at least one year. The primary outcome was the accuracy of both biopsy techniques.

Results 89 patients were included (62% male, median age: 66 years). Location of the stricture was hilar in 52 cases and distal in 37. Single and BBB biopsies were technically successful and with sufficient tissue for diagnosis in 82 (92.1%, median number of biopsies=4) and 78 (87.6%, median number of BBB biopsies=2), respectively. These biopsies confirmed malignancy in 31/82 and 29/78 of cases, respectively. Comparing the two biopsy techniques, these techniques yielded different results in 4/78 patients (5.1%).

In 82 (92.1%) patients follow-up was complete and malignancy was confirmed in 51 (62.2%) patients, resulting in an overall sensitivity, specificity and accuracy of 60.8%, 100% and 75.6% of both techniques combined. For both sampling techniques, sensitivity and accuracy decreased significantly if a stent was placed at a prior ERC (n=37, 41.6%) or whenever prior intra-ductal tissue acquisition had been performed (n=41, 46.1%). The number of BBB did not affect sensitivity or accuracy. No adverse events related to d-SOC guided biopsies were noted.

Conclusions In this prospective study, BBB did not outperform at least four random single biopsies of IBDS. Prior manipulation of the IBDS, by stent placement or prior tissue acquisition, is associated with a decreased yield (Dutch Trial Register: NL9649).

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A Pathologic Abdominal Ultrasonography At Diagnosis Of CLL Significantly Reduces The Time To Progression In Patients With Rai 0 Or Rai 1 Disease
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Adeline Teh European Respiratory Journal 2013

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Conclusion: This prospective multicentre study was prematurely discontinued due to MSE withdrawal from the market by the manufacturer because of safety issues. In total 88 patients underwent enteroscopy-assisted biliary ERCP in different types of surgically altered anatomy, resulting in an overall technical success rate of 54%. This result is lower as compared to literature data based on balloon-assisted enteroscopy. SAE rate was 7% with only 1 SAE attributable to the use of MSE (oesophageal perforation). MSE allows enteroscopy-assisted ERCP in patients with surgically altered anatomy, but other techniques may be preferred.

Disclosure: The study was sponsored by Olympus Europe (Hamburg).

PP1064

SINGLE OPERATOR CHOLANGIOSCOPY IN THE MANAGEMENT OF PROXIMALLY MIGRATED BILIARY STENTS – SINGLE CENTER EXPERIENCE

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Introduction: Endoscopic biliary stenting is a well–established therapy in the management of hepatobiliary diseases. However, migration is reported in 5%-10% of cases. Management of proximally migrated stents using standard techniques(guidewire cannulation, snare, forceps, Schohenra stent retriever) can be technically challenging sometimes. Cholangioscopy and retrieval under direct visualization could be a useful tool in such difficult cases.

Aims & Methods: To evaluate the application of single-operator cholangioscopy in the management of proximally migrated biliary stents in terms of efficacy and safety.

Methods:We performed a retrospective analysis of the data of a prospective group of patients. The cohort included consecutive 100 cases of proximally migrated stents from January 2018 through March 2024. We evaluated the retrieval technique, success rate, and adverse events.

Results: Patients were divided into two groups. In the first collective of patients- cholangioscopy was not performed n=62/62%/. We found a technical success rate – defined as successful stent extraction in 69,35% of cases/n=43/. In 19 of the cases removal was not achieved, followed by placement of new plastic stent n=19/30.65%/.In the second group, n=38/38%/ cholangioscopy with single operator cholangioscope was the retrieval technique with a technical success rate of 100%.

There was a statistical difference between the two groups in terms of technical success in favor of the group with cholangioscopy - Pearson chi-square $\chi 2 = 21.534$, $p < 0.001$.

Cholangioscopy was performed either after the failure of standard techniques or as the first-choice tool for stent removal. In five cases we performed pancreatoscopy for extraction of migrated pancreatic stents with only one case of postprocedure pancreatitis.

We experienced adverse events/AE/ in 17 cases as pancreatitis was the most common complication n=11/64,71% of all AE/, followed by cholangitis n=5/29,41% of all AE/ and one case of bleeding n=1/5,88%/. In the first group, the rate of adverse events was 17,74%/n=11/ against 13,95%/n=6/ for the second group.

There was no significant statistical difference in the rate of AE between the two groups. The mean procedure duration was 34,35 minutes for the first group and 42,24 minutes for the second with a statistically significant difference p=0.029 in favor of the first group.

However, it is important to note that in some cases cholangioscopy was performed after the failure of standard techniques which by ilself prolonged the procedure time.

Type of AE	Group 1	Group 2
Pancreatitis	N=7/63,64% of AE for the group; 41,18% of all AE; 63,64% of all cases of pancreatitis/	N=4/66,67% of AE for the group;23,53% of all AE;33,36% of all cases of pancreatitis/
Cholangitis	N=3/27,27% of AE for the group; 17,65% of all AE;60% of all cases of cholangitis/	N=2/33,33% of AE for the group; 11,76% of all AE;40% of cases of cholangitis/
Bleeding	N=1/9,09% of AE of the group;5,88% of all AE;100% of cases of bleeding/	NA

Conclusion: Cholangioscopy is a safe and effective technique for the extraction of migrated biliary stents with a high rate of efficacy and an acceptable rate of adverse events. It could be proposed as a first choice in cases where failure of standard techniques is suspected/persistent stenosis, residual bile duct stones/.

Disclosure: Nothing to disclose.

PP1065

CHARACTERIZING LARGE COMMON BILE DUCT STONES: DEFINING SIZE AND CLINICAL IMPLICATIONS

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Introduction: The precise definition of a large stone is ambiguous, with sizes often ranging from 10 to 15 mm. Authors refer to a stone as "large" if its size exceeds the diameter of the CBD by more than 2mm (ratio of stone size to CBD diameter > 1).

Aims & Methods: Our study aimed to determine the threshold at which the diameter of the stone leads to endoscopic treatment failure.This research is a retrospective analysis that encompassed all patients who had endoscopic retrograde cholangiopancreatography (ERCP) for the treatment of common bile duct stones from January 2019 to December 2022. The examination of the ROC curve helped identify the threshold at which the diameter of the stone can predict the failure of the ERCP.

Results: We enrolled a total of 181 patients, with a mean age of 64 years (ranging from 22 to 103 years), and a male-to-female sex ratio of 0.41. The primary reasons for doing ERCP were the presence of remaining or recurring gallstones (69%, n = 129) or the need for sequential therapy (18%, n = 33). The efficacy of the first therapy was 61.5%. The mean stone size was 12.5mm, with a range of 3-40mm. Upon examining the ROC curve, it was determined that a diameter of 12 mm provided the highest accurate prediction of endoscopic treatment failure, with a sensitivity of 74% and a specificity of 73%. Univariate analysis revealed that the presence of a stone bigger than 12 mm was a significant predictor of failure of routine endoscopic therapy (p = 0.001). The average ratio of stone size to diameter of the CBD was 0.74 [0.27-1.67]. In our series, we found no significant association between this factor and ERCP failure (p = 0.276).

Conclusion: Within our dataset, we observed that stones larger than 12 mm were indicative of a higher likelihood of ERCP failure. There was no significant correlation between the ratio of stone size to the diameter of the common bile duct (CBD) and the failure of endoscopic therapy.

Disclosure: Nothing to disclose.

Aims & Methods: We performed a prospective pilot study in patients with proven MBO and a bile duct diameter of at least 12mm, requiring biliary drainage, excluding patients with gastric outlet obstruction. Patients underwent biliary drainage with (as first procedure) EUS-CDS using a 6 or 8 mm LAMS with a 6 cm by 8 or 10 mm FCSEMS placed through the LAMS. Primary outcome was stent dysfunction, defined as recurrent jaundice after initial clinical success, ongoing jaundice in combination with persistent dilatation of the bile ducts, or cholangitis. Secondary outcomes were technical success, clinical success, and adverse events (AEs).

Results: Overall, 27 consecutive patients eligible for EUS-CDS were enrolled. The placement of a LAMS was successful in 24/27 patients (89%), and placement of FCSEMS through the LAMS was successful in 20/24 patients (83%), in the remaining 4 patients a coaxial double pigtail stent was placed. In 2 patients there was persistent cholestasis requiring stent revision (10%), leading to a clinical success rate of 90%. No patients developed stent dysfunction after initial clinical success.

Periprocedural AEs occurred in 3 patients (11%) due to LAMS maldeployment which was solved intraprocedurally in all patients. In 1 patient this led to biliary peritonitis and fluid collections requiring percutaneous drainage, the other 2 patients recovered uneventfully.

Two patients experienced cholecystitis within 30 days after the procedure (10%), one patient who also had concomitant renal failure subsequently deceased.

The other patient recovered after antibiotics and percutaneous drainage. Two other patients deceased within 30 days which was unrelated to the procedure.

Median age, y (IQR)	**69 (62.5-77.5)**
Male sex, n (%)	14 (51.9)
Type of tumor, n (%)	
· Pancreatic ductal adenocarcinoma	27 (100)
Tumor stage, n (%)	
· Resectable	16 (59.3)
· Locally advanced	5 (18.5)
· Metastatic	6 (22.2)
Median serum total bilirubin, µmol/L (IQR)	224 (182-336.5)
Median diameter common bile duct, mm (IQR)	16 (16-20)

Table. Baseline characteristics in 27 patients undergoing EUS-CDS.

Conclusion: This study showed a stent dysfunction rate of 10% following technically successful EUS-CDS with placement of a FCSEMS through the LAMS. Improving the LAMS design may reduce the rate of stent dysfunction by improving the direction of bile flow through the stent towards the descending duodenum.

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PP1090

ENDOSCOPIC ULTRASOUND-GUIDED TECHNIQUES FOR BILIARY DRAINAGE - COMPARATIVE ANALYSIS OF SINGLE CENTER DATA

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Introduction: Endoscopic retrograde cholangiopancreatography /ERCP/ is the standard technique in the treatment of unresectable malignant biliary obstruction/MBO/, unfortunately, a failure rate of 3% up to 12 % and a rate of complications up to 6,85% have been reported in the literature. Endoscopic ultrasound-guided biliary drainage/EUS – BD/ is a feasible alternative for biliary drainage, applicable especially with surgically altered anatomy. With several techniques available, hepaticogastrostomy /EUS - HGS/ and choledochoduodenostomy/EUS - CDS/ are most commonly performed amongst them.

Aims & Methods: To compare the most commonly used techniques for endoscopic ultrasound-guided biliary drainage in terms of efficacy and safety.

Methods:Retrospective analysis of a prospective database of patients undergoing EUS -BD in a single tertiary referral center. EUS–BD was performed after the failure of ERCP or as a first choice of drainage procedure in patients with altered anatomy. 102 patients were included in the EUS-HGS group 94,12%(n=96) with malignant biliary obstruction and 5.12%(n=6) with benign underlying disease. Of 24 patients included in the EUS–CDS group 95,83% (n=23) had underlying malignancy against one patient with benign disease.

Results: Considering the application of EUS – BD as a first choice of drainage procedure for patients with surgically altered anatomy we had 46 patients in the HGS group (45.1%) against 16.67%(n=4) for the CDS group. In 56/44,44%/ cases EUS BD was performed during the same session after unsuccessful cannulation. Evaluating results in terms of technical success rate, defined as successful stent placement – we found a 98,04 % success rate for the EUS-HGS group and 95,83% in the EUS–CDS group. We defined clinical success as a drop in the bilirubin levels by one-half in the first week following the procedure. The results between the two groups were not significantly different - 80.46% for the HGS against 80,95% for the CBS group. Concerning adverse events during the procedure, we found a ratio of 7.84% for the patients undergone HGS and 4,76% for EUS – CDS with no significant difference. The most common AE found was proximal stent misdeployment/n=3/. All of the events were managed either conservatively or during the same session with the placement of fully covered SEMS. Concerning early AE /during the first 7 days / we experienced 14,71% early

adverse events in the HGS group/n=15/ and 16,67% /n=4/ in the CDS group with most common event postprocedure infection with no significant difference.

Conclusion: The two most common transluminal techniques for EUS biliary drainage - HGS and CDS are a promising tool with comparable technical and clinical success rates, adverse events, and overall survival. Both procedures are valid alternatives after failed ERCP or as a first step especially in patients with surgically altered anatomy.

Disclosure: Nothing to disclose.

PP1091

WITHDRAWN

PP1092

TRANS-DUODENAL GALLBLADDER EUS-GUIDED DRAINAGE: A SINGLE CENTER EXPERIENCE

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Introduction: Endoscopic ultrasound-guided gallbladder drainage (EUS-GBD) is becoming an important and effective alternative to percutaneous drainage (PTD) for patients not suitable for surgery. It is also an acceptable option for biliary drainage in oncologic patient, if retrograde drainage failed. Placing of a lumen apposing metal stent (LAMS) for EUS-GBD allows the removal of gallbladder stones too, so becoming a possible alternative to surgery in very selected cases.

Aims & Methods: The study aims to describe our endoscopic experience and management in patients unfit for surgery and in those oncologically advanced. Retrospectively analyzed cases with EUS-GBD, from December 2019 to September 2023, in a single peripheral hospital (Hopital Riviera-Chablais), using 3 types of LAMS (10x10mm, 15x10mm, 16x20mm), delivered with an electrocautery-enhanced catheter.

Results: EUS-GBD was performed in 23 patients (15:8=M:F) with median age of 83 years old (52-89). 13 patients (56.2%) had advanced cancer (6 pancreatic metastatic cancer, 5 cholangiocarcinoma, 1 breast metastatic cancer, 1 metastatic pulmonary NET) and 10 patients were affected by symptomatic lithiasic cholecystitis and they were not considered fit for surgery (whose 2 already received a PTD). EUS-GBD was attempted through the duodenum in all cases but one, previously treated with PTD and that was drained through the stomach.

In one case, the stent was mis-deployed through the duodenum (without entering the gallbladder lumen), so requiring the placement of an over-the-scope-clip and a different biliary drainage for biliary obstruction in an oncological patient. A 15x10 mm LAMS was used in 14 cases, 10x10 mm LAMS was used in 6 cases (including the failed one), and 16x20 mm in 2 cases. A double pigtail 5 Fr 7cm was placed through all 22 successfully placed LAMS. 3 patients underwent electrohydraulic-lithotripsy (EHL) through the LAMS after 4-8 weeks. In 5 patients LAMS was then removed.

Generally, except one complication, it was not described short term or long-term adverse events. 6/23 (26%) patients died for oncological disease progression and for other causes not procedure related.

Conclusion: EUS-GBD represents a promising therapeutic approach in patients with high risk of mortality. Considering the high rate of clinical and technical success as well as the possibility of managing endoscopically potential complications, this approach could be also proposed in peripheral centers and not only in advanced endoscopic ones.

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Disclosure: Nothing to disclose.

PP1093

WITHDRAWN

PP1094

SAFETY OF ENDOSCOPIC ULTRASOUND-GUIDED CHOLEDOCHO-DUODENOSTOMY IN PATIENTS WITH MALIGNANT OBSTRUCTION AND ASCITES

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Introduction: Ascites of any etiology presents a major problem in patients with malignant biliary obstruction (MBO) and failed ERCP, where trans-mural drainage is indicated, but presumed to be unsafe due to the risk of bile leak. We planned to evaluate the safety of Endoscopic Ultrasound-guided choledocho-duodenostomy (EUS-CDS) in our patients with ascites.

Aims & Methods: We palnned to evaluate the safety of endoscopic ultrasound-guided choledocho-duodenostomy (EUS-CDS) in malignant biliary obstruction (MBO) and ascites in a retrospective study. Prospectively maintained records of consecutive patients with MBO, with or without ascites, and undergoing EUS-CDS for biliary drainage, were retrospectively analysed. Technical success was defined as successful stent deployment, while clinical success was defined as biliary decompression (biochemical and radiological), and relief in cholangitis. Complications such as bile leak, fever and abdominal pain were recorded, and the data were compared between patients with and without ascites.

Results: Between November 2019 and March 2024, 60 patients underwent EUS-CDS for MBO. Of these, 38 (65%) were males and the mean age was 61.49 years. At the time of the procedure, 18 patients had ascites (30%) had ascites, of which 11 had Grade II and 7 had Grade III ascites. The most common malignancies wer pancreatic cancer (28), peri-ampullary carcinoma (12) and distal cholangiocarcinoma (9).

Other lesions seen were duodenal cancer (5), malignant lymph node metastases causing MBO (4) and gall bladder cancer (2). Technical success was achieved in 100% procedures, and clinical success was also achieved in all

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Disclosure: Nothing to disclose.

PP1116

FORGING NEW PATHS: GROUNDBREAKING INSIGHTS FROM MEXICO'S FIRST COMPARATIVE STUDY ON ENDOSCOPIC ULTRASOUND-GUIDED BILIODIGESTIVE DERIVATIONS

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Introduction: Biliodigestive diversions are surgical procedures aimed at bypassing obstructions or restoring the flow of bile from the liver to the digestive tract. These procedures are commonly performed in patients with biliary tract obstructions caused by conditions such as tumors, strictures, or stones. By creating an alternate pathway for bile drainage, biliodigestive diversions help alleviate symptoms and prevent complications associated with biliary obstruction, improving the patient's quality of life and overall prognosis.
There are various techniques for biliodigestive diversions, including hepaticojejunostomy, hepaticogastrostomy, and choledochoduodenostomy, each tailored to the specific needs and anatomical considerations of the patient.
Aims & Methods: Aims: Compare the efficacy and safety of biliodigestive diversion procedures, hepaticogastrostomy and choledochoduodenostomy, in patients with biliary tract obstructions.
Methods: Restrospective comparative study in patients with biliary tract obstructions undergoing either hepaticogastrostomy or choledochoduodenostomy at Centro Medico Nacional 20 de Noviembre will be included in the study from 2018- 2024.
Results: We evaluated 65 patients in total, median age 65 years, 44% were female, we had 3 biliodigestive procedures: Coledocoduthdenostomy 50%, Hepaticogastrostomy 28.1% and Rendez-vous 12.5%, the type of prothesis were 10x8 30%, 8x8 10%, Hot Axius in 5%, 10x6 16%, technical success reported was 87.5% and clinical success was 89.1, Five patients experienced complications, with peritonitis being the most frequent, followed by bleeding.
These findings underscore the importance of vigilant post-procedural monitoring and prompt management of complications to ensure optimal patient outcomes.
Conclusion: These results are encouraging and suggest that both choledochoduodenostomy and hepaticogastrostomy are effective procedures for addressing biliary obstructions in this patient cohort.
Additional Considerations that we want to mention, It's important to note that both technical and clinical success are important indicators of procedure efficacy and safety and that further analysis would be helpful to explore any association between the type of procedure performed and long-term outcomes, such as patency duration and patient quality of life.Overall, these results provide valuable insights into the practice of endoscopic ultrasound-guided biliodigestive diversion in Mexico and may serve as a basis for future research and clinical practice in this field.
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Disclosure: Nothing to disclose.

PP1117

ADVERSE EVENTS ASSOCIATED WITH ENDOSCOPIC ULTRASOUND-GUIDED BILIARY DRAINAGE

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Introduction: Endoscopic ultrasound-guided biliary drainage (EUS – BD) has become widely accepted over the past several years for complicated biliary drainage when conventional endoscopic retrograde cholagiopancreatography is not successful or feasible due to variety of constrains. The success rate of the procedure is between 90% an 97% and the complication rate is less than 10%.
Aims & Methods: The aim of the study is to evaluate the safety and efficacy of EUS-BD performed in our unit while assessing the risk factors associated with the procedure.
We performed retrospective analysis of a prospective data base from March 2020 to October 2023. The patients underwent EUS – BD using linear scope (Fujifilm EG – 580UT). Several procedures are possible. The procedure was tailored to individual patient's anatomy.
Results: We identified 140 patients who underwent EUS-BD during the study period (men- 75, women- 65) – 130 (92.8%) with malignant and 10 (7.1%) with benign disease. Gender distribution shows higher rate of post-procedural complications in men (29,7% vs 21,5%), nevertheless there is no statistically significant correlation between gender and complication rate. The medium age of the patients was 66.3 years (38 years – 92 years). No statistically significant correlation was found between age, presence of arterial hypertension, diabetes mellitus and adverse events.
We analyzed the different therapeutic modalities including EUS - CDS (n = 20), EUS - HGS (n = 88), antegrade stenting (n = 12) and rendezvous (n = 13), hepaticojejunostomy (n = 5), cholecystogastrostomy and -duodenostomy (n = 2). We found no statistically significant correlation between the type of technical modality and the incidence of peri- and post-procedural complications.

The technical success was 96.6% (n = 137). Mean duration of the procedure was 42.15 min. (10 min. – 170min.). Mean hospital stay was 5 days (2 days – 10 days). Adverse events were detected in 38 patients (27.1%). The various complications that have been reported were classified into periprocedural and postprocedural:

- Periprocedural adverse events were detected in 7 (5%) patients: 2 (1.4%) with bleeding, 2 (1.4%) with stent migration, 3 (2,1%) with loss of access.
- Postprocedural complications are deteced in 29 (20,7%) and we divided into:

1. Early (up to 7 days after procedure) – n = 21 (15%) of them 13 (9,3%) with cholangitis, 3 (2,1%) with abdominal pain, 1 (0,7%) with bleeding, 2 (1,4%) with pancreatitis, 1 (0,7%) with pneumoperitoneum and 1 (0,7%) patient with biloma.
2. Late (a week after the procedure) – n = 8 (5,7%) with cholangitis.

- There were 2 deaths related to the procedure (1.4%) in patients with advanced oncologic disease.

All cases were managed conservatively and did not require surgery, intensive care or interventional radiology. Three (2,1%) of the periprocedural complications were solved by performing PTBD immediately after EUS-BD by the same team.

Conclusion: EUS-BD is effective tool for biliary drainage both in naïve patients and those with altered biliary anatomy. Along with the possibility of emergency PTBD, it has favourable technical and clinical success rate and safety profile and therefore the potential to shift the current paradigms that define management of complicated biliary obstruction.

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Disclosure: Also presented on ESGE DAYS 2024.

PP1118

THE IMPACT OF CHOLANGIOSCOPE DIAMETER VARIATION ON CHOLANGIOSCOPY OUTCOMES: A RETROSPECTIVE COMPARATIVE STUDY

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Introduction: Digital single-operator cholangioscopy (DSOC) stands as an invaluable diagnostic and therapeutic instrument, offering direct visualization of the biliary ducts. The use of cholangioscopes with higher diameter may raise concerns regarding patient discomfort and safety.

Smaller diameter cholangioscopes could offer enhanced maneuverability and decreased risk of adverse events, improving procedural success rates.

Aims & Methods: The aim of this study is to compare the impact of cholangioscope diameter variation on cholangioscopy outcomes, with a focus on procedure success rates. A retrospective, comparative study performed in patients who underwent either diagnostic or therapeutic DSOC from January 2021 to August 2023 were retrospectively collected. A $p < 0.05$ was considered statistically significant.

Results: A total of 128 procedures were performed in 119 patients. Median age was 62.5 (44 – 71) and 46.1% were female. 52.3% of procedures were performed with the 9.3F cholangioscope, 53 (41.4%) were performed with the 11.1F, and 6.2% procedures were performed with the 7F cholangioscope. The 9.3F cholangioscope was used mainly for diagnostic procedures (61.2%) when compared to the 11.1F (39.6%) ($P = .01$). The most common diagnostic indication was indeterminate biliary stricture (9.3F: 31.3% vs 11.1F: 13.2%) ($P = .01$).

Most lesions were in the common bile duct (CBD). Two procedures performed with the 9.3F scope switched to a lower caliber scope (7F) to surpass the lesions, while 4 procedures performed with 11.1F required the application of a 9.3F to surpass the lesions and finish the procedures (P=.176). The 9.3F allowed the evaluation of the intrahepatic ducts in 6 procedures. More therapeutic procedures were performed with the 11.1F cholangioscope (60.4%), while 38.8% with the 9.3F. The main indication was lithotripsy.

Most procedures with a stone size >20mm were performed with the 11.1F (61%) (P=.01), with a total removal of stones of 64.5%. Technical success was higher in the 9.3F (97.0% vs 90.6%), clinical success was higher in the 11.1F (96.2% vs 94.0%).

All cases performed with the 7F cholangioscope were diagnostic, 7/8 procedures with 7F allow a complete evaluation of the intrahepatic ducts, 1/8 had a complete post-surgical CBD stenosis, and achieved a 100% technical and clinical success rate.

Conclusion: Cholangioscope diameter should be tailored to the specific diagnostic or therapeutic needs. While the 9.3F cholangioscope is more suitable for diagnostic procedures and has a higher technical success rate, the 11.1F is preferable for therapeutic interventions, particularly for larger biliary stones where higher caliber lithotripter is required. The 7F cholangioscope presents an effective alternative for complete intrahepatic duct evaluations.

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	Fluid collection		
Factors	Post- pancreatectomy	Post- pancreatitis	p-value
Age (years)	57.9 (52.8-63.2)	52.6 (48.1-57.1)	0.11
Male	20 (74.1%)	18 (66.7%)	0.77
BMI (kg/m2)	25.1 (22.5-27.7)	24.4 (21.9-26.9)	0.67
Comorbidities	16 (59%)	20 (74.1%)	0.37
Cardiac	3 (11%)	7 (25.9%)	0.29
Pulmonary	2 (7%)	7 (25.9%)	0.13
Size (mm)	73.7 (60.4- 86.9)	66.5 (54.5-78.6)	0.41
Infection	11 (40.7%)	11 (40.7%)	0.78
Number of Stents	1 (1-5)	1 (1-5)	0.98
Time to intervention (days)	30 (7-100)	24 (2-90)	0.47
Outcomes			
Re-Interventions	3.0 (2.3-3.7)	3.5 (2.5-4.4)	0.44
Hospital stay	24.1 (18.2-29.9)	30.6 (11.6-49.7)	0.47
ICU stay	1.7 (0.5-2.9)	11.9 (1.5-22.3)	0.03
Early outcome	22 (81.5%)	21 (77.8%)	0.99
Late outcome	27 (100%)	27 (100%)	
Complications	2 (7.4%)	8 (29.6%)	0.08
Mortality	1 (3.7%)	3 (11.1%)	0.60

Table.

Conclusion: Despite comparable clinical outcomes after EUS-guided drainage in both groups, patients with post-pancreatitis fluid collection were associated with greater ICU utilization and tended to experience higher complication rates at initial intervention.

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Disclosure: Nothing to disclose.

PP1182

OPTIMIZING PANCREATIC WON MANAGEMENT: THE QNI CLASSIFICATION APPROACH FOR ENDOSCOPIC DRAINAGE

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Introduction: Pancreatic walled-off necrosis (WON) presents a significant challenge in acute pancreatitis management, often necessitating endoscopic intervention for drainage and necrosectomy. However, the optimal selection of stent type for endoscopic drainage remains debatable. This study aimed to evaluate the utility of the QNI classification in guiding stent selection for WON drainage.

Aims & Methods: We conducted a retrospective analysis of patients who underwent endoscopic drainage and necrosectomy for symptomatic pancreatic WON at a tertiary referral center between January 2022 and September 2023.

Patients were divided into two groups based on the QNI classification:

Group 1 consisted of patients who had WON affecting 1 quadrant or 2 quadrants with a necrosis of less than 30%.

Group 2 consisted of patients whose WON had affected 3 quadrants, 2 quadrants with 30% necrosis, or 1 quadrant with more than 60% necrosis at the time of the index procedure.

A WON-based decision was made by the endoscopist regarding the use of LAMS or plastic stents. Necrosectomy was performed in cases of infection following WON drainage. Resolution was considered in clinically asymptomatic patients with WON < 30 mm at the 3-month imaging follow-up.

Results: Forty-eight patients were included in the study, with a mean age of 55.7 (±12.28) and a male-to-female ratio of 2.4:1, 20 patients in Group 1 and 28 patients in Group 2. Except for infection, which occurred more frequently in Group 2, the indications for drainage (pain, weight loss) were similar between the two groups (28% vs 5%, p=0.03). LAMS were used more frequently in group 2 than in group 1 (64% vs 40%, p=0.001). The mean number of endoscopic procedures in Group 1 was 1.7 and in Group 2 it was 3. The interval between endoscopic procedures in Group 1 and Group 2 was 20.3 days and 12.4 days, respectively (p=0.05). Clinical resolution at 3 months showed no significant difference between groups, with rates of 90% vs 85% (p=0.87), and the complication rates was 10% vs 14.2% (p=NS). Percutaneous drainage was done in 0% vs 7.14% cases, and surgery was required in 0% vs 7.1% of cases.

Conclusion: As a result of the newly proposed QNI classification system, patients can be guided in the selection of LAMS placement as well as for multidisciplinary management. Severe QNI scores may need more aggressive interventions, yet outcomes are comparable to those with milder disease.

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Disclosure: Nothing to disclose.

PP1183

EFFICACY AND SAFETY OF ENDOSCOPIC ULTRASOUND-GUIDED RADIOFREQUENCY ABLATION OF PANCREATIC TUMORS - INITIAL EXPERIENCE OF SINGLE CENTER

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Introduction: Surgery is the mainstay therapeutic strategy for pancreatic tumors. Although effective, the rates of peri-operative morbidity and mortality remain a concerning issue. This poses the need for developing less invasive, safe but effective techniques. Endoscopic ultrasound-guided radiofrequency ablation/EUS RFA/ is a novel tool for targeted local destruction, applicable for pancreatic neuroendocrine tumors /PanNEN/, locally advanced adenocarcinoma, and cystic pancreatic neoplasms.

Aims & Methods: To evaluate EUS RFA of pancreatic tumors in terms of efficacy and safety. Primary endpoint was clinical success rate defined as a complete response after the procedure and during follow-up. The secondary endpoint was the assessment of adverse events/AE/ associated with the procedure.

Methods: Retrospective analysis of a prospective database including all consecutive patients who were treated with EUS RFA for the period August 2022 – December 2023 in a single tertiary center. We evaluated electronic patient records and gathered data on patients' baseline characteristics, procedure characteristics, and outcomes. The follow-up of the group included imaging studies - computed tomography and/or contrast-enhanced EUS, done on the third and the sixth month post-procedure.

Results: Ten sessions of RFA in seven patients were performed. Male to female ratio was 4:3, with a mean age of 65.42 years. The procedures were performed with EUS–guided RFA 19 G Needle. The group included five patients with neuroendocrine tumors - two with non-functional pNEN –

G1 grade of differentiation and three with insulinoma; one patient with metastasis from renal cell carcinoma, and one patient with pancreatic ductal adenocarcinoma. The mean size of the lesions was 23.5714 ±4.755 (±20.17%)mm. Technical success defined as successful puncture of the lesion and application of alternating current was achieved in all cases. Clinical success defined as the disappearance of lesions on imaging studies at the 3rd and 6th month was achieved in 85,71 % of the patients. In three of the patients, we performed a second session on the third month during follow-up due to signs of vital tissue. In the 6thmonth during follow-up in two of them, we found a complete response. There was no correlation between response rate and functional status of neuroendocrine tumors as well as no association of procedure outcome and location of lesions. In terms of efficacy, we found a negative correlation between lesion size and response rate. We observed the resolution of symptoms due to hormonal hypersecretion in the cases of insulinoma in the first 24 postprocedural hours with no events of hypoglycemia. No early or late adverse events were reported in the observed group.

Patient	Histology	Size of lesion	Number of sessions	Number of passes during the session	Response	Adverse events
1	NF PanNET ki-67-2% G1	43/27mm	2	4	Partial response after 2 sessions	None
2	NF PanNET ki-67-2% G1	22/15mm	1	3	Complete response after one session	None
3	FNET - insulinoma G1	20mm	2	4	Clinical response after one session;complete response after second session	None
4	Metastasis from renal cell carcinoma	18/15mm	2	3	complete response after two sessions	None
5	Locally advances adenocarcinoma	38mm	1	3	Complete response after one session	None
6	NET Insulinoma G1	17/13mm	1	3	complete response after one session	None
7	NET Insulinoma G1	7mm	1	2	Complete response after one session	None

Conclusion: EUS RFA is a highly effective and safe mini-invasive technique for treating pancreatic tumors, especially PanNENs.It could be offered to selected patients as an alternative to surgical treatment, providing targeted selective local tissue destruction. The procedure can be applied as an adjunctive tool in the palliative treatment of locally advanced ductal adenocarcinoma but more data are needed.

Disclosure: Nothing to disclose.

PP1184

ADVANCEMENTS IN ENDOSCOPIC PANCREATIC NECROSECTOMY: INSIGHTS FROM THE LAMS ERA

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Introduction: Walled-off pancreatic necrosis (WOPN) stands as a grave complication of acute pancreatitis, posing a substantial risk of sepsis-induced multiple organ failure when infected. Traditional surgical debridement, though effective, often entails elevated rates of adverse events and mortality. However, the emergence of endoscopic ultrasound (EUS)-guided cysto-gastrostomy employing LAMS presents a promising alternative for WOPN treatment, offering advantages in managing necrotic collections via endoscopic necrosectomy. This study aims to evaluate the technical and clinical success as primary objectives, alongside assessing adverse events and recurrence rates as secondary objectives.

Aims & Methods: We conducted a retrospective analysis of consecutive patients diagnosed with infected walled-off pancreatic necrosis (WOPN) and treated over a 48-month period from March 2020 to February 2024. The treatment protocol involved the placement of a novel LAMS – HOT AXIOS stent, utilizing an electrocautery-enhanced delivery system. This was followed by direct endoscopic necrosectomy (DEN), performed immediately post-stent deployment and repeated at intervals of 3 to 7 days until complete resolution was attained. All procedures were performed by expert clinicians under anesthesia with meticulous management of the necrotic cavity.

Results: 31 patients diagnosed with infected WOPN underwent EUS assessment for LAMS placement. 5 patients were excluded: 3 due to cavity distance from gastric wall and 2 due to large amount of solid necrotic tissue (>30%). 26 patients underwent LAMS placement with average age 34.5 years. Drainage indications included sepsis with infected collection(53.8%), pain(23%), gastric outlet obstruction(11.5%), and a combination of these (11.5%). For primary LAMS insertion,100% technical success rate was achieved. Technical success rates for complete endoscopic necrosectomy were 30.8% & 69.2% at the end of 7 days & 14 days respectively. In cases of failed endoscopic necrosectomy, persistently infected necrosis, clinical deterioration, or complications, a step-up approach was pursued, leading to ultimately a surgical intervention in 23% (6 patients). Complications during endoscopic necrosectomy included transient self-limiting bleeding in 6 patients (23%), aspiration pneumonitis in 3 patients (11.5%), and spurting bleed from necrotic bed necessitating intra-procedural clip placement in one patient. Average procedure duration was 55 minutes with an average of 3 sessions required per patient. Clinical success, defined as pure endoscopic management without the need for surgical or radiological intervention, was achieved in 11 patients (42.3%). 6 patients (23%) required angioembolization, 6 patients (23%) required surgical intervention for incomplete drainage/sepsis and 3 patients(11.5%) required percutaneous catheter drain placement. Average hospital stay was 19 days. Patients who underwent successful endoscopic necrosectomy with LAMS were subjected to MRCP to identify disconnected ducts before LAMS removal, which occurred after an average duration of 18 days. Following stent removal, 11 patients (42.3%) required double pigtail plastic stent (5 Fr x 3 cm) placement due to disconnected ducts. Patients were followed up for an average of 60 days with no recurrences observed during this period.

Conclusion: Adoption of specialized LAMS and subsequent direct endoscopic necrosectomy produced commendable results in managing infected WOPNs. This approach showcased remarkable technical success and favorable clinical outcomes when executed according to established protocols in expert hands.

Disclosure: Nothing to disclose.

tion of this treatment in standard clinical practice and our data aligns reasonably well with the findings of the registration study.

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PP1015

EFFECT OF NEUTROPHIL-TO-LYMPHOCYTE RATIO IN TREATMENT WITH ATEZOLIZUMAB-BEVACIZUMAB IN CIRRHOTIC AND NON-CIRRHOTIC PATIENTS WITH HEPATOCELLULAR CARCINOMA

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Introduction: The majority of hepatocellular carcinoma (HCC) patients has cirrhosis. The increased incidence of HCC in non-alcoholic steatohepatitis (NASH) and on the other hand the decrease of incidence of viral hepatitis, have as a result increased incidence of HCC in non-cirrhotic patients.

There are limited data for response differentiation in cirrhotic and non-cirrhotic patients regarding treatment with atezolizumab-bevacizumab[1]. Elevated neutrophil-to-lymphocyte ratio (NLR) seems to be in favor of worst prognostic for immunotherapy.

Aims & Methods: The aim of this study was to determinate NLR in HCC for cirrhotic and non-cirrhotic patients as a biomarker for effective treatment. 57 patients with Barcelona Clinic Liver Cancer(BCLC) B/C HCC that received treatment with combination atezolizumab-bevacizumab in our referral center through the last three years were included.45/57 were men, mean age was 66.3 years old and mean body mass index (BMI) was 27.23, 33 viral related HCC, 19 with diabetes,29 ALBI-I,41 BCLC-C,16 BCLC-B,22 macrovascular infiltration (MVI),23 extrahepatic disease, 31 had received prior therapy.

Patients with NLR>3 categorized as NLR-H patients and the rest of them as NLR-L. Patients divided into 4 groups, depending on the presence of cirrhosis or not and NLR value, as follows: Group A (non-cirrhotic, NLR-L/N=13), group B (non-cirrhotic, NLR-H/N=14), group C (cirrhotic, NLR-L/N=11), group D (cirrhotic, NLR-H/N=19). The 4 groups were compared for their baseline characteristics and survival (OS and PFS) and multivariate analysis were performed. Next, cirrhotic and non-cirrhotic patients were examined separately and compared for baseline characteristics and survival based on baseline NLR values and receipt of prior therapy.

Results: The groups were comparable in baseline characteristics except for liver disease etiology (p<0.001), ALBI score (p=0.014), MVI(p<0.001), BCLC(p=0.014) and prior treatment (p=0.009). Median OS was 30 months(m),10m,12m,5m and median PFS was 14m,4m,8m,2m for groups A,B,C,D respectively (p<0.001). In multivariate analysis, a statistically significant difference regarding worst survival was found in group D patients compared to group A (p=0.005, HR=0.1), group C (p=0.032, HR=0.333) and marginally group B (p=0.055, HR=0.321). In analysis of cirrhotic patients alone based on NLR, patients were comparable for all baseline characteristics. Cirrhotic patients with NLR-L had better OS(12m vs.5m,p=0.002) and PFS(8m vs. 2m, p=0.028) compared to cirrhotic patients with NLR-H. NLR was an independent determinant of OS (p=0.015,HR=3.480). In analysis of non-cirrhotic patients based on NLR, patients were comparable except for prior treatment. Patients with NLR-L had significantly longer OS (30m vs 10m,p=0.006) and PFS (15m vs 4m,p=0.01). In multivariate analysis,only the presence of prior treatment and not NLR influenced survival. Patients were re-divided according to the presence or absence of prior therapy into 2 groups. Previously treated non-cirrhotic patients had better OS (30m vs 8m, p<0.001) and PFS (24m vs 4m, p<0.001). In the multivariate analysis, the presence of prior treatment was an independent factor determining survival in the non-cirrhotic patients.

Conclusion: Cirrhotic patients with high baseline NLR values show the worst survival among the subgroups. Baseline NLR is an independent determinant of OS in cirrhotic patients, but not PFS, while in non-cirrhotic patients receiving prior therapy is the only factor that independently determines both OS and PFS. The results need to be verified in larger patient cohorts.

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Disclosure: Nothing to disclose.

PP1016

ENDOSCOPIC ULTRASOUND-GUIDED LIVER BIOPSY USING A 22-G FINE-NEEDLE BIOPSY NEEDLE

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Introduction: Liver biopsy is a crucial diagnostic procedure for assessing hepatic pathologies, providing valuable insights into the etiology, severity, and prognosis of liver diseases. In recent years, Endoscopic Ultrasound-Guided Liver Biopsy (EUS-LB) using 22G- fine needle biopsy (FNB) needle has emerged as a promising alternative, leveraging the superior imaging capabilities of endoscopic ultrasound (EUS) to guide biopsy with increased precision and safety. The 22G- FNB needle features a crown tip with three symmetrical cutting edges that enable swift core tissue procurement for histological analysis. The 22G- FNB needle provide greater than 95% tissue adequacy and an excellent diagnostic accuracy.

Aims & Methods: The aim of our study is to evaluate the diagnostic utility and safety of a 22G-FNB needle using the slow -pull technique for EUS-LB of parenchymal and focal liver lesions.

We performed a retrospective analysis of prospective data basefrom January 2021 to March 2024. Each patient underwent anendoscopic ultrasound by using linear scope (Fujifilm EG-580UT) and fine needle biopsy using 22G - tip needle with the slow-pull aspiration technique:

- For 33 patients we used a 22G Trident™ - tip FNB needle (Micro-Tech Endoscopy);
- For 26 patients we used a 22G Acquire- tip FNB needle (Boston Scientific Corp.);
- For 4 patients we used a 22G SonoTip Top Gain - tip FNB needle (MediGlobe);

The median number of needle passes was approximately 3 (between2 and 5).

Results: We identified 63 patients who underwent EUS-LB of the liver during the study period(28 men and 35 women): 47 (74.6%)of them were with malignant and 16 (25.4%)–with benign disease. The medium age of the patients was 56.9 years. The specimen was considered adequate in all 63 patients.

We classified the EUS-FNB of liver diseases into EUS-FNB of parenchymal and focal liver lesions.

- EUS-FNB of parenchymal liver disease were performed to 13 (20.6%) of the patients: cirrhosis was found in 2 (3.17%), nonalcoholic fatty liver disease – in 5 (7.9%) and cholestasis in 6 (9.5%).
- We performed EUS-FNB of focal liver lesions in 50 (79.36%) of the patients.

Metastasis were found in 39 (61,9%): pancreatic ductal adenocarcinoma was detected in 27 (42.8%), pancreatic acinar cell carcinoma – in 1 (1.58%), pancreatic neuroendocrine carcinoma – in 5 (7.9%), lung adenocarcinoma – in 3 (4.7%), ductal adenocarcinoma of breast – in 2 (3.17%) , colorectal adenocarcinoma – in 1 (1.58%) and Ewing sarcoma – in 1 (1.58%).

Primary liver cancer - hepatocellular cancer was diagnosed in 4 (6.34%) patients.

Cholangiocarcinoma was found in 3 (4.7%) patients.

There were 3 (4.7%) patients with negative histology for tumor cells in the specimen: in 2 (3.17%) cases liver abscess was proved and 1 (1.58%) hepatic cyst.

No adverse events were observed during the first 48h and after a 30 days follow-up.

There was no death during the study period.

Conclusion: Our study illustrates that EUS-guided liver biopsy using a 22 G- FNB needle provides adequate specimen for histologic analysis, lesser postprocedural recovery time and it is a safe, highly effective alternative to other methods of liver biopsy. The use of real time imaging guidance with doppler also helps to reduce the adverse events.

Disclosure: Nothing to disclose.

PP1017

CLINICAL CHARACTERISTICS AND PROGNOSIS OF DE NOVO HEPATOCELLULAR CARCINOMA AFTER TIPS PLACEMENT: A RETROSPECTIVE COHORT STUDY

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Introduction: Portal hypertension often accompanies hepatocellular carcinoma (HCC) in cirrhosis. Transjugular intrahepatic portosystemic shunt (TIPS) serves as an effective intervention for portal hypertension, while HCC can exacerbates it.

Aims & Methods: To investigate the prognosis of post-TIPS HCC patients and factors influencing it. Retrospective analysis of post-TIPS HCC patients, assessing overall survival (OS), progression-free survival (PFS), and objective response rate (ORR) using Kaplan-Meier, logistic regression, and Cox model.

Results: A total of 68 patients were included (April 2015 to October 2023). Forty-seven percent died during follow-up, with liver decompensation as a major cause (27.9% vs 10.3%, P=0.18). Median OS was 33 months, median PFS was 24 months, and ORR was 80%. The 2-year OS rates for BCLC stage 0, A, B, and C were 85.6%, 54.6%, 25%, and 0%, respectively. Tumor number (HR 1.58, P=0.01) and moderate to severe ascites (HR 5.16, P=0.003; HR 5.52, P=0.01) were OS risk factors, while mild to moderate ascites affected PFS (HR 3.19, P=0.021; HR 6.20, P=0.002). Age (HR 0.91, P=0.031) and ascites severity (HR 0.06, P=0.022; HR 0.025, P=0.022) influenced ORR.

Conclusion: Liver decompensation is a primary mortality cause in post-TIPS HCC. Ascites presence affects outcomes, underscoring post-TIPS ascites management importance.

Disclosure: Nothing to disclose.

ry, respectively. 73% of all participants agreed that a structured training regimen is desirable. However, 64% of participants reported not having such a structured program at their institution (71% of trainees and 55% of trainers). Likewise, 80% of participants did not have a mandatory self-assessment before training initiation.

Majority of trainees (73%) and trainers (81%) favored that training should be concentrated within centers meeting certain quality metrics. For this, 64% of all participants indicated that a threshold of 200 annual ERCPs should be used. Using this threshold revealed that 32% of trainees pursued training in centers with <200 annual ERCPs and that a low annual caseload of <50 was more frequent at lower volume centers vs. higher volume centers (86% vs. 63%, respectively). Furthermore, 71% of trainees performed <50 ERCPs/year in stark contrast to 95% of trainers performing >50 ERCPs/year. While 27% of trainees in higher volume centers were female, all trainees in lower volume centers were of female gender.

Conclusion: The first Pan-European survey investigating ERCP training conditions revealed that structured training and concentration of training efforts within European centers meeting specific quality metrics are desirable but exposed the low availability of structured training programs and that around 30% of trainees are practicing at lower volume centers. These data could be interpreted as motivation to further standardize ERCP training conditions and ultimately improve patient care throughout Europe.

Disclosure: Nothing to disclose.

MP132

DIAGNOSTIC ACCURACY OF DIFFERENT CHOLANGIOSCOPY-GUIDED BIOPSY TECHNIQUES FOR THE DIAGNOSIS OF INDETERMINATE BILIARY DUCT STRICTURES

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Introduction: Indeterminate biliary duct strictures (IBDS) pose a diagnostic dilemma, and digital single-operator cholangioscopy (d-SOC) has improved diagnostic accuracy by enabling targeted intra-ductal biopsies (1-3). There is no consensus on the optimal biopsy strategy, but data suggests that at least four single biopsies yields adequate specimen samples for pathological examination (4). Considering the desmoplastic character of cholangiocarcinoma obtaining larger and deeper samples may have a higher diagnostic yield.

The aim of this study was to compare the diagnostic yield of d-SOC guided single standard biopsies to those obtained via bite-on-bite-biopsy (BBB) technique in patients with IBDS.

Aims & Methods: This international, multi-center, prospective cohort study included patients with a diagnosis of IBDS who underwent d-SOC from November 2020 to August 2022 at fourteen European tertiary referral centers (Dutch Trial Register: NL9649). IBDS was defined as a bile duct stricture of indeterminate nature after previous laboratory work-up, imaging or endoscopic retrograde cholangiography with or without brush-cytology of fluoroscopy guided intra-ductal biopsies.

During d-SOC, in every patient sampling of the stricture(s) was performed by firstly obtaining at least 4 single biopsies, and secondly obtaining at least 1 BBB. Definitive diagnosis was established on pathology outcomes (biopsies or surgical resection specimens) and clinical follow-up of at least one year. Primary outcome was the accuracy of both biopsy techniques.

Results: Eighty-nine patients were included (62% male, median age: 66 years), 52 of whom had a hilar and 37 a distal stricture. Single and BBB biopsies were technically successful and with sufficient tissue for diagnosis in 82 (92.1%, median number of biopsies = 4) and 78 (87.6%, median number of BBB biopsies = 2), respectively. These biopsies confirmed malignancy in 31/82 and 29/78 of cases, respectively. Comparing the two biopsy techniques, these techniques yielded different results in 4/78 patients (5.1%).

In 82 (92.1%) patients follow-up was complete and malignancy was confirmed in 51 (62.2%) patients, resulting in an overall sensitivity, specificity and accuracy of 60.8%, 100% and 75.6% of both techniques combined. For both sampling techniques, sensitivity and accuracy decreased significantly if a stent was placed at a prior ERC (n = 37, 41.6%) or whenever prior intra-ductal tissue acquisition had been performed (n = 41, 46.1%). The number of BBB did not affect sensitivity or accuracy. No adverse events related to d-SOC guided biopsies were noted.

Conclusion: In this prospective study, BBB did not outperform at least four random single biopsies of IBDS. Prior manipulation of the IBDS, by stent placement or prior tissue acquisition, is associated with a decreased yield.

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MP133

FEASIBILITY AND SAFETY OF SINGLE ORAL CHOLEDOSCOPY COMBINED WITH ENDOSCOPIC RADIOFREQUENCY ABLATION FOR THE DIAGNOSIS AND TREATMENT OF UNRESECTABLE EXTRAHEPATIC BILE DUCT CARCINOMA

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Introduction: Among the diagnostic methods for EHCC, cell brush is the conventional method for EHCC diagnosis, but the sensitivity of cell brush and routine biopsy is low. The sensitivity and accuracy of EHCC diagnosis can be improved by single oral choledochoscopy. Radiofrequency ablation is a common and effective treatment for unresectable EHCC, providing local tumor control. Single oral choledochoscopy combined with radiofrequency ablation can improve the positive rate of pathological diagnosis.

Aims & Methods: To investigate the feasibility and safety of treating non-resectable extrahepatic cholangiocarcinoma (EHCC) with single resection combined with radiofrequency ablation (RFA).

A total of 149 patients with suspected extrahepatic cholangiocarcinoma treated in Hangzhou First People's Hospital from January 2013 to January 2023 were reviewed. According to the treatment process, 114 patients were eventually included and divided into two groups (n=48 cases) : Single oral choledochoscopy was performed by ERCP and the lesion tissue was biopsied under direct vision. Intraoperative rapid pathologic examination was performed on the same stage RFA for the patients who were pathologically identified as malignant tumors. Regular times group (n = 66) : first by endoscopic retrograde pancreatic angiography (endoscopic retrograde cholangiopancreatography, ERCP) + cells brush or a single biopsy samples by mouth choledochoscope examination, pathological results to obtain positive line of ERCP + RFA again; The operation success rate, postoperative liver function recovery, average ERCP number, postoperative adverse event incidence, length of hospitalization and cost were compared between the two groups.

Results: 1. Patients in both groups successfully completed the RFA, the operation success rate was 100% (114/114).

2. There was no significant difference in the overall incidence of postoperative adverse events between the two groups [39.58% (19/48) vs. 39.40% (26/66),$\chi 2$=0.00, P=0.984].

3. There was no significant difference in the proportion of patients with total bilirubin improvement between the two groups [41.67% (20/48) vs. 42.42% (28/66), $\chi 2$= 0.32, P=0.750].

4. The average number of ERCP in the same group was significantly lower than that in the conventional group, and the difference was statistically significant (1.00±0.00 times/person vs. 2.64±0.49 times/person, t=0.77, P<0.001).

5. The average length of hospital stay in the same group was significantly longer than that in the conventional group, with statistical significance (8.40±3.63 days vs. 17.47±9.82 days, t=6.21, P<0.001).

6. The average hospitalization cost in the same group was significantly higher than that in the conventional group, and the difference was statistically significant (27718.31±9142.02 yuan versus 49112.76±16153.14 yuan, t=7.38, P<0.001).

99.55%). Furthermore, diagnostic sensitivity was 97.3% (CI 95%, 86.2% to 99.5%), while diagnostic specificity was 100% (CI 95%, 34.24% to 100%). AEs were reported in two procedure (4.7%). Conclusions: Trans-oesophageal EUS–FNB is a feasible and safe diagnostic method of tissue sampling for lung masses. Our findings on EUS-TA confirm the high sensitivity, specificity, diagnostic yield, accuracy and specimen adequacy of EUS-FNB for lung masses.

Patients (n=42), procedures (n=43)	
Male (%)	31 (73.8)
Age, mean±DS	70.0±10.3
ECOG PS,	
• ECOG PS 0	24 (57.1)
• ECOG PS 1	16 (38.1)
• ECOG PS ≥2	2 (4.8)
Smoking history, n (%)*	
• No smoker	4 (9.3)
• active at diagnosis	24 (55.8)
• previous smoker	12 (34.9)
Lesion size (mm), mean±DS	51.1±21.6
Location	
• Right upper lobe	9 (21.4)
• Right inferior lobe	8 (19.0)
• Left upper lobe	11 (26.2)
• Left inferior lobe	1 (2.4)
• Pulmonary hilum	3 (7.1)
• Right lung	3 (7.1)
• Left lung	6 (14.3)
• Both lungs	1 (2.4)
Bronchial infiltration, n (%)	11 (42.3)
Lymph nodes involvement, n (%)	29 (69.0)
Pleural effusion, n (%)	4 (9.5)
TNM Staging (n=38)*	
• Stage I	1 (2.7)
• Stage II A	2 (5.4)
• Stage II B	1 (2.7)
• Stage III A	12 (32.4)
• Stage III B	6 (16.2)
• Stage IV	15 (40.5)
Histological examination	
• Squamous carcinoma	1 (2.4)
• Adenocarcinoma	10 (23.8)
• Small-cell carcinoma	1 (2.4)
• Not-small cell lung carcinoma (NSCLC)	19 (45.2)
• Secondary lesions	1 (2.4)
• Neuroendocrine carcinoma	2 (4.8%)
• Mesothelioma	2 (4.8)
• Not adequate for diagnosis	4 (9.3)
• Negative for malignancy	2 (4.8)
• Hodgkin Lymphoma	1 (2.4)
Surgery, n (%)	4 (9.3)
Follow up, median (days)	49 (45.0 to 66.815)

Characteristics of patients (n=42) undergoing EUS-FNB of lung masses.

Outcomes	%	CI 95%
Diagnostic accuracy	97.4	86.8% to 99.55%
Diagnostic sensitivity	97.3	86.2% to 99.5%
Diagnostic specificity	100.00	34.24% to 100%
Diagnostic Yield	90.7	78.4% to 96.3%
Specimen adequacy	93.02	81.4% to 97.6%

Outcomes of EUS-FNB of lung masses.

Endoscopic Ultrasound - EUS 1
Monday, May 20, 2024
12:30 PM - 1:30 PM
Poster Session

Mo1434
Endoscopic Ultrasound (EUS)
ADVERSE EVENTS ASSOCIATED WITH ENDOSCOPIC ULTRASOUND- GUIDED BILIARY DRAINAGE

Petko Karagyozov, Kiril Todovichin, Ivelina Zhecheva
Institutions: Acibadem City Clinic Tokuda Hospital, Bulgaria. Disclosure compliance: I understand. Participant disclosure: Petko Karagyozov: NO financial relationship with a commercial interest; Kiril Todovichin: NO financial relationship with a commercial interest; Ivelina Zhecheva: NO financial relationship with a commercial interest.

Aims: Endoscopic ultrasound - guided biliary drainage (EUS-BD) has become widely accepted over the past several years for complicated biliary drainage when c onvent ional endosc opic ret rograde c holangiopanc reat ography (ERCP) is not successful or feasible due to a variety of constraints.The success rate of the procedure is between 90% and 97% and the complication rate is less than 10%.The aim of our study is to evaluate the safety and efficasy of EUS-BD performed in our unit while assessing the risk of complications associated with the proc edure. Methods: We performed retrospective analysis of a prospective data base from March 2020 to October 2023. The patients underwent endoscopic ultrasound biliary drainage using linear scope (Fujifilm EG- 580UT). Several procedures are possible. The procedure was tailored to the individual patient's anatomy . Results: We identified 140 patients who underwent EUS-BD during the study period (men- 75, women- 65) – 130 (92.8%) with malignant and 10 (7.1%) with benign disease. The medium age of the patients was 66.3 years. The technical success was 96.6%. Adverse events were detected in 39 patients (27.9%) The various complications that have been reported were classified into early (periprocedural) and late (postprocedural)- a week after.
Periprocedural adverse events were detected in 7 (5%) patients: 2 (1,4%) with bleeding, 2 (1,4%) stent migration, 1(0,7%) with biloma, 1 (0,7%) blood vesels canulation and 1 (0,7%) with false tract creation.Postprocedural complications are deteced in 30 (21.4%): 21 (15%) with cholangitis, 3 (2.1%) with abdominal pain, 3 (2.1%) with bleeding, 3 (2.1%) with pancreatitis.There were 2 deaths related to the procedure (1.4%) in patients with advanced oncologic disease.
All cases were managed conservatively and did not require surgery, intensive care or interventional radiology. Three (2,1%) of the periprocedural complications were solved by performing PTBD immediately after EUS-BD by the same team.
Conclusions: EUS-BD is effective tool for biliary drainage both in naive patients and those with altered biliary anatomy. Along with the possibility of emergency PTBD, it has favourable technical and clinical success rate and safety profile and therefore the potential to shift the current paradigms that define management of complicated biliary obstruction.

Mo1442
Endoscopic Ultrasound (EUS)
CLINICAL OUTCOMES OF ENDOSCOPIC ULTRASOUND-GUIDED GALLBLADDER DRAINAGE AT AN ACADEMIC MEDICAL CENTER

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Introduction: Endoscopic ultrasound-guided gallbladder drainage (EUS-GBD) is a safe and effective treatment modality for cholecystitis and other gallstone-related diseases in poor surgical candidates. EUS-GBD has also shown promise in the palliation of distal malignant biliary obstruction (MBO) with patent cystic duct, following failed attempts at conventional transpapillary drainage. This study describes a four-year experience with EUS-GBD at a single academic medical center.
Methods: This study retrospectively analyzed consecutive patients at a single center

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Aims: According to the Tokyo 2018 guidelines, ERCP should be performed early (within 48-72 h) in moderate (grade II) acute cholangitis (AC). To compare different clinical outcomes (in-hospital and 30-day mortality, persistence of clinical changes at 72 hours, need for emergent ERCP, post-ERCP complications and readmission rate) in patients with acute cholangitis undergoing ERCP ≤72h (Group 1) and > 72h (Group 2). Methods: We carried out a retrospective observational study of patients admitted in four center between February 2021 and September 2023, including all cases of moderate AC (TG 18), submitted to ERCP. Results: 123 patients were included, whose 32.53% (n=40) were were included in Group 1 and 67.4% (n=83) in Group2. The two groups did not show significant differences with regard to median age (68.02 vs 67.00 years), gender (50% vs 57.3% women), Charlson Comorbidity Index (CCI, 5.00 vs 5.24 points), previous ERCP (26% vs 36%) and diagnosis (main bile duct lysis 84% vs 82.30%). Regarding the outcomes defined in this study, there were no statistically significant differences between the two groups when the remaining variables were analyzed. Age ≥ 75 years was responsible for the moderate severity calssification in 45.8% of AC cases. However, only the CCI, and not age alone, was shown to influence 30-day mortality (OR=1.616 p=0.036). Conclusions: In our study, performing ERCP after the first 72 hours was not associated with increased mortality. Thus, the inclusion of age ≥ 75 years as a severity criterion, and the performance of early ERCP in this subgroup of patients with moderate AC, becomes debatable.

Tu1511

ERCP: Biliary Endoscopy

EFFICACY OF FULLY COVERED SELF-EXPANDABLE METAL STENTS IN PATIENTS WITH HILAR CHOLANGIOCARCINOMA UNDERGOING TRIPLET CHEMOTHERAPY REGIMEN

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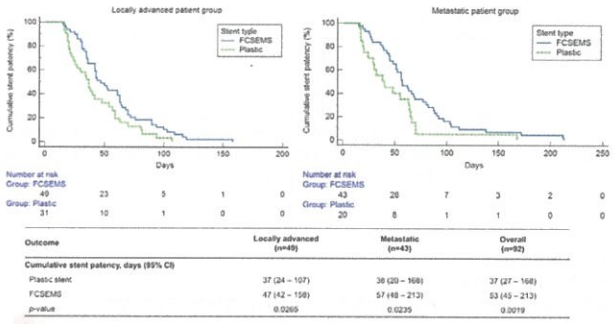
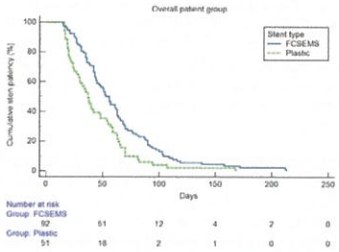
Background: Recent studies have shown that nab-Paclitaxel plus gemcitabine-cisplatin (GCP) chemotherapy regimen provides benefits in terms of response rate and overall survival in hilar cholangiocarcinoma (CCC). In this situation, endoscopic biliary drainage (EBD) using 6mm slim Fully Covered Self-Expandable Metal Stents (FCSEMS) is considered to have many benefits not only palliation for recurrent biliary obstruction but also less adverse events such as side branch obstruction. The aim of this study is to investigate stent patency of 6mm FCSEMS in patients diagnosed with hilar CCC who are undergoing GCP chemotherapy. Methods: We retrospectively analyzed 92 unresectable hilar CCC patients who received bilateral EBD using 6mm FCSEMS underwent GCP chemotherapy between February 2020 and June 2023 in the single academic referral center. Patients were classified into a metastatic group, where distant metastasis was confirmed through imaging studies such as computed tomography or positron emission tomography-computed tomography, and a locally advanced group without distant metastasis. Primary endpoint is stent patency, defined as the period between the day of stent placement and the day of re-intervention. We used Kaplan-Meier survival analyses to compare stent patency. Results: In the locally advanced group, plastic stents exhibited a cumulative patency of 37 days, while FCSEMS demonstrated 47 days of patency. In the metastatic group, plastic stents had a cumulative patency of 38 days, while FCSEMS showed 58 days of patency. Notably, a statistically significant difference ($p<0.05$) in cumulative stent patency was observed between plastic stents and FCSEMS in both groups. Conclusions: When bilateral EBD was performed using 6mm FCSEMS in patients with unresectable hilar CCC receiving GCP chemotherapy, better stent patency was shown in both the locally advanced and metastatic groups compared to that of plastic stent, and this was confirmed as a significant result.



Outcome	Locally advanced (n=49)	Metastatic (n=43)	Overall (n=92)
Cumulative stent patency, days (95% CI)			
Plastic stent	37 (24 – 107)	38 (20 – 168)	37 (27 – 168)
FCSEMS	47 (42 – 158)	57 (48 – 213)	53 (45 – 213)
p-value	0.0265	0.0235	0.0019

Figure 1. Comparison of cumulative stent patency betwwen plastic stent and fully covered self expandable metal stent in patients with locally advanced and metastatic stage.



Outcome	Locally advanced (n=49)	Metastatic (n=43)	Overall (n=92)
Cumulative stent patency, days (95% CI)			
Plastic stent	37 (24 – 107)	38 (20 – 168)	37 (27 – 168)
FCSEMS	47 (42 – 158)	57 (48 – 213)	53 (45 – 213)
p-value	0.0265	0.0235	0.0019

Figure 2. Comparison of cumulative stent patency betwwen plastic stent and fully covered self expandable metal stent in patients with hilar cholangiocarcinoma.

Tu1512

ERCP: Biliary Endoscopy

ENDOBILIARY RADIOFREQUENCY ABLATION- A PROMISSING NEW TOOL TO PROLONG STENT PATENCY IN PATIENTS WITH MALIGNANT BILIARY OBSTRUCTION

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Introduction: The main approach for the management of unresectable malignant biliary obstruction is ERCP with stenting followed by palliative chemotherapy. However major concern is the rate of recurrent biliary obstruction/RBO/. Endobilliary radiofrequency ablation (EB-RFA) is a new endoscopic technique that can be an adjunctive tool in prolonging the period of stent patency and patient survival. Aims: The primary endpoints were to evaluate the correlation between the period of stent patency and the type of placed stents and to evaluate the correlation between stent patency and chemotherapy in patients after EB-RFA. Secondary endpoints were the overall efficacy and safety of the procedure in terms of survival and adverse events/AE/. Methods: We performed a retrospective analysis of a prospective database including all consecutive patients who underwent EB-RFA for the period July 2021 – November 2023.26 procedures in 24 patients were performed. Endobiliary RFA/EB-RFA /catheter (ELRA, STARmed, Taewoong Medical) and RF generator (VIVA combo, STARmed) were used in 24 of the procedures. After passing a guidewire the catheter was positioned at the targeted lesion, followed by 120 s of ablation (temperature control mode). Results: There were two groups of patients depending on the type of stents- in seven patients we placed plastic stents after RFA; the group with metal stents included 17 patients. The mean period of stent patency defined as the time between the date of the procedure and the last follow-up without signs of stent occlusion was 261.50 (142.50+/-312.75) days. For the group with plastic stents, the period was 196.57±101.83 days, and 260.29±132.05 days for the group with metal stents – the difference was not statistically significant. In 15 patients/62,5%/ there was chemotherapy with Paclitaxel/Gemcitabine after stent placement – in 2 patients with plastic stents/8,3%/ and 13 patients /54,2%/with metal stents. We found

an association between the period of stent patency and symptom-free survival and placement of metal stents followed by chemotherapy - Pearson $\chi 2$ test = 4.854, p=0.028. The longest period of stent patency is observed in patients who receive metal stents and chemotherapy after EB-RFA. The rate of the AE was 18.75%/n=3/ - one patient with self-limited bleeding; one patient with postprocedural cholangitis and one patient with postprocedural biloma. There were no deaths or ICU admissions. We experienced four episodes of RBO – two managed with a second session of RFA and two only with the placement of new stents. Conclusion: ID-RFA combined with the placement of metal stents followed by chemotherapy is a promising tool to improve outcomes in patients with MBO with high efficacy and a good safety profile. Therefore ID-RFA can be proposed as adjunctive treatment in patients with MBO although more randomized studies are needed.

Tu1513

ERCP: Biliary Endoscopy

FACTORS ASSOCIATED WITH A PERSISTENT BILIARY LEAK DESPITE OF BILIARY SPHINCTEROTOMY IN PATIENTS WITH PENETRATING OR BLUNT ABDOMINAL TRAUMA

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Background: Penetrating or blunt abdominal trauma causes a biliary leak, which could be managed by endoscopic retrograde cholangiopancreatography (ERCP) and biliary sphincterotomy. The data on factors associated with persistence of a biliary leak in trauma patients even after successful biliary sphincterotomy is scarce. We aimed to describe factors associated with a persistent biliary leak. Methods: The medical records of an academic level 1 trauma center were interrogated to identify patients who presented after a penetrating or blunt trauma event. Patients with a biliary leak who underwent ERCP were included. Demographics, labs, endoscopic and surgical interventions, and clinical courses were recorded. The primary outcome was a persistent biliary leak, which was defined as needing a repeat ERCP for further management, excluding biliary stent removal. Wilcoxon Rank Sum and Fisher Exact tests were used for continuous and categorical variables, respectively. Given the small sample size, a p value of < 0.10 was defined as statistically significant. Results: A total of 76 patients (median age 28.5 years [IQR: 21.0-40.0], 72.4% male, and 65.8% admitted as transfers) were included. Table 1. The mechanisms of injury included gunshot wounds (42.1%), motor vehicle collisions (21.1%), and other mechanisms (22.4%). Most patients had type IV (26.3%) or type V (26.3%) liver injuries. At the index ERCP, a sphincterotomy was performed in 66 patients (86.8%), a biliary stent placed in 97.4% of patients, and a pancreatic stent in 14.5%. 12 patients (15.8%) had a persistent biliary leak confirmed on a subsequent cholangiogram and required further management. A higher INR at admission (1.6 vs 1.3, p = 0.035), lower sodium at the time of ERCP (135 vs 137 mEq/L, p = 0.045), a longer percutaneous abdominal drain time (66 vs 27 days, p = 0.006), and longer biliary stent time (98 vs 67 days, p = 0.071) were associated with the need of a repeat ERCP for a persistent biliary leak. A lower hemoglobin at admission (10.5 vs 11.6 g/dL, p = 0.106) approached significance for having a persistent biliary leak. Liver enzymes (LFTs) also approached significance as patients with higher LFT elevations tended to need further management. Liver injury grade, the type of surgery performed at the presentation of trauma, and location of biliary leak were not associated with the need of a repeat ERCP. Conclusion: In this cohort of relatively higher-grade traumatic liver injury, a persistent biliary leak even after biliary sphincterotomy occurred in 15.8% of patients. Having a biliary stent or concomitant percutaneous abdominal drain for a longer period were associated with a persistent biliary leak. The type of liver injury and site of biliary leak were not associated with the need of a repeat ERCP.

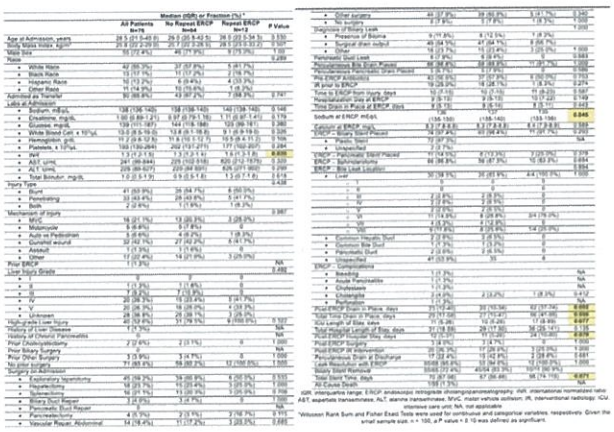

Table 1: Baseline Characteristics of All Patients with Biliary Leak after Trauma.

Tu1524

ERCP: Biliary Endoscopy

IMPACT OF TIME OF DAY ON PROCEDURAL OUTCOMES IN ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY (ERCP): AN ANALYSIS FROM A TERTIARY REFERRAL CENTER

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Background: Endoscopic retrograde cholangiopancreatography (ERCP) remains one of the highest-risk endoscopic procedures with reported adverse event rates of up to 12%. Addressing modifiable factors, such as operator fatigue, may mitigate procedural risk. In colonoscopy, there is conflicting data on whether procedure time of day, as a surrogate of operator fatigue, affects outcomes, with some literature demonstrating decreased procedure completion and polyp detection rates in the afternoon. There is a paucity of data evaluating this potential relationship in ERCP. Aim: To evaluate the impact of procedure time of day on procedural success and short-term adverse outcomes in patients undergoing ERCP. Methods: The records of 5755 consecutive ERCP procedures performed on adult patients at our tertiary referral center from January 1, 2010 to December 31, 2020 were retrospectively reviewed. The primary outcome was the procedural success rate, defined as successful navigation to the papilla, selective duct cannulation and cholangiography, and realization of the intended therapeutic goals. Secondary outcomes included procedure duration, rate of deep ductal cannulation, rate of sphincterotomy, and short-term (30-day) adverse events (immediate bleeding, pancreatitis, perforation). Statistical analysis was conducted using R. Categorical variables were compared using the Chi-square test of independence or Fisher's exact test. Continuous variables were compared using T-tests or the Mann-Whitney-U test. The normality of a given variable was assessed using the Shapiro-Wilk's test. Results: A total of 5755 ERCP's were performed between 8 AM – 6 PM; 2863 were performed before 12PM (AM group) and 2892 after 12PM (PM group). Baseline characteristics were similar between the two cohorts, with the exception of hypertension (33.7% AM vs 30.1% PM; p=0.003), and anticoagulation (20.3% AM vs 18.3% PM; p=0.05) (Table 1). In both groups, the most common ERCP indication was choledocholithiasis. The primary operators in both cohorts were predominantly clinical fellows. There was no

2. Александър Кацаров, Александър Юлиянов, Асен Дудов, Ася Консулова, Васил Михайлов, Веселина Колева, Димитър Калев, Драга Тончева, Желязко Арабаджиев, Захари Захариев, Иван Василевски, Ивелин Такоров, Ирена Костадинова, Камен Недев, Марчела Колева, Милена Станева, Милка Георгиева, Надя Димитрова, Никола Владов, Николай Белев, Николай Йорданов, Павел Бочев, **Петко Карагьозов**, Радослав Мангалджиев, Радослав Петков, Росица Кръстева, Савелина Поповска, Светлана Христова, Соня Сергиева, Татяна Хаджиева. Поведение при панкреасен дуктален аденокарцином. Клинично ръководство, основано на доказателства. Редактор- Димитър Калев. Варна 2021: Арт Трейсър, ООД; ISBN 978-619-7094-60-2

Учебно пособие от мултидисциплинарен авторски екип, разработено по метода GRADE. Имах честта да напиша главите за ендоскопска диагностика, ендоскопска ехография и тънкоиглена биопсия, ЕРХПГ, дуоденално стентиране и алтернативни билиарни дренажни техники. Дадени са ценни препоръки, базирани на доказателствата, като въпросите са формулирани на база съществуващи систематични и мета-анализи, както и на висококачествени рандомизирани проучвания.

2. Калев Д., Кацаров А., Юлиянов А., Петреска А., Консулова А., Хаджийска В., Михайлов В., Иванова В., Колева В., Костов Д., Видева Д., Калев Д., Тончева Др., Пиперкова Е. , Иванов И., Такоров И., Костадинова И., Йорданов К., Недев К., Драганов К., Чавдарова Л., Балабански Л., Пенков М., Таушанова М., Колева М., Владов Н., Белев Н., Йорданов Н., **Карагьозов П**., Гецов П., Костадинов Р., Мангалджиев Р., Поповска С., Бачурска С., Златанова Т., Хаджиева Т., Луканова Ц. , Тричков Цв., Калчева Ю. Клинично поведение при холангиокарцином: клинично ръководство, основано на доказателства. Ред. Димитър Калев. Варна : Арт трейсър, 2024, 297 с. ISBN 978-619-7094-74 -9

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2. Факирова, А.Кацаров, А.Юлианов, А. Консулова, Б. Илчева, В. Михайлов, В. Колева, Г.Кирова, Г. Балаценко, Д. Костов, Д. Вълчева, Д. Тончева, Е. Пиперкова, З. Захариев, И. Такоров, И. Гергов, И. Костадинова, К. Йорданов, Л. Чавдарова, М. Генова, М. Колева, М. Георгиева, Н. Младенова, Н. Чилингирова, Н. Владов, Н. Белев, **П. Карагьозов**, Р. Мангалджиев, Р. Кръстева, С. Христова, С. Бачурска, С. Сергиева, Т. Хаджиева, Х. Ивановска, Ц. Тричков. Поведение при стомашен карцином: клинично ръководство, основано на доказателства. Ред. Димитър Калев. Варна : Арт трейсър, 2022, ISBN 978-619-7094-64 -0

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