EPLB001
RISK FACTORS AND TREATMENT MEASURES FOR EARLY AND LATE CHOLANGITIS AFTER PANCREATICOUDENECTOMY
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Introduction: Postoperative cholangitis is one of the common complications after pancreaticoduodenectomy (PD), and late-onset cholangitis occasionally recurs and results in a negative impact on the patients’ quality of life. The aim of this study was to evaluate the risk factors and treatment strategies for early (EC) and late cholangitis (LC) after PD.

Methods: From May 2012 to December 2020, 370 consecutive patients underwent PD with the modified Child’s reconstruction. Hepatocjejunostomy was always performed with a single-layer interrupted suture using 4/0 monofilament synthetic absorbable threads. Of these, 357 patients were enrolled in this study, excluding 10 cases of hepatopancreaticoduodenectomy, 2 cases of prior cholecdochojejunostomy, and 1 case of hospital death. EC and LC after PD were defined as the onset during hospitalization and after hospital discharge, respectively, according to the revised Tokyo Guidelines 2018. Cholangitis due to tumor recurrence or metastasis was not included.

Results: EC and LC after PD occurred in 36 (10.1%) and 25 (7.0%) patients, respectively. The median time to the first episode of LC was 170 days (range, 23-1493). In univariate analysis, age ≥ 70 years (P = 0.015), ASA-PS ≥ 2 (P = 0.041), and preoperative albumin level ≤ 3.5 g/dL (P = 0.010) were significantly associated with EC after PD. Postoperative complications with Clavien-Dindo classification ≥ Grade IIIa (P=0.003), pancreatic fistula (PF) with ISGPF Grade B/C (P=0.002), surgical site infection (SSI) (P=0.017), and multiple anastomotic hepatic ducts (P=0.045) were significant risk factors for LC after PD. Multivariate analysis did not identify any independent risk factors for both EC and LC. Of the 25 patients with LC, 21 (84.0%) improved with antibiotic therapy, and 4 (16.0%) with anastomotic strictures required interventional balloon dilatation and stenting without reoperation.

Conclusions: Elderly patients who may have severe comorbidities or malnutrition may develop EC during hospitalization after PD, while postoperative complications such as PF and SSI, and multiple anastomotic hepatic ducts may predispose the patients after hospital discharge to LC. Although conservative therapy is successful in most of the cholangitis after PD, non-surgical treatment such as stricture dilatation can be useful for refractory cholangitis with anastomotic stenosis to achieve remission.

EPLB002
THE USE OF LOCAL ANAESTHETIC WOUND CATHETER INFILTRATION FOR POST-OPERATIVE PAIN AFTER HEPATIC SURGERY: A SYSTEMATIC REVIEW AND META-ANALYSIS
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Introduction: The gold standard regime for analgesia following liver resection remains under debate. Studies have suggested that local anaesthetic (LA) infiltration via a wound catheter may provide analgesic benefits. The aim of this study was to analyse whether LA wound catheter infiltration (LA-WCI) as an adjunct to intravenous patient-controlled analgesia (IV-PCA) provides superior analgesic outcomes compared to IV-PCA alone.

Methods: A systematic literature search and meta-analysis was conducted according to PRISMA guidelines. Randomised control trials (RCTs) comparing LA-WCI with IV-PCA versus IV-PCA alone were included. Primary outcomes were total opioid use in the first 48 hours and pain scores at multiple time points at rest and on exertion. Secondary outcomes were length of hospital stay, length of intensive care unit (ICU) stay, time to ambulation, time to first bowel movement, incidence of surgical site infections and incidence of nausea and vomiting.

Results: Of 958 articles screened, six RCTs with a total of 440 patients were included in the meta-analysis. In all studies, IV-PCA with LA-WCI (LA-WCI group) was compared to IV-PCA alone (IV-PCA group). Total opioid use (mg morphine equivalent) via IV-PCA in the initial 48 hours post-operatively was significantly less in the LA-WCI group compared to the IV-PCA group [MD -21.27mg (-39.39, -3.15), I² = 98%, p=0.02]. Pain scores were significantly lower in the LA-WCI group at rest at POD0 (post-operative day 0) 6-8hrs (p=0.0009), POD1 AM (p=0.01), POD 1 PM (p=0.02) and POD2 (p=0.0006), and on exertion at POD0 0-2hrs (p=0.05), POD1 AM (p=0.03), POD1 PM (p=0.03), POD2 (p=0.03) and POD3 (p=0.01), but similar at all other time points. The LA-WCI group had significantly reduced length of hospital stay [MD -1.32 days (-2.23, -0.40), I² = 0%, p=0.005], time to ambulation [MD -5.94 hours (-8.47, -3.42), I² = 0%, p=0.0001] and incidence of nausea and vomiting [OR 0.16 (0.06, 0.42), I² = 0%, p=0.0002]. No significant differences were observed in length of ICU stay, time to first bowel movement and incidence of wound infection.

Conclusions: LA-WCI as an adjunct to opiate IV-PCA post-hepatectomy reduces opioid use in the post-operative period, pain scores at multiple time points at rest and
exertion, length of hospital stay, time to ambulation and incidence of nausea and vomiting. However, LA-WCI use does not alter length of ICU stay, time to first bowel movement and incidence of wound infection.

EPLB003
LIVER DRAINS AFTER SURGERY, A REAL-LIFE SNAPSHOT AMONG THE HPB COMMUNITY: THE LLDR.A.S. WORLD-WIDE SURVEY
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Background: Although several trials have been conducted, the management of liver drains remains controversial among HPB surgeons. We conducted a world-wide survey to define actual clinical drain practices adopted by liver surgeons in the EA-HPBA, A-HPBA and AP-HPBA communities.

Methods: An open survey consisting of 30 questions was prepared and then published on Google Form, which was then delivered by email to members of the three major chapters of the international hepatopancreato-biliary association (IHPBA).

Results: 191 HPB surgeons responded to the web-survey. Twenty (10.5%) respondents were from the Asian-Pacific region, while 15 (7.9%) were from North America, 13 (6.8%) from South America and 143 (74.9%) from Europe and Africa. One hundred-twelve surgeons (58.6%) reported routine use of abdominal drains liver resection. Eighty-eight (46.1%) respondents reported that drain removal was driven by low volume and low bilirubin levels in the drains; 85 (44.5%) surgeons usually consider removal of drains; 84 (44.0%) respondents considered drains preferred to always use a drain. Among patients with cirrhosis, 87 (45.5%) surgeons reported the routine use of drains, while 84 (44.0%) respondents considered drains only selectively. The lack of drains was most prevalent among surgeons from North America (12, 80%); in contrast, 14 (70.0%) surgeons in the Asian-Pacific region, 87 (60.8%) in Europe and Africa and 8 (61.5%) in South America were more inclined to employ liver drains routinely (p=0.014). Among surgeons whose practice is mostly mini-invasive liver surgery (n=31), 23 (74.2%) reported draining only in selected cases, while the proportion of surgeons who use drains selectively among surgeons who performed mainly open liver resections was lower (n=56, 35.0%; p<0.001).

Conclusion: Despite several RCTs, use of drains at the time of liver resection remains highly variable. In particular, surgeons from North America, as well as surgeons who predominantly perform minimally-invasive hepatectomy, are much less likely to employ abdominal drains at the time of liver resection.

EPLB004
RESULTS OF LAPAROSCOPIC COMMON BILE DUCT EXPLORATION IN THE ELDERLY
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Introduction: Laparoscopic common bile duct exploration (LCBDE) is a good alternative to endoscopic retrograde cholangiopancreatography (ERCP) for the treatment of common bile duct stones (CBDs). However, its use in elderly patients has not spread due to the morbidity and pre-surgical risks they present. The aim of the study was to assess the safety, effectiveness, and complications of LCBDE in elderly patients.

Methods: A retrospective study was conducted in the Surgical department of Hospital Dr. Peset, Valencia. Patients included had a diagnosis of CBDs confirmed by intraoperative cholangiography (IOC) and underwent LCBDE (Figure 1), from January 2009 to December 2019. These patients were divided into two groups. Group A consisted of patients aged 70 years or older. Group B consisted of patients younger than 70 years. Data regarding comorbidity, intraoperative and postoperative results were analyzed.

Results: 267 patients were included, 125 as group A and 142 as group B. Elder patients had higher rates of preoperative comorbidity and surgical risk. The success rate showed no differences between the two groups (Group A= 97.6%, Group B= 100%). There were also no differences regarding conversion (8.8% vs. 12.7% p= 0.310) or complications rate (23.2% vs. 20.4%, p= 0.583), including bile leak (8.8% vs. 3.5%, p=0.07) (Table 1). Mortality and hospital stay were similar between both groups (p>0.05).

Conclusion: despite the higher comorbidity and pre-surgical risk in the elderly group, LCBDE is a safe and effective alternative, and should be offered as a therapeutic option to elder patients.
Results: 380 patients underwent ERCP for cholangitis. 301 had a clinical diagnosis of cholangitis — the TG18 diagnostic criteria demonstrated 99% diagnostic accuracy in this cohort. We also identified 79 patients who satisfied TG18 criteria but the diagnosis of ‘cholangitis’ was not recognised during admission — the mortality rate in this cohort was 4%, highlighting the value of a diagnostic criteria. Grade III cases had longer length-of-stay and more ICU admissions (p<0.0001). Early ERCP (<48hrs) was associated with shorter length-of-stay (p=0.0332) but on review of cases, mortality (1.8%) did not result from delay to ERCP.

Conclusion: Our study demonstrates the accuracy of TG18 diagnostic criteria in an Australian population, and validates the prognostic value of its severity gradings. We report improved outcomes with early ERCP, and low cholangitis-associated mortality.

**EPLB005. Table 1**

<table>
<thead>
<tr>
<th>Grading severity VS Outcomes</th>
<th>Overall</th>
<th>Grade I (Mild)</th>
<th>Grade II (Moderate)</th>
<th>Grade III (Severe)</th>
<th>p-value (grade I vs III)</th>
<th>p-value (GII vs III)</th>
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<tr>
<td>In-hospital mortality</td>
<td>1.8% (7/380)</td>
<td>1.4% (1/71)</td>
<td>0.87% (2/229)</td>
<td>5% (4/80)</td>
<td>0.3711</td>
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<td>Hospital LOS (mean; days)</td>
<td>8.7</td>
<td>6.6</td>
<td>8</td>
<td>12.4</td>
<td>0.0001</td>
<td>&lt;0.0001</td>
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<tr>
<td>ICU admission</td>
<td>13.4% (51/380)</td>
<td>7.0% (5/71)</td>
<td>6.6% (15/229)</td>
<td>38.8% (31/80)</td>
<td>0.0001</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>ICU LOS (mean; days)</td>
<td>1.0</td>
<td>2.8</td>
<td>2.7</td>
<td>4.3</td>
<td>0.3610</td>
<td>0.1008</td>
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**Timing to ERCP vs Outcomes, stratified by Grading severity**

<table>
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<tr>
<th>Hospital LOS (mean)</th>
<th>Overall</th>
<th>Grade I</th>
<th>Grade II</th>
<th>Grade III</th>
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<td>7.0</td>
<td>10.5</td>
<td>11</td>
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</tbody>
</table>

**EPLB005**

**VALIDATION OF TOKYO GUIDELINES 2018 FOR CHOLANGITIS IN AN AUSTRALIAN COHORT**

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**Introduction:** The Tokyo Guidelines 2018 (TG18) outline diagnostic and severity grading criteria for acute cholangitis, and recommends early biliary decompression. The application of TG18 to patients with cholangitis has not been validated in an Australian setting. This study evaluates the accuracy of the TG18 diagnostic criteria, the prognostic value of severity grading, and compares outcomes based on the timing of ERCP.

**Methods:** A retrospective review of patients undergoing emergency ERCP for cholangitis in calendar years 2016-19 was performed at our hospital — we provide a high volume, surgeon-led ERCP service in Melbourne, Australia. TG18 diagnostic criteria was applied retrospectively to patients with clinically diagnosed cholangitis. TG18 severity grade, and time to ERCP, were compared with outcomes. Data was analysed using Fisher’s and T-tests.

**Results:** 380 patients underwent ERCP for cholangitis. 301 had a clinical diagnosis of cholangitis — the TG18 diagnostic criteria demonstrated 99% diagnostic accuracy in this cohort. We also identified 79 patients who satisfied TG18 criteria but the diagnosis of ‘cholangitis’ was not recognised during admission — the mortality rate in this cohort was 4%, highlighting the value of a diagnostic criteria. Grade III cases had longer length-of-stay and more ICU admissions (p<0.0001). Early ERCP (<48hrs) was associated with shorter length-of-stay (p=0.0332) but on review of cases, mortality (1.8%) did not result from delay to ERCP.

**Conclusion:** Our study demonstrates the accuracy of TG18 diagnostic criteria in an Australian population, and validates the prognostic value of its severity gradings. We report improved outcomes with early ERCP, and low cholangitis-associated mortality.

**EPLB006**

**ENDOSCOPIC ULTRASOUND IN BORDERLINE & LOCALLY ADVANCED PANCREATIC: LEEDS EXPERIENCE**

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**Introduction:** Endoscopic ultrasonography (EUS) is an essential pancreatic cancer investigation which has picked up in the last decade and is commonly used in combination with more traditional cross-sectional imaging techniques. Up to 79% of all pancreatic malignancies are locally advanced (stage 3) or metastatic (stage 4) at initial presentation. Developments in technology, such as contrast enhancement, elastography and fine needle aspiration (EUS-FNA) have further increased EUS diagnostic yield. EUS-FNA is accepted as the optimal method of obtaining tissue for histological diagnosis prior to starting neoadjuvant treatment (NAT) and has a lower incidence of complications such as pancreatitis, bleeding and tumour seeding. The aim of this study was to evaluate the role of EUS in advanced pancreatic cancers.
**Methods:** Patients with borderline and locally advanced pancreatic ductal adenocarcinoma between 2016 and 2020 were retrieved from institutional pancreatic tumour database. Patients with IPMN, MCN, periampullary cancers and metastatic pancreatic cancer were excluded. All patients with BRPC, LAPC received NAT. Data of patients undergoing EUS were retrieved and compared with cross-sectional imaging. Appropriate statistical analysis was performed where applicable.

**Results:** 96 patients underwent EUS and FNB. Diagnosis of PDAC was confirmed in 81.25% (78) cases before starting neoadjuvant treatment. Mean tumour size on EUS was 2.7cm as compared to 3cm on CT. CT confirmed N1 disease was seen in 21.6% (26) patients however, in only 2.5% (3) cases local lymphadenopathy was detected using EUS. Vascular involvement was seen in 50.8% (61) cases on CT and only in 44.1% (53) in the EUS group. EUS induced pancreatitis was seen in 3.12% (3) patients. 2 attempts to confirm tissue diagnosis was seen in 3.84% of patients. Dysplasia, IPMN, Pancreatitis and Suspicious lesions were detected in 1.04%, 2.08%, 1% and 15.62% is suspected PDAC on imaging. There were no EUS induced bleeding or other complications during the study period.

**Conclusion:** EUS has a role in the evaluation of advanced pancreatic malignancies and in assessment of vascular involvement and local lymphadenopathy. It also provides cytological and histological confirmation prior to commencing NAT. EUS-guided therapeutic interventions also provide effective biliary drainage particularly in individuals where ERCP is not feasible.

**EPLB007**  
**PROTECTIVE PERITONEAL PATCH FOR ARTERIES DURING PANCREATO DUODENECTOMY: GOOD VALUE FOR MONEY**  
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**Purpose:** This study proposes a simple and inexpensive protective technique of wrapping the hepatic and gastroduodenal artery stumps with a peritoneal patch during pancreateoduodenectomy (PD) in order to decrease the impact of clinically relevant Post-operative pancreatic fistula (CR-POPF).

**Method:** Among the 85 PD achieved between July 2020 and March 2021, sixteen patients with high-risk pancreatic anastomosis received a peritoneal patch. The Updated Alternative Fistula Risk Score (ua-FRS) was calculated. POPF and Post Pancreatectomy Hemorrhage (PPH) were diagnosed and graded according to the International Study Group of Pancreatic Surgery. The mortality rate was calculated up to 90 days after PD.

**Results:** The mean ua-FRS of the 16 patients was 43% (range: 21%–63%). Among them 6 (38%) experienced CR-POPF and a PPH was observed in two patients (13%). In these two patients who required reintervention, the peritoneal patch was remarkably intact and neither gastroduodenal stump nor hepatic artery were involved. None of the patients experienced 90-day mortality.

**Conclusion:** Although the outcomes are encouraging, the evaluation of a larger series to assess the effectiveness of the peritoneal protective patch for arteries in high-risk pancreatic anastomosis is ongoing.

**EPLB008**  
**USE OF THE REX SHUNT IN ADULTS FOR LEFT PORTAL VEIN RECONSTRUCTION**  
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**Purpose:** To report an expanded use of Rex shunt (RS) for portal vein (PV) reconstruction in adults. The RS was developed to treat children with extrahepatic portal vein thrombosis (EHPVT) following liver transplantation or with a healthy liver.

**Methods:** An RS was used to achieve portal reperfusion during various liver surgeries when a standard porto-left portal anastomosis was deemed technically unsatisfactory or incompatible with right-sided R0 onco-surgical resection.

**Results:** This study involved 5 male and 6 female patients (median age, 59 years). The RS was feasible in all 11 consecutive attempts, including hepatectomy for malignancy combined with PV resection in 9 (82%) patients where the left lobe or liver was left in place. A reinforced Gore-Tex graft was used in 10 patients and an allogenic iliac vein was used in 1 patient. Within 90 days, 1 patient with a patent shunt had died of pulmonary embolism, and 1 patient had died of diffuse PVT with multiple organ failure. In 4 patients, postoperative complications included...
ascites, biliary fistula, and shunt thrombosis. At a median 13.5-month follow-up, 7 patients with a patent shunt remained alive.

A systematic review of RS in adults identified 11 cases in 8 reports performed mainly for EHPVT (9 patients). In 2 patients, postoperative complications involved transient ascites and abdominal bleeding requiring surgical revision. Postoperative mortality was nil. The median long-term patency rate was 24 months.

**Conclusion:** Use of the RS in adults is straightforward, offering a supplementary technical option for portal reconstruction in patients with malignancy or EHPVT, provided the downstream portal system is normal.

**EPLB009**

**SAFETY PROFILE OF SUBTOTAL CHOLECYSTECTOMY, WHAT TO TELL OUR PATIENTS?**

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**Background and Aims:** Subtotal cholecystectomy (STC) is an alternative to total cholecystectomy (TC) in patients with severe inflammation/adhesions around the hepatico-cystic triangle. This study aims to evaluate the safety profile of STC.

**Materials and Methods:** We retrospectively reviewed all patients who had STC between February 2009 and August 2019. Patients who had cholecystectomy for gallbladder malignancy or as part of another operation were excluded from the study.

**Results:** A total of 5661 patients underwent cholecystectomy during the study period. Out of these, 97 (1.7%) underwent STC. The laparoscopic open conversion rate was high at 48.8% (47 cases), as was the overall postoperative complication rate 45.4% (44 cases). No patients suffered iatrogenic bile duct injury. Nineteen patients suffered post-operative bile leak (19.6%). This was significantly higher in patients who had STC in the acute setting (41% vs 13% for elective STC cases, P=0.04). There was no statistically significant difference in the incidence of bile leak among the patients who had reconstituting STC and fenestrating STC. The 90-day readmission rate was 8.2% (8 cases). No mortalities were recorded within 90-day post STC.

**Conclusions:** STC seems to be an effective technique to avoid bile duct injury in difficult cholecystectomy cases. However, the peri-operative morbidity associated with STC is relatively high. Surgeons should be aware of STC’s risks and should take appropriate steps to minimise the risks.

**EPLB010**

**EVALUATION OF THE UTILITY OF PROGNOSTIC MODELS FOR PATIENTS DIAGNOSED WITH PERI-HILAR CHOLANGIOCARCINOMA**

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**Purpose:** Several prognostic scoring systems have been proposed to stratify and predict Overall Survival (OS) for Peri-hilar cholangiocarcinoma (PHC) patients. The American Joint Committee on Cancer (AJCC) staging system is a post-resectional model, utilising tumour-specific pathological parameters to determine prognosis. The Mayo Clinical (MC) scoring system has been developed utilising primarily clinical, serological, and radiological variables to predict OS in all patients with a diagnosis of peri-hilar cholangiocarcinoma. The objective of this study was to evaluate the utility of these models in determining prognosis for all patients presenting to a tertiary treatment centre with PHC.

**Methods:** Three hundred and two patients diagnosed with PHC referred to a regional tertiary referral centre between 2008 and 2019 had their demographic and survival data retrospectively analysed from a prospectively held database linked to Hospital Episode Statistics and Somerset Cancer Registry data. Univariate and multivariate modelling was utilised to determine significant prognostic variables. Concordance Indices were constructed for the prognostic models to determine internal validity within the cohort.

**Results:** Multivariate analysis demonstrated that: pre-interventional ECOG status (p<0.001); serum albumin (p<0.001); bilirubin levels (p<0.001); CA 19-9 levels (p<0.001) and resectional status (p<0.001) were significant predictors of OS. The predictive performance of the prognostic models for stratifying patients by OS in this cohort was poor and did not achieve significant Concordance Indices.

**Conclusions:** The predictive performance of the prognostic models for OS have poor utility. Simple serological markers may provide better indication of OS.

**EPLB011**

**TIMING OF CHOLECYSTECTOMY AFTER PERCUTANEOUS CHOLECYSTECTOMY: A SYSTEMIC REVIEW AND META-ANALYSIS**

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**Purpose:** There is controversy about the optimum timing of cholecystectomy after percutaneous cholecystostomy. The aim of this systemic review and meta-analysis was to evaluate outcomes of early versus late cholecystectomy after percutaneous cholecystostomy.

**Methods:** The study was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement and MOOSE guidelines. Heterogeneity was measured using Q tests and I² statistics. The random effects model was used. We evaluated 3 different time periods after percutaneous cholecystostomy within 10 days or after 10 days, less than 4 weeks or more than 4 weeks, less than 8 weeks or more than 8 weeks.

**Results:** Seven studies including 18714 patients were included in the final analysis. Three studies including 215 patients evaluated cholecystectomy less than 10 days vs more than 10 days after percutaneous cholecystostomy. Two studies including 9356 patients evaluated earlier than
4 weeks vs later than 4 weeks and three studied including 9143 patients evaluated cholecystectomy within 8 weeks versus later than 8 weeks of percutaneous cholecystostomy. There was no difference in conversion to open cholecystectomy in all the 3 groups. There was no difference in overall complications and bile duct injury in the less than 10 days group versus more than 10 days group. Overall complication rate (risk ratio 0.67, p < 0.0001), postoperative mortality (risk ratio 0.46, p = 0.003), bile duct injury (risk ratio 0.62, p = 0.01) was significantly less in earlier than 4 week group. Hospital stay was not significantly different between less than 4 weeks versus more than 4 weeks group. (Mean difference = -2.74, p = 0.12). Owe all complication rates were significantly more in less than 8 weeks group. (Risk ratio 1.07, p = 0.01). Hospital stay was significantly less in less than 8 weeks group. (Mean difference 0.87, p = 0.01).

Conclusion: Early cholecystectomy preferably within 4 weeks after percutaneous cholecystostomy is preferable over late cholecystectomy.

EPLB012
PERIOPERATIVE OUTCOME OF SYSTEMATIC MESOPANCREAS DISSECTION FOR PANCREATIC AND PERIAMPUllARY CARCINOMA AT A TERTIARY REFERRAL CENTRE FROM A LOW-MIDDLE INCOME COUNTRY

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Purpose: Margin negative resection is considered as the surrogate marker of quality surgery. However, in pancreatic cancer the incidence of R1 resection is high despite of a very good quality surgery. Total mesopancreas excision has been considered to improve the margin negative resection and the lymph node yield. Amongst various techniques of mesopancreas excision (SMD), systematic mesopancreas dissection is applicable to pancreatic as well as other periamputillary carcinoma.

Objective: This study has been done to compare the perioperative outcomes, the lymph node yield and the margin status in patients who undergo standard pancreaticoduodenectomy (ST-PD) and SMD pancreaticoduodenectomy (SMD-PD) for pancreatic and periamputillary carcinoma.

Methods: A retrospective comparative study was conducted in patients who underwent pancreaticoduodenectomy for pancreatic and periamputillary carcinoma in a single unit of Gastrointestinal and Hepatopancreatobiliary surgery at Tribhuvan University Teaching Hospital, Nepal. The demographics, indication of surgery, duration of surgery, intraoperative blood loss, incidence of procedure-specific complications as defined by International study group on pancreatic surgery (ISGSP), length of hospital stay, perioperative mortality, stage of the disease, lymph node yield and margin status were compared between the SMD-PD and ST-PD.

Results: Total of 33 patients underwent SMD-PD with the mean age of 56.7 ± 12.9 years with 63.6% of patients being male. The most common indication of surgery was ampullary carcinoma. The demographic data was comparable with the historical data of 45 patients who underwent ST-PD. The duration of surgery (344.2 ± 48.6 mins vs 374.2 ± 54.9 mins) and intraoperative blood loss (436.4 ± 171.3 ml vs 481.8 ± 196.4 ml) was found to be comparable with the patients who underwent SMD-PD. However, the incidence of postoperative pancreatic fistula and perioperative mortality were less in patients who underwent SMD-PD as compared to the patients who underwent ST-PD (21.2% vs 26.7% and 9.1% vs 11.1% respectively). The rate of margin negative resection was high (97% vs 91.1%). The median lymph node yield was significantly high in patients who underwent SMD-PD (15 vs 6, p < 0.05).

Conclusion: SMD-PD is feasible and should be done not only for pancreatic carcinoma but also for other periamputillary carcinoma.

EPLB013
THE CURRENT MANAGEMENT OF AMPULLARY CANCER: A SURVEY AMONG HEALTHCARE WORKERS WORLDWIDE

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Purpose: Ampullary adenocarcinoma (AAC) is rare. Therefore, guidelines for the management of patients diagnosed with AAC are not available. To gain insight in the current daily practice of AAC worldwide, this international survey study was performed.

Methods: Surgeons and medical oncologists (in training), whom were members of the Dutch Pancreatic Cancer Group (DPCG) or the International Study Group on Ampullary Cancer (ISGACA), or contributed to (peri)ampullary cancer research, were invited through email (January till March 2021). Participants were also approached trough their colleagues and online media platforms.

Results: Overall, 57 (72%) surgeons and 22 (28%) oncologists completed the survey. Most respondents work in Europe (81%), and 90% work in a pancreas expertise cancer. When choosing treatment, 94% of the respondents take patients performance status and the presence of metastatic disease into consideration. Neoadjuvant treatment is considered by 20% and adjuvant therapy by 75% of the respondents, with 71% choosing for adjuvant chemotherapeutic treatment alone and 4% choosing for combined adjuvant chemoradiation therapy. The formation of multi-disciplinary teams, improvement in surgical and local procedures, increased availability of chemotherapy, and knowledge on tumor biology were interpreted as improvements in the last five years. The necessity for international registries and randomized controlled trials on neoadjuvant and adjuvant chemo(radio)therapy were mentioned frequently.
**EPLB014**

**EARLY ADVERSE OUTCOMES OF LIVER ALLOGRAFTS FROM DONORS WITH COVID VACCINE INDUCED THROMBOCYTOPENIA AND THROMBOSIS SYNDROME**

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**Background:** Vaccine-induced immune thrombotic thrombocytopenia (VITT) following the ChAdOx1 nCOV-19 is a recently described syndrome that may have implications for organ transplantation. Our aim was to describe the early liver allograft outcomes from donors with VITT.

**Methods:** A retrospective single centre case series was performed at a liver transplant centre in the United Kingdom. The study period was between the 1st of January and 1st of April 2021. Donors were included if they had new onset thrombocytopenia (<50x10⁹) within 21 days of a COVID-19 vaccination and had their liver procured for transplant. The outcomes of interest were complications and graft survival during the first 30 days.

**Results:** During the study period, five deceased brain-dead organ donors with VITT were identified. All donors developed thrombocytopenia 9 to 16 days following COVID-19 vaccination and died from intracranial haemorrhage. The demographics, platelet counts and location of thrombosis are demonstrated in Table 1. One graft was discarded due to extensive portal vein thrombosis. The remaining four organs were transplanted into five patients between the ages of 2 – 43, with one graft being split for an adult and a child (Table 2). Both recipients of the split graft experienced graft loss within the first post-operative week due to hepatic vein thrombosis. Another

**Conclusion:** This study highlights the worldwide variation in the management of patients diagnosed with AAC, especially regarding neoadjuvant and/or adjuvant therapy. More data, including randomized controlled trials and international registries are needed to develop evidence-based guidelines for a more standardized surgical, and oncological management.

**EPLB014 Table 1**

<table>
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<th>Case</th>
<th>Age, Gender</th>
<th>Days since vaccine, vaccine type</th>
<th>Thrombotic complication</th>
<th>Bleeding complication</th>
<th>Platelet level (x10⁹/L)</th>
<th>Prothrombin time (seconds)</th>
<th>D-Dimer</th>
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**EPLB015**

**CONTINUITY OF CARE EXPERIENCED BY PATIENTS IN A MULTI-INSTITUTIONAL PANCREATIC CARE NETWORK: A PILOT STUDY**

J. Hopstaken1, D. van Dalen1, M. van der Kolk1, E. van Geenen2, J. Hermans1, E. Gootjes4, H. Schers5, S. van Dulmen6, K. van Laarhoven1 and M. Stommel1  
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**Background:** Over the past decades, volume norms for pancreatic surgery were applied in the Netherlands. As a result of this centralization, pancreatic tumor care has become multi-institutional. To illustrate, patients are referred to a center of expertise for pancreatic surgery whereas other parts of pancreatic care, such as chemotherapy, take place in local hospitals. This fragmentation of health care services could affect continuity of care (COC). The aim of this study was to assess COC perceived by patients in a pancreatic care network and investigate correlations with patient-and care-related characteristics.

**Methods:** This is a pilot study in which patients with (pre)malignant pancreatic tumors discussed in a multidisciplinary tumor board in a Dutch tertiary hospital were asked to fill out the Nijmegen Continuity of Care-questionnaire (NCQ) (5-point Likert scale). Patient-and care-related data were retrieved from medical records. Correlations of NCQ score and patient-and care-related characteristics were calculated with Spearman’s correlation coefficient.
Results: In total, 44 patients were included (92% response rate). Pancreatic cancer was the predominant diagnosis (32%). Forty percent received a repetition of diagnostic investigations in the tertiary hospital. Mean scores for personal continuity were 3.55±0.74 for GP, 3.29±0.91 for the specialist and 3.43±0.65 for collaboration between GPs and specialists. Overall COC was scored with a mean 3.38±0.72. No significant correlations were observed between NCQ score and certain patient-or care-related characteristics.

Conclusion: Continuity of care perceived by patients with pancreatic tumors was scored as moderate. This outcome supports the need to improve continuity of care within multi-institutional pancreatic care networks.

Keywords: Pancreatic tumor, Pancreatic surgery, Continuity of care, Quality of care, Centralization, Oncology networks

EPLB016
SURGICAL MANAGEMENT OF POSTOPERATIVE BLEEDING AFTER PANCREATIC RESECTION, NATIONAL CANCER INSTITUTE OF UKRAINE EXPERIENCE
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Purpose: One of the most severe (although not the most common) complications after pancreatic surgery is bleeding. The aim of this study was to examine and estimate the incidence, types, risk factors, time of onset, management, and outcomes of hemorrhage after pancreatic resections, performed by a team of surgeons at high volume center.

Method: A retrospective observational study was conducted on 236 consecutive patients undergoing pancreatic resections performed by a team of surgeons from the HPB department at the National cancer institute. Hemorrhage after pancreatic resections was defined according to the International Study Group of Pancreatic Surgery criteria.

Results: A total of 236 patients underwent pancreatic resections during a of 5 years from 2016 to 2021. 20 (8.5%) developed hemorrhage in the postoperative period, in this group there were no patients (0%) with type A bleeding, 2 of 20 patients (10%) had type B bleeding, and the remaining 18 patients (90%) had a type C hemorrhage. A soft tissue gland, small diameter of pancreatic duct were defined as serious risk factors of bleeding after pancreatic resections. The onset of hemorrhage was in median 10 days after the index operation, ranging from 1 to 25 days. 4 of 20 patients (20%) had sentinel bleedings. 3 of 18 patients with type C type (17%) had the bleeding stop by formation of a hematoma, which was revealed during laparotomy. Hemostatic control was achieved by performing surgical intervention in all of the rest patients with Grade C type of bleeding: in 7 (47%) of 15 patients ligation of the bleeding vessel(N2), and in 8(53%) patients precision suturing of the bleeding vessel(N2) were performed, respectively. The success rate of method N2 was 2/7(29%), method N22 was successful in 6/8 (75.0%). Considering high risk of recurrent bleeding after second surgery, 3(20%) of 15 patients underwent total pancreatectomy, 1(33%) of 3 ended lethally. Total mortality rate among patients with a Grade C hemorrhage after pancreatic resections was 8/18 (44%). Fatalities occurred as a consequence of multiorgan failure syndrome, caused by critical ischemia or septic shock.

Conclusion: Hemorrhage is a dangerous complication after resections of pancreatic gland. Ligation of the damaged blood vessel is associated with extremely high rush of mortality. Total pancreatectomy should be considered a lifesaving option for patients with high risk pancreas.

EPLB017
LAPAROSCOPIC COMMON BILE DUCT EXPLORATION: A SINGLE CENTER EXPERIENCE
Centro Hospitalar de Entre o Douro e Vouga, General Surgery, Portugal

Purpose: Approximately 15% of patients who have symptomatic cholelithiasis harbor concomitant chedocholithiasis.Despite the increasing number of studies demonstrating the advantages of laparoscopic bile duct exploration (LCBDE) in the treatment of patients with choledocholithiasis, a two-stage procedure via endoscopic retrograde cholangiopancreatography (ERCP) before or after cholecystectomy continues to be widely used.

This study aims to demonstrate our experience and results obtained in the treatment of patients with choledocholithiasis using LCBDE.

Method: Observational, retrospective study of patients undergoing LCBDE between January 2012 and May 2020. Descriptive and statistical analysis was performed with SPSS 25.

Results: 172 patients underwent LCBDE (42.4% male, median age 64 years) Transcystic approach was chosen in 58.7% and transcholedochal in 41.3% of patients. Cholecystectomy was executed in 28.5% of the surgeries. In the transcholedochal approach, the primary closure of the CBD was performed in 29.6% of the patients. Conversion rate was 1.7 %. The CBD stone clearance rate was 90%, the remainder patients underwent postoperative ERCP.

Conclusion: LCBDE is a safe and effective single-stage treatment in the approach of patients with common bile duct stones. Its performance in experienced centers allows the treatment of these patients with acceptable morbidity rates, placing it as a first-line therapy in the treatment of choledocholithiasis.
EPLB019
NEW BIODEGRADABLE Pancreatic STENTS
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Postoperative pancreatic fistula remains the most important morbidity after pancreaticoduodenectomy. Currently, the stents used are not degradable and they can cause obstruction, stricture and pancreatitis. A new pancreatic biodegradable stent has been developed. We present 4 cases of the first biodegradable stents used in pancreatic surgery in the south region of Spain. This is a single-centre, prospective study of consecutive patients with periampullary area tumours. In all cases we performed a pancreaticoduodenectomy with a Blumgart anastomosis and the biodegradable stent was placed from the pancreatic duct to the jejunum. All the patients had a good recovery and there was no mortality after 30 days. Complete degradation occurred after 3 months in all cases. The two most widely spread risk factors for the development of pancreatic fistula are the presence of a soft pancreas and the small diameter of the pancreatic duct, suggesting that the integrity of the pancreaticojejun anastomosis and its susceptibility to failure is of vital importance in preventing this complication. The Archimedes stent is a biodegradable biliary and pancreatic stent intended to be used to drain obstructed biliary or pancreatic ducts. The helical design of the stent allows bile to flow on the outer extremity of the device while supporting the opening of the lumen. It has also a proximal and a distal flap that help minimize migration. It is designed to completely degrade via hydrolysis in approximately 11 weeks. The use of a resorbable stent could be a valid alternative to prevent the development of fistulas.

EPLB020
METAL ION TRANSPORTATION PATTERNS AND CHEMOKINES LEVEL HIGHLIGHT FROM THE POINT OF VIEW OF THE INNATE IMMUNE SYSTEM IN THE FORMATION OF NON-ALCOHOLIC FATTY LIVER DISEASE
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Purpose: Non-alcoholic fatty liver disease (NAFLD), including non-alcoholic fatty liver (NAFL) and non-alcoholic steatohepatitis (NASH), represents the hepatic...
manifestation of obesity and metabolic syndrome. NAFLD covers a spectrum of disorders ranging from simple steatosis to non-alcoholic NASH and cirrhosis, which properly can develop into liver cancer. In our research, we use bioinformatics methods to evaluate the biological progress changes from normal liver to non-alcoholic fatty liver disease.

**Method:** We downloaded the data from the NCBI GEO database and begin the analysis of the GSE151158, after using three common expression analysis of R language, including edgR, DESeq2, and limma. We found the common gene set in the transcriptional progress which contains 270 genes in the threshold of \( p < 0.05 \). After that, Gene set enrichment analysis (GSEA) is performed to find the important biological function in module in the formation of Non-alcoholic fatty liver disease.

**Results:** By using the bioinformatics method, we found 270 differently expressed genes (DEGs) in the progress of formation of Non-alcoholic fatty liver disease. Gene set enrichment analysis is performed to find the enriched functions. We found that 13 metal ion transport or metabolism-related and 3 chemokine-related genes were enriched. The metal ion transport or metabolism-related genes mostly get negative enrichment scores, while most chemokines-related genes got positive enrichment scores.

**Conclusion:** The results we obtained from the research meant that metal ion transportation patterns and abnormal chemokines played several key roles from the point of view of the innate immune system in the formation of non-alcoholic fatty liver disease. As an early stage of non-alcoholic fatty liver disease, this finding will help us to understand the disease mechanism and design effective drugs to prevent the development and deterioration of the non-alcoholic fatty liver disease.

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**EPLB022**

**LIVER RESECTIONS: BILIARY LEAKAGE AS THE MOST FREQUENT COMPLICATION**

M. C. Lama\(^1\), C. Parada\(^1\) and J. D. Samper\(^2\)

\(^1\)Hospital General Universitario de Elda, Department of Surgery, and \(^2\) Hospital General Universitario de Elda, Department of Radiology, Spain

**Introduction:** Biliary leakage is one of the most frequent complications in liver surgery.

**Objective:** Our objective is to evaluate our incidence of postoperative biliary leakage and its characteristics.

**Material and methods:** Study period: April 2009 to October 2020.

**Results:** 184 liver resections were performed, being 106 (58%) men and 78 (42%) women with mean age 61.5 \( \pm \)13.1 years (range 4-87). Diagnosis: 133 (72.3%) liver metastases, 24 (13%) primary tumour and 27 (14.7%) benign pathology. Mean length of stay was 6.8 \( \pm \)4 days (range 3-30). There was no mortality and morbidity was 21.2% (39 patients).

The most frequent complication was biliary leakage with 8.6% (16 patients), 11 men and 5 women with mean age 58+/-11 years (range 33-77). The mean length of stay was 12.7+/-8 days (range 4-30).

**Diagnosis:** 11 liver metastases, 3 primary tumours and 2 benign pathologies.

**Conclusion:** Biliary leakage continues to be one of the most frequent complications and determines a longer mean length of stay.

Interventional radiology plays an important role in its resolution.
EPLB023
COMMON BILE DUCT EXPLORATION: TRANSCYSTIC VERSUS TRANSCHELEDOSCHAL APPROACH

Centro Hospitalar de Entre o Douro e Vouga, General Surgery, Portugal

Purpose: Choledocholithiasis can be treated by either open, laparoscopic, percutaneous, or endoscopic approach (Endoscopic Retrograde Cholangiopancreatography [ERCP]). In experienced hands, the laparoscopic common bile duct exploration is an advantageous option for managing stones within the biliary tree with the benefits of a single stage approach and high success rates. Although, it is not clear whether laparoscopic transcystic exploration is superior than a transcholedochal one in the management of choledocholithiasis.

Aim: To compare the safety and effectiveness of transcystic with transcholedochal approach in laparoscopic common bile duct exploration (LCBDE) for choledocholithiasis.

Methods: Observational, retrospective study of patients undergoing LCBDE between January 2012 and May 2020. Descriptive and statistical analysis was performed with SPSS 25.

Results: 172 patients underwent LCBDE (42.4% male, median age 63.5 years). Transcystic exploration was chosen in 58.7% and transcholedochal in 41.3% of patients. In the transcholedochal approach, the majority of the patients had dilatated CBD. Complication rates were similar in both groups. The CBD stone clearance rate was higher in the transcystic exploration. Additionally, 14% of the patients with the transcystic approach underwent post-operative ERCP, similarly to those in transcholedochal treatment.

Conclusion: From our knowledge both options are valid and safe. Transcystic exploration is feasible in most cases, saves time, does not violate de CBD and shows no higher morbidity. Once stones exceed 5mm, the likelihood of extraction falls and a choledochotomy may be a better one. Furthermore transcholedochal exploration has a higher rate of successful duct clearance.

EPLB024
A ROCKY SITUATION: JUDICIOUS MANAGEMENT OF GALLSTONE ILEUS COMPPLICATED BY BOWEL NECROSIS AND PERFORATION

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Gallstone ileus is an uncommon cause of mechanical bowel obstruction, associated with high rates of mortality. This case report details the management of a case of complicated gallstone ileus in a rural setting.

A 64 year old male presented to a rural emergency department with acute lower abdominal pain, and was found to be in septic shock with generalised peritonitis. Past history was significant for rheumatoid arthritis on immunosuppression, chronic obstructive pulmonary disease and obesity. Blood tests revealed an elevated bilirubin (45mmol/L) and lactate (2.8mmol/L), whilst Computer Tomography demonstrated Rigler’s triad. The patient was resuscitated and underwent an emergency laparotomy. Intraoperatively, there were multiple areas of full-thickness necrosis and one area of perforation in the distal ileum. A 4cm diameter gallstone was removed from a one metre segment of resected distal ileum. The patient’s haemodynamic instability requiring inotropic support limited the operation to damage control, leaving the remaining small bowel stapled off. The patient was transferred via air ambulance to a tertiary hospital. An end ileostomy was created with a view of re-anastomosis in future. He had an uneventful recovery.

This case raises awareness of the rare phenomenon of enteric full-thickness necrosis and perforation associated with gallstone ileus. In the rural setting with limited intensive level care, the less invasive surgical approach is safer. Early communication with the receiving hospital is vital. Due to the paucity in the literature comparing outcomes, there is no consensus on management but should be individualised to the patient’s condition, co-morbidities and healthcare setting.

EPLB025
ROLE OF DUCTAL IMAGING IN ACUTE GALLSTONE PANCREATITIS UNDERGOING A CHOLECYSTECTOMY: A RETROSPECTIVE ANALYSIS FROM JANUARY 2017 TO DECEMBER 2018

K. Ammar1, R. Thakkar2, R. Samuels2, L. Olge2, J. French2 and G. Sen2
1Freeman Hospital, Newcastle NHS Foundation Trust, HPB and Transplant Surgery, and 2Freeman Hospital, Newcastle NHS Foundation Trust, United Kingdom
**Introduction:** Studies have suggested that up to 18% of patients presenting with acute pancreatitis and normal liver biochemistry have gallstones, advocating a magnetic resonance cholangiopancreatography (MRCP) in all patients. Previous studies have correlated clinical parameters including liver biochemistry with the presence of persistent common bile duct stones in patients with acute biliary pancreatitis.

**Aims:** To identify a cohort of patients who presented with acute gallstone pancreatitis and underwent a cholecystectomy to the Department of HPB Surgery at the Freeman Hospital, Newcastle upon Tyne, UK. Additionally, to explore correlations between liver biochemistry and ductal imaging data.

**Methods:** Patients with gallstone pancreatitis who underwent cholecystectomy between January 2017-December 2018 were identified. Data were collected, including LFTs on admission, at the time of surgery and on discharge. Imaging data including ultrasound abdomen, intraoperative cholangiogram (IOC) and MRCP were also reviewed to assess for the presence of ductal stones.

**Results:** Over the study period, 66 patients presented with acute gallstone pancreatitis and underwent a cholecystectomy. At presentation, 47/61 (77%) of patients had abnormal LFTs, 14/61 (23%) had normal LFTs. For the remaining 5 patients data for LFTs at presentation was unavailable. 9 (13.6%) patients had biliary ductal calculi present on imaging, a further 2 patients had suspected but not confirmed ductal stones on imaging and the remainder of patients (n=55) did not. In patients that had imaging confirming biliary ductal stones (n=9), all had deranged LFTs on admission. Furthermore, mean bilirubin, ALP and ALT were higher in patients that had ductal stones on imaging compared with those that did not. In the patients that had normal LFTs on admission (n=14), none had imaging (US abdomen, MRCP or IOC) showing biliary ductal stones.

**Conclusion:** Although this is a small patient cohort, these findings indicate that MRCP may not be necessary in patients who present with normal liver biochemistry as the normal LFTs can be a good negative predictor factor for the likelihood of having ductal stones in patients presenting with acute biliary pancreatitis. This has the potential to reduce inpatient hospital stay, radiology service workload and the associated cost reducing the burden on service provision. However, a multicentre randomised control trials are needed to obtain a higher level evidence.

**EPLB026**

**PANCREATODUODENECTOMY FOR AMPULLARY CANCER AFTER ROUX-EN-Y GASTRIC BYPASS — AN EXTREMELY RARE CASE REPORT**

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Algarve Hospital Centre: Centro Hospitalar do Algarve EPE, Portugal

**Introduction:** Obesity is a known risk factor for periampullary neoplasia. However we have identified in the international literature only 1 case of a patient with ampullary carcinoma and history of gastric bypass submitted to curative surgery. And it is considered a surgery challenge. We present here the second case.

**Methods:** This clinical case describes a female patient, 70 years old, clinically classified as a peripanillary neoplasia with resectability criteria and without metastization evidence (cT2N0M0). This patient has a surgical history of a laparoscopic Roux-en-Y gastric bypass in 2017. This clinical case was discussed in the multidisciplinary hepatobiliarypancreatic meeting, resulting in a curative surgery as proposal.

**Results:** The patient was subjected to a pancreaticoduodenectomy (with a terminalateral pancreatojejunual anastomosis and a terminalateral hepaticojejunual anastomosis) with remnant gastrectomy in December of 2020. Post-operative care had no complications, resulting in a clinical discharge thirteen days later. The histological result of the surgical piece showed an ampullary adenocarcinoma moderately differentiated with invasion of peripancreatic adipose tissue, with surgical margins free of neoplasia and 29 nodes were removed (6 with metastasis) (pT4, pN1).

**Conclusion:** There are multiple types of possible reconstruction for patients after a Roux-en-Y gastric bypass. The rarity of clinical cases is the main factor for the poor evidence to the best clinical practice and for the big surgical challenge that it presents.
(P = 0.75), bleeding (P = 0.44) were not reliably associated with DGE.

**Conclusions:** Determination of the severity of delayed gastric emptying after pancreaticoduodenectomy (ISGPS) correlates well with the clinical course of delayed gastric emptying, which makes it possible to study the results of PD for further treatment of patients in the surgical department. The main factors in the development of delayed gastric emptying are the type of digestive anastomosis, the condition of the parenchyma of the pancreas, and possible fistulas of the pancreas.

**EPLB028**

**SOLID BIFOCAL PSEUDOPAPILLARY NEOPLASM OF THE PANCREAS: A CASE REPORT, LITERATURE REVIEW AND CLASSIFICATION PROPOSAL**

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**Introduction:** Solid pseudopapillary neoplasia of the pancreas (SPNP), first described by Frantz in 1959, is a rare entity, with a frequency of 0.3-2.7% of all pancreatic tumors. It has a distal location, an average of 7 cm in diameter at the time of its appearance and a propensity for the female gender, showing a bimodal frequency.

**Objective:** To report the atypical presentation of a solid pseudopapillary neoplasm of the pancreas (SPNP) through a clinical case, review of the literature and a classification proposal.

**Case:** 21-year-old patient, with incidental finding of two pancreatic tumors. An MRI of the pancreas is requested in which two solid, rounded lesions with well-defined margins are observed in the head of the pancreas, measuring 40 x 39 mm and another 16 x 15 mm at the junction of the body and the pancreatic tail (Figure 1). Surgery included a pyloric preserving pancreaticoduodenectomy with pancreatojejunostomy and distal pancreatectomy. The central pancreas was preserved.

**Results:** The patient presents low output pancreatic fistula and nosocomial infection, treated with antibiotic therapy, being discharged 29 days after the intervention. Pathological and immunohistochemical analysis consistent with SPNP, positive for nuclear β-catenin and vimentin; negative for CK AE1/AE3.

**Discussion:** SPNP are visualized as encapsulated, solid-cystic lesions, with internal bleeding and without internal septa and diagnosis is confirmed with the histological study. Microscopically they appear as solid nests of cells, with abundant small blood vessels. Cells located distant from the capillaries tend to degenerate and the viable ones, close to them, present pseudopapillary architecture, characteristic of these tumors. Immunohistochemical analysis is positive for nuclear β-catenin and vimentin (Table 1). These are an uncommon entity, even more so if there is a synchronous lesion of the same histological lineage. For this reason, it is proposed to classify this entity -from the quantitative point of view- into unifocal, bifocal and multifocal.

**Conclusion:** Bifocal SPNP is a rare entity and for this, or multiple lesions, an attempt should be made of a conservative resection of the parenchyma to minimize pancreatic insufficiency in a frequently young population, and always look for R0 resection, due to its uncertain behavior and overall survival of 93.7% at five years.

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<th>Pancreatic neuroendocrine tumor</th>
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**EPLB028 Figure 1**

**EPLB028 Table 1** Immunohistochemical findings of differential diagnoses for SPNP
EPLB029
PRIMARY CLOSURE VERSUS T TUBE DRAINAGE IN LAPAROSCOPIC COMMON BILE DUCT EXPLORATION: HAS THE PARADIGM ALREADY CHANGED?
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Purpose: The question of how to close common bile duct (CBD) following of laparoscopic bile duct exploration (LCBDE) remains a topic of debate. Traditionally, the CBD is closed with T-tube drainage after choledochotomy and removal of CBD stones. With advances in laparoscopic instrumentation and acquisition of advanced laparoscopic skills primary duct closure without a T-tube has been proposed as an alternative. In recent studies primary closure has been showing less complications, shorter hospitalization stay and reduced operative times discouraging the routine use of T-tube after LCBDE.

The aim of this study is to compare the safety and effectiveness of primary closure with T-tube drainage in laparoscopic common bile duct exploration (LCBDE) for cholecodolithiasis.

Method: Observational, retrospective study of patients undergoing LCBDE between January 2012 and May 2020. Descriptive and statistical analysis was performed with SPSS 25.

Results: 71 patients underwent LCBDE with a transcholedochal approach (62% female, median age 67 years). Cholecodochoscopy was executed in 46.5% of the patients. Primary closure rate was 29.6%. The T-Tube group had a higher complications rate (24.5% vs 23.8%) and an inferior CBD stone clearance rate (87.8% vs 90.5%). The reinter- vention (7% vs 4.8%) and the hospital stay were superior in the T-tube group (7.6 vs 5.8 days).

Conclusion: Primary closure was adopted as a preferred method in recent years in our hospital. Even with these previous results, we can assume that primary closure is feasible and associated with fewer complications, less need for re-resection and shorter hospital stay than T-tube drainage. Based on these results, primary duct closure may be considered as the optimal procedure for CBD closure after LCBDE.

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EPLB030
PANCREATIC COLLISION TUMOR
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A collision tumor is defined as the association of at least two types of cancers in the same anatomical site with no transition zone. A pancreatic collision tumor is an extremely rare entity that can be challenging to diagnose. We report a case of a pancreatic collision tumor composed of both a neuroendocrine tumor and an intestinal adenocarcinoma.

A 76-years-old male was hospitalized in 2021 for painless jaundice and constitutional symptoms. A CT scan was ordered, identifying a dilatation of both the intra- and extrahepatic ducts suspecting an ampullary tumor. An ERCP was performed, finding a mass involving the major papilla. We performed a cephalic duodenopancreatectomy, cholecystectomy and resection of the common bile duct with a Y-Roux reconstruction.

Histopathological examination demonstrated a pancreatic collision tumor with both a small cell neuroendocrine carcinoma and an intestinal adenocarcinoma staged as pT3N1M0. Immunostaining was positive for CD 56, chromogranin and synaptophysin. The patient is in treatment with platinum-etoposide chemotherapy at the moment.

A collision pancreatic tumour is an exceedingly rare type of tumour little described in literature. Many authors suggested that these tumours may arise from common precursor stem cells. Prognosis of collision malignant tumours is unclear, suggesting a median survival time of only 10 months. Preoperative diagnosis is difficult because of the lack of specific symptoms. Radical resection is still the treatment of choice, as we applied on our patient.

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EPLB031
TREATMENT OF METASTATIC LIVER CANCER USING MICROWAVE ABLATION
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Currently, there is an increase in the number of patients with metastatic liver damage, for whom performing liver resections is not possible due to the burdened somatic status or insufficient volume of the liver parenchyma. During the period from 2020 to 2021, 36 surgical interventions were performed using microwave ablation under ultrasound control, percutaneously and intraoperatively. When performing ablation, minor postoperative complications of the 1st degree are observed according to the Clavien-Dindo classification of surgical complications.

The presented experience demonstrates the justification for the use of microwave destruction of metastatic malignant tumors of the liver and demonstrates the possibilities of microwave thermal ablation therapy in patients who cannot be performed radical surgical treatment.
EPLB032
AN UNUSUAL CASE OF DYSPNEA
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The term hepatic cyst usually refers to solitary non-parasital cysts of the liver. There is a high prevalence of hepatic cysts in the general population, but giant cysts of the liver are uncommon. Usually, cysts remain asymptomatic and require no treatment. We report a case of giant liver cysts which debut as an acute dyspnea.

A 76-years-old woman with history of ulcerative colitis, arrived in the emergency room with dyspnea and abdominal pain. The symptoms had started one year earlier with a distinct deterioration in the previous days. A CT scan was ordered, identifying a giant liver cyst measuring 18x17.8x22.5cm, producing a compression on the heart, pancreas and cava vein.

Laparoscopic marsupialization was performed without complications, draining a big amount of serous fluid. The prognosis on our patient was expected to be good and at the moment she has no symptoms. The cause of simple liver cysts is unknown, but they are believed to be congenital in origin. Generally, the hepatic cyst causes no symptoms and may be found incidentally through a laparotomy or with abdominal imaging. However, large cysts may appear as abdominal lumps, palpable mass, through abdominal pain and compression of adjacent structures. A definitive role for open surgery technique in selected patients is indicated especially in giant cysts that had taken up most of the abdomen, and displaced other organs. Giant simple hepatic cysts should be considered in the differential diagnosis of intra-abdominal masses and in our case of dyspnea.

EPLB033
EXTRAHEPATIC OBSTRUCTIVE JAUNDICE DUE TO GRANULAR CELL TUMOUR
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Introducción: Granular cell tumour of the main bile duct is a rare entity and difficult to diagnose preoperatively. Radiological tests usually suggest malignancy. Echoendoscopy has allowed more precise diagnoses and conclusive cytological studies by FNA.

Case Report: A 24-year-old patient was seen at another centre after presenting with an episode of abdominal discomfort with increased bilirubin, transaminases and cholestasis enzymes. Abdominal ultrasound showed micro-lithiasis and slight dilatation of the intrahepatic bile duct. The patient evolved clinically and analytically and was discharged from hospital and referred to his reference centre.

When the patient was assessed in the outpatient clinic, he was asymptomatic but had conjunctival jaundice. Laboratory tests showed a bilirubin level of 3.7 mg/dl; AST/ALT: 186/306 IU/L; FA: 743 IU/L; GGT: 540 IU/L. The study was continued:

- Abdominal ultrasound: cholesterosis without lithiasis with slight thickening of the gallbladder wall and normal bile duct (Figure 1a).
- Cholangioresonance: Slight dilatation of the intrahepatic bile duct up to the common hepatic duct where there is a 7 mm long stenosis of benign appearance, although malignancy cannot be ruled out (Figure 1b).
- Echoendoscopy: Stenosis of the common hepatic duct with thickening of its wall without exceeding it. The edges of the lesion are irregular and after administration of sonovue® there was no enhancement (Figure 1c).
- FNA was performed.

Cytology by FNA: Benign proliferative lesion of mesenchymal type. Immunohistochemistry with s-100 protein of a faded extension (inverse process) showed cytoplasmic granular positivity in individual cells and isolated cell groups, being the diagnosis of granular cell tumour.

The patient underwent cholecystectomy and exeresis of the biliary tract with intraoperative histological analysis of the resection limits and reconstruction by means of end-to-side Roux-en-Y hepatic-jejunostomy. The patient progressed well and was discharged on the 5th postoperative day.

Analysis of the surgical specimen confirmed the preoperative cytology (Figure 1d).

Conclusions:

- Granular cell tumour of the bile duct is rare and preoperative tests usually suggest malignancy.
- Echoendoscopy and FNA increase the chances of making an accurate preoperative diagnosis.
- El diagnóstico preoperatorio facilita al cirujano la elección de la técnica quirúrgica.