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ABSTRACT BOOK

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procedure was performed under local anaesthesia. The intrahepatic tract was dilated with an 8 × 60 mm angioplasty balloon, followed by the placement of an 8-mm Fluency ePTFE-covered stent (Bard, Murray Hill, USA). Persistent visualised collaterals on post-TIPS portography were embolised. Patients were evaluated at 1, 3, and 6 months after discharge and every 6 months until liver transplantation, death, or loss to follow-up. The primary end point was variceal rebleeding, which was defined as a single episode of clinically significant rebleeding from portal hypertensive sources.

Results: The haemodynamic success of TIPS (final PPG ≤ 12 mmHg) was not achieved in 37 patients (17.1%). In group 1 (PPG >12 mmHg), the median PPG was reduced from 27 mmHg (IQR, 25–30 mmHg) to 15 mmHg (IQR, 14–19 mmHg). In group 2 (PPG ≤ 12 mmHg), the median PPG was reduced from 20 mmHg (IQR, 17–23 mmHg) to 8 mmHg (IQR, 6–10 mmHg). The median percentage reduction of PPG was 44% (IQR, 31%–51.5%) in group 1 and 60% (IQR, 51.2%–68.5%) in group 2. There was no significant difference between group 1 and 2 in terms of 1-year probability of remaining free of variceal rebleeding (91.8% vs 90.1%), 1-year probability of hepatic encephalopathy (29.1% vs 29.5%), 1-year probability of shunt dysfunction (14.5% vs 17%) and 1-year probability of survival (91.9% vs 97.8%). In group 1, variceal rebleeding occurred in six patients. TIPS dysfunction was confirmed in each patient. Five patients received shunt revision, and one underwent endoscopic treatment. Still, three out of six patients died of variceal rebleeding after discharge. During follow-up, another three patients died due to liver failure 56, 112 and 480 days after TIPS placement, respectively.

Conclusion: In our cohort, the cumulative rates of variceal rebleeding, hepatic encephalopathy and mortality were similar between the two groups and were consistent with patients who had a final PPG ≤ 12 mmHg in previous reports. Further studies are required to assess the efficacy of a small diameter TIPS which may lead to a PPG > 12 mmHg, complemented by drugs, endoscopic or interventional procedures.

PO-2621

Fixed 8-mm diameter VCX stents do not provide clinical advantages compared to former underdilated VTS stents in cirrhotic patients treated with TIPS for refractory ascites

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Background and aims: In patients with cirrhosis and refractory ascites (RA) treated with TIPS, new Viatorr controlled expansion (VCX) stents calibrated at 8 mm are designed to avoid passive expansion as opposed to conventional Viatorr TIPS Stent (VTS) for which the diameter may passively increase to 10 mm after TIPS insertion even if liver tract was underdilated at 8 mm, which may further increase portocaval shunting. We aimed to compare 1-year transplant-free survival, occurrence of hepatic encephalopathy (HE) and ascites persistence 1 year after TIPS insertion in patients with cirrhosis and RA treated either with fixed 8-mm diameter VCX stents or with VTS stents initially underdilated to 8 mm.

Method: : Files of patients with cirrhosis who received TIPS for RA from 2010 to 2020 were retrospectively reviewed.

Results: 78 patients were included (32 treated with fixed 8-mm diameter VCX stents and 46 treated with underdilated VTS stents). Characteristics of patients were similar at baseline in both groups. 48 patients (62%) were male, median age was 62 years (95% CI: 57–64) and 59 patients (76%) had alcoholic-related cirrhosis. During follow-up, (median: 417 days [95% CI: 255–556]), 17 patients (5 treated with VCX stents and 12 with VTS stents) underwent stents dilatation, 42 died and 6 were transplanted. Compared to patients treated with underdilated VTS stents, patients treated with fixed 8-mm diameter VCX stents disclosed similar 1-year transplant-free survival (66%, [95% CI: 48–83%] vs. 69% [95% CI: 56–83%], p = 0.7), similar incidence of HE (50% [95% CI: 34–72] vs. 44% [95% CI: 31–63], p = 0.6), similar incidence of HE requiring hospitalization (37% [95% CI: 22–62] vs. 37% [95% CI: 24–57], p = 0.9) and similar incidence of ascites persistence (53% [95% CI: 30–75] vs. 64% [95% CI: 48–80], p = 0.7) 1 year after TIPS insertion. In multivariable analyses adjusted for age and MELD score, at 1 year, fixed 8-mm diameter stents were not associated with death or liver transplantation (HR: 1.35 [95% CI: 0.58–3.11], p = 0.5), HE (HR: 1.19 [95% CI: 0.59–2.40], p = 0.6), HE requiring hospitalization (HR: 1.04 [95% CI: 0.45–2.39], p = 0.9) or resolution of ascites (HR: 1.19 [95% CI: 0.52–2.72], p = 0.7). Exclusion of patients in whom stent was dilated during follow-up did not change the results.

Figure: Kaplan-Meier survival curves of patients with cirrhosis and refractory ascites treated with fixed 8-mm diameter VCX stents or former underdilated VTS stents

Conclusion: Fixed 8-mm diameter VCX stents were not associated with better survival or with lower rates of liver-related events than underdilated VTS stents in patients with cirrhosis and RA.

PO-2655

Splenic vein flow for non-invasive screening for esophageal varices in advanced liver disease patients

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Background and aims: Current work aimed to evaluate the prognostic value of splenic venous flow (SVF) as a possible non-invasive screening test of esophageal varices (EV) in patients with advanced liver disease (ALD). Despite esophagogastroduodenoscopy (EGD) is still the "gold standard" for revealing esophageal varices (EV) in patients with advanced liver disease (ALD), searching for an optimal diagnostic algorithm is actual. Many biochemical/elastography modalities were presented in modern literature to substitute this invasive and uncomfortable (for patients) examination. We tend to use the hemodynamic parameters of the portal system to solve the problem.

Method: Using Doppler sonography, we evaluated splenic vein flow in 377 patients; 87 of them (control group) had no varices, and 290 ALD patients had proved with endoscopy presence of EV. The mean, median and interquartile range (IQR) were calculated (we obtained abnormally distributed data), and Mann-Whitney U test was used for two groups comparisons. The receiver operating characteristic (ROC) curve and area under the ROC curve (AUROC) were computed using EZR statistics software.

Results: Significant difference (p = 0.000, U test) of SVF was obtained in patients with ALD + EV versus control group: 1.06 l/min versus 0.32 L/min (mean), with median 0.88 L/min (IQR 0.58–1.27) versus 0.29 L/min (IQR 0.22–0.40). Area under the curve and cut-off values in the prediction model area were 0.93 and 0.55 L/min, respectively, with a sensitivity of 0.804 and specificity of 0.943 (Fig). According to literature data, the AUROCs for predicting varices using the shear method of wave elastography yielded around 0.80, which is less accurate than in the proposed model.

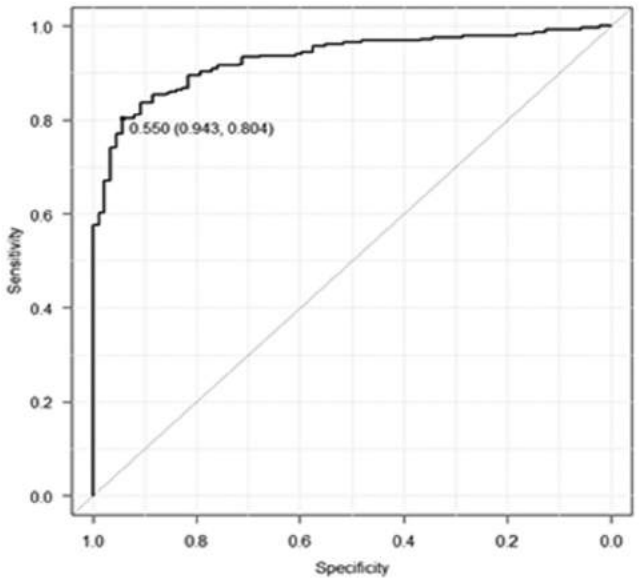

Figure: ROC of splenic vein flow in the prediction of varices revealing.

Conclusion: Splenic vein flow increases markedly in variceal patients with hepatic CSPH, and its measurement could be a helpful screening tool in selection patients who should be referred (if SVF exceeded 0.5 L/min) to endoscopy examination. Our model demonstrated more accuracy in varices prediction (AUROC = 0.93) than systems based on elastography. One more conclusion is that increased splenic vein flow plays a significant role in the pathogenesis of portal hypertension and esophageal varices formation, but further investigations are needed.

PO-2685

Using dimeric to monomeric IgA ratio to diagnose portal hypertension in liver disease: a pilot cohort study

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Background and aims: Portal hypertension (PHT) diagnosis in liver cirrhosis is vital to prevent life-threatening variceal bleeding. Platelet count and transient elastography are used to triage PHT risk and endoscopy to confirm diagnosis of varices, however these tests are expensive and difficult to access in remote/low resource settings. Dimeric IgA to monomeric IgA ratio (dIgA ratio) is a potential biomarker of gut mucosal leakage present in portal hypertension. We evaluated the diagnostic performance of a novel point-of-care (POC) dIgA ratio test for PHT.
Method: BioPoint® POC dIgA test is an antigen immunoassay-based lateral flow test which uses 15 μL of plasma or whole blood and provides a quantitative result <20 minutes using the Axxin hand-held reader. PHT was defined as platelet count <150 and splenomegaly (liver ultrasound), or clinical evidence of portal hypertension on gastroscopy. Associations between dIgA ratio, PHT and clinical parameters were determined by linear and logistic regression. ROC analysis was used to determine diagnostic accuracy.
Results: 1407 plasma samples from 960 patients with chronic liver disease were included; 280 (29%) had cirrhosis, 121 (9%) had PHT and 21 (2%) had current varices. Median dIgA ratio was higher in patients with PHT (1.14 vs 0.4, $p < 0.001$), ascites (1.4 vs 0.7, $p < 0.001$) and hepatic encephalopathy (1.4 vs 0.82, $p < 0.001$). A POC dIgA ratio cutoff of 0.6 had good diagnostic accuracy and high NPV for PHT and varices in both the test (AUROC 0.84 and 0.83) and validation cohorts (AUROC 0.86, Table 1).
Conclusion: POC dIgA ratio test had good accuracy for the presence of PHT and varices. Given limited access to transient elastography and endoscopy in low resource settings, the high NPV of POC dIgA test for PHT in this study warrants further clinical utility and cost-effectiveness studies in low-resource settings.

PO-2788

Umbilical hernia repair in Cirrhosis: TIPS insertion improves one-year survival but not long-term outcomes

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Background and aims: Umbilical hernia occur in up to 20% patients with cirrhosis. Management is controversial with a paucity of studies. We aimed to determine outcomes and factors predicting mortality following repair of symptomatic umbilical hernia in patients with cirrhosis.
Method: Retrospective study of patients with cirrhosis undergoing repair of hernia in a single centre from 1998 to 2020. Survival following surgery was estimated using the Kaplan-Meier method, comparing use of TIPS perioperatively (TIPS vs. nTIPS). Cox proportional hazards model and logistic regression analysis were used to determine predictors of overall survival (OS) and 1-year mortality, respectively. Statistical significance was set at $p < 0.05$.

Table 1: (abstract: PO-2685) Performance of POC dimeric IgA ratio for portal hypertension (PHT)

Ratio dIgA	No PHT	PHT	Sensitivity	Specificity	PPV	NPV	AUROC	95% CI	p value
Test cohort (n = 306; 40% cirrhosis, 5% healthy controls)									
≤0.6	161	11	86%	71%	51%	94%	0.84	0.78–0.89	<0.001
>0.6	66	68							
Validation cohort (n = 652, 1097 samples; 24% cirrhosis, 3% healthy controls)									
≤0.6	875	8	80%	83%	15%	99%	0.86	0.80–0.92	<0.001
>0.6	182	32							
Presence of varices (validation cohort, 1097 samples)									
	No Varices	Varices							
≤0.6	877	6	71%	82%	7%	99%	0.83	0.73–0.93	<0.001
>0.6	199	15							

PPV, positive predictive value; NPV, negative predictive value.