to hospital discharge, compared with 6/18 (33%) non-AAH ITU patients.

Conclusion Patients with AAH admitted to ITU do comparatively worse than non AAH patients receiving a similar level of organ support; and prognostic variables such as the CLIF-C ACLF score may not be as discriminatory in this cohort. As such, ceilings of care should be considered carefully and on an individual case basis.

Conclusions TIPSS using a GORE® VIATORR® stent to manage patients with severe cirrhosis and RA or bleeding is expected to be cost-saving and improve patient outcomes. While TIPSS remains cost-saving and cost-effective in our base-case analysis for the management of high quality and adequately powered RCTs which also evaluate quality of life and health economics are required to inform robust economic analysis; mainly for the bleeding indication. Increased implementation of TIPSS is likely to improve patient outcomes and be cost saving to the NHS, particularly for the management of ascites.

Abstracts

P58 ECONOMIC EVALUATION OF THE GORE® VIATORR® STENT IN PATIENTS WITH COMPLICATIONS OF SEVERE CIRRHOSIS – ASCITES AND BLEEDING: A UK COST-UTILITY ANALYSIS

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Introduction Variceal bleeding and refractory ascites are common clinical manifestations of liver cirrhosis. Transjugular intrahepatic portosystemic stent-shunt (TIPSS) procedures can increase survival and improve quality of life in some cirrhotic patient populations. TIPSS is clinically effective: versus endoscopic band ligation (EBL) in second line treatment of variceal bleeding; and versus large volume paracentesis (LVP) in refractory ascites. However, there is a sparsity of UK based economic evidence determining the cost-effectiveness of TIPSS for these two indications. This study aimed to establish the cost-effectiveness of (i) TIPSS versus EBL in second line treatment of variceal bleeding, and (ii) TIPSS versus LVP in the management of refractory ascites.

Methods A cost-utility analysis was conducted from a UK health perspective including NHS costs and quality adjusted life years (QALYs). A Markov model was constructed which included health states for survival either with or without complications of liver cirrhosis including variceal bleeding, ascites and hepatic encephalopathy. The model was conducted across a 2-year time horizon and applied costs and dis-utilities per complication for each monthly cycle. Uncertainty was analysed in one-way deterministic and probabilistic sensitivity analyses.

Results TIPSS with the GORE® VIATORR® stent was cost-effective (dominant) and highly cost saving to the NHS for both populations. For the variceal bleeding indication, when compared with EBL, TIPSS resulted in 0.22 additional QALYs, saved the NHS £17,983 per patient and had a 100% probability of being cost-effective. For the refractory ascites indication, when compared with LVP, TIPSS resulted in 0.526 additional QALYs, saved the NHS £17,983 per patient and had a 100% probability of being cost-effective.

Abstracts

P59 SYSTEMATIC REVIEW AND META-ANALYSIS OF EARLY TRANSJUGULAR INTRAHEPATIC PORTOSYSTEMIC STENT-SHUNT (TIPSS) IN THE MANAGEMENT OF ACUTE VARICEAL BLEEDING

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Introduction Transjugular intrahepatic portosystemic stent-shunt (TIPSS) insertion is well established as an effective treatment for the management of bleeding in patients with decompensated cirrhosis. Current evidence suggests that early TIPSS (within 72 hours of a variceal bleed) using the GORE® VIATORR® stent effectively reduces portal pressure and improves prognosis in comparison to endoscopic band ligation (EBL) and medical management. We conducted a meta-analysis of trials comparing early TIPSS with EBL in cirrhotic patients with acute variceal bleeding.

Methods Systematic literature searches were conducted in MEDLINE, PubMed, EMBASE and Cochrane. Eligible studies were published between May 1999 and May 2020. The outcomes of interest were survival, re-bleeding and rate of hepatic encephalopathy. Risk Ratio (RR) estimates with 95% confidence interval (CI) were calculated using a random effects model and trials were evaluated using the Cochrane tool for the assessment of the risk of bias.

Results 8,123 studies were identified by the search and three prospective controlled trials including 152 patients were included in the meta-analysis. Meta-analyses demonstrated that GORE® VIATORR® consistently and significantly reduced incidence of bleeding (RR = 0.20, 95% CI = 0.09–0.42, p = <0.001) (figure 1). This was associated an improvement in overall survival, which did not quite reach statistical significance, at 1 and 2 years (RR = 0.62, 95% CI = 0.33–1.19 and RR = 0.62, p = 0.16 95% CI = 0.31–1.26, p = 0.19).
Incidence of hepatic encephalopathy was similar across the studies (RR = 1.01, 95% CI = 0.70–1.46, p = 0.97).

Conclusion TIPSS is more effective in preventing variceal bleeding than EBL and medical management, without an increase adverse events. While this was not associated with a statistically significant improvement in survival, it is likely that these findings were underpowered. High quality, adequately powered and multi-centre randomized trials evaluating clinical and quality of life outcomes are required to verify these results and inform robust economic evaluations of TIPSS in the management of variceal bleeding in patients with cirrhosis.

Discussion The COVID-19 pandemic has demonstrated the need to identify and offer timely follow-up for our most unwell patients, allowing those with a stable condition to safely shield. Virtual monitoring of patients is important to identify asymptomatic flares. We advocate incorporating nurse-led monitoring of such patients, in combination with patient initiated follow-up for those with symptomatic disease.

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Promising outcomes with recent immune checkpoint inhibitor trials in hepatocellular carcinoma (HCC) have encouraged the search for novel immunotherapies. The tumour microenvironment in hepatocellular carcinoma (HCC) is highly complex but aggressive tumours are characterised by the accumulation of immunosuppressive cell populations. The endothelium is described as the gatekeeper for immunity, however, the regulation of immune cell/endothelial interaction within HCC is poorly characterised. We aimed to increase our understanding of the biological processes taking place at the level of the tumour endothelium in HCC through RNA sequencing of the endothelium in isolation, comparing this to non-tumour endothelium. In addition, we further studied the tumour microenvironment by spatial transcriptomic analysis of whole HCC tissue sections.

Methods We undertook a validated technique for endothelial isolation using magnetic beads conjugated to Ulex agglutinin I, a lectin isolated from Ulex europaeus which binds specifically to the L-fucose residues present within glycoproteins on the surface of human endothelial cells. These beads were incubated with a single cell suspension of HCC tissue or distal non-tumour tissue. RNA was extracted and mRNA sequencing performed. We next analysed paraffin sections of resected HCCs with Nanospring® Digital Spatial Profiling (DSP) to provide further information on the localisation of immune signatures within the tumour microenvironment.

Results 5 paired tumour and distal non-tumour samples taken from patients who underwent surgical resection were analysed. 45 genes were identified as being significantly differentially expressed between the tumour and non-tumour endothelium (adjusted p value <0.05). 41 genes were upregulated in the tumour endothelium and 4 downregulated. Pathway analysis revealed 83 pathways that were downregulated (adjusted p value <0.05) and these were further grouped into 7 key clusters. Remarkably, these clusters were all related to immune related pathways: leucocyte mediated immunity; leucocyte mediated toxicity; leucocyte proliferation; cell killing;