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**Introduction** Treatment protocols for hepatocellular carcinoma (HCC) are evolving rapidly. We sought to determine long-term outcomes in patients with HCC treated with DEB-TACE as stand alone or part of multimodality treatment at a single centre.

**Methods** Our departmental database of HCC, diagnosed using EASL radiological criteria, was reviewed retrospectively. From August 2006 to January 2011, 80 patients (60 males/20 females) underwent DEB-TACE some of which also had surgery and/or percutaneous ablation. A total of 186 episodes of DEB-TACE treatment were performed (minimum 1 episode and maximum 8 episodes per patient). 37.5% of patients presented with multifocal disease, a further 7.5% presented with tumour plus satellites. The mean MELD (model for end-stage liver disease) in this cohort was 9.53 (range 6–22). Demographics, procedural details, clinical measures and outcomes were studied. Median age was 69 years (range 33–87). All patients were included in the survival analysis. Overall survival was described using Kaplan–Meier methods.

**Results** 53 patients with a median tumour size of 49 mm (range 12–163 mm) were treated with DEB-TACE alone with a mean number of procedures of 2.1. Here median survival was 28.5 months (798 days). The 1- and 3-year survival rates in this group were 66% and 38% respectively. 27 patients (median tumour size of 40 mm (range 12–100 mm)) were treated with a combination of therapies and at 55 months (1540 days) the median survival had not been reached. Survival in this group was 51.1% at time data collection. In this group the 1- and 3-year survival rates were 86% and 64% respectively. In our cohort of patients DEB-TACE both with or without combination therapies, resulted in median survival of 44 months. Overall survival rates at 1- and 3-years were 74.5% and 50.3% respectively. There were no deaths at 30 days following a DEB-TACE episode.

**Conclusion** In our centre this procedure is safe and well tolerated with multimodality treatment showing an improved survival outcome. Our results highlight the importance of a multi-disciplinary approach with the application of multimodal therapy in the management of HCC with an improved survival for appropriately selected patients.

**Competing interests** None declared.

# PTU-024 A “REAL WORLD” CONTROLLED STUDY OF LIVER STIFFNESS MEASURED BY ARFI (ACOUSTIC RADIATION FORCE IMPULSE) ELASTOGRAPHY IN HOSPITALISED PATIENTS WITH DECOMPENSATED ALCOHOLIC LIVER DISEASE (ALD): A NEW PARADIGM IN ASSESSMENT OF SEVERITY AND PROGNOSIS?

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**Introduction** Acoustic Radiation Force Impulse (ARFI, Virtual Touch<sup>®</sup>) elastography is a novel validated technique for measuring liver stiffness (LS), with advantages over transient elastography including greater accuracy in ascites or obesity. However, elastography has not been well studied in acutely ill patients with decompensated chronic liver disease (CLD). We report our experience in a consecutive controlled cohort in a secondary care setting.

**Aims:** (1) To establish whether LS is significantly different in patients hospitalised for decompensated CLD from outpatient

controls with proven cirrhosis; (2) To investigate correlation between ARFI and severity scores such as DF, GAH, Lille, Child Pugh and MELD.

**Methods** ARFI was performed by a single radiologist, using a standard 10 observation technique. 108 patients were studied: (1) 60 hospitalised patients (13 AAH-acute alcoholic hepatitis with Bili >80; 19 DALD-decompensated ALD; 12 DCLD-decompensated CLD; 10 ALC-alcoholics without severe liver disease; 6 acute hepatitis), representing 39% of 152 consecutive cases seen by the liver service; and (2) 48 age and sex matched CLD controls (all never hospitalised, 33 with biopsy-proven advanced fibrosis/cirrhosis; 15 with clear clinical/radiological/endoscopic evidence of advanced CLD).

**Results** Validation: technical ARFI failure <5%, IQR/median <0.5 in 93%. Compared with CLD controls, significantly higher mean shear velocity (SV) was seen in both (a) all 32 decompensated ALD patients (AAH+ALD—2.9±0.8 vs 2.4±0.8 m/s, 99% CI 0.2 to 1.0, p=0.001) and (b) all 44 decompensated CLD patients (AAH+DALD+DCLD—2.8±0.8 vs 2.4±0.8 m/s, 99% CI 0.0 to 0.8, p=0.006). In hospitalised patients with ALD (AAH+DALD+ALC) significant correlations were seen between mean SV and both DF (r=0.55, p<0.001) and GAH (r=0.38, p=0.01), but not with Lille score. Strong correlations were shown in all inpatients between SV and Child-Pugh score (r=0.52, p<0.001), and also with MELD score (r=0.42, p=0.002), but not in controls.

**Conclusion** In this “real world” study, ARFI elastography is an accurate and highly reproducible tool in assessing severity and prognosis in acutely ill patients with decompensated CLD, as shown by (a) increased LS in hospitalised ALD/CLD patients compared with cirrhotic controls, and importantly (b) further increases in LS reflect severity and adverse prognosis as shown by standard scores. As higher LS scores appear to reflect disease processes beyond fibrosis, the usefulness of this “real” measurement as an alternative to current “surrogate” prognostic markers merits further analysis in larger studies.

**Competing interests** None declared.

# PTU-025 A NEW PARADIGM IN THE NON-INVASIVE ASSESSMENT OF PORTAL HYPERTENSION: A SINGLE ULTRASOUND PROCEDURE INCORPORATING ACOUSTIC RADIATION FORCE IMPULSE (ARFI) ELASTOGRAPHY PREDICTS OVER 90% OF OESOPHAGO-GASTRIC VARICES AND PORTAL GASTROPATHY

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**Introduction** Accurate non-invasive techniques for imaging portal hypertension (PHT) have long been the goal of hepatologists. However the sensitivity of standard ultrasound (US) alone is too low to achieve this. The combined use of elastography with US to detect PHT has not been investigated. ARFI (Virtual Touch<sup>®</sup>) elastography is a novel validated technique for measuring liver stiffness (LS), with practical advantages over transient elastography including real-time scanning. We report our experience of this technique in assessing PHT in a consecutive secondary care cohort.

**Aims** To establish whether the addition of LS estimation by ARFI to conventional US Doppler assessment of the spleno-portal venous system can reliably predict the presence of significant endoscopic PHT.

**Methods** Conventional US and elastography were performed simultaneously at one session by a single radiologist, using a Siemens Acuson S2000<sup>TM</sup> and 4C1 probe 4 MHz transducer and a