

3. <https://www.bsg.org.uk/wp-content/uploads/2019/12/BSG-BASL-Decompensated-Cirrhosis-Care-Bundle-First-24-Hours.pdf>

P206 **GEOGRAPHICAL VARIATION OF CHRONIC LIVER DISEASE RISK FACTORS ACROSS THE UK**

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Introduction Chronic liver disease (CLD) is a largely preventable condition with increasing burden on NHS resources. The aim of this study was to determine geographical variation in liver risk factors for CLD and association with regional Gross Disposable Household Income (GDHI).

Methods Between 2018–2019, a cross-sectional survey was conducted across the UK to screen for obesity, alcohol intake, diet, and viral hepatitis. In 2019, liver transient elastography (FibroScan) measurement was introduced. Spearman's correlation coefficient (r_s) was used to assess linear relationships between ordinal and discrete variables.

Results We analysed the data from 2152 individuals aged 18+ (males, $n=1092$, 51%; females, $n=1058$, 49%) across 25 UK towns. 24% ($n=519$) exhibited high-risk levels of alcohol consumption, 30% ($n=637$) had high-risk diets, 25% ($n=531$) were obese, and 33% ($n=704$) had risk factors for viral-induced liver disease. FibroScan readings were available for 1044 individuals. Male gender, >40 years of age, obesity, and a high-risk diet were associated with a FibroScan score >7 kPa in univariate analysis. In multivariate analysis, male gender (odds ratio [OR], 1.651; 95% confidence interval [CI], 1.164–2.341; $p=0.005$), >40 years of age (OR, 1.846; 95% CI, 1.192–2.860; $p=0.006$), and obesity (OR, 3.245; 95% CI, 1.927–5.465; $p<0.001$) were independent predictors of a FibroScan reading >7 kPa. Across UK towns, there was a weak negative association between FibroScan readings >7 kPa (range 9–26%) and GDHI ($r_s=-.309$, $p=0.355$). Disparity of CLD risk factors in UK towns (alcohol, 4–34%; diet, 17–53%; obesity, 11–34%; viral, 22–70%) was not significantly associated with GDHI ($r_s=0.026$, $-.264$, $-.277$, and $.117$, respectively).

Conclusions UK towns displayed noteworthy disparity in the prevalence of CLD risk factors, which was not adequately explained by regional economic performance. Further studies are required to explain this disparity, accounting for societal factors and comorbidities, to inform resource allocation and policy-making.

P207 **TRANSIENT ELASTOGRAPHY MAY OVERESTIMATE RISK OF SEVERE FIBROSIS IN PATIENTS WITH PRIMARY SCLEROSING CHOLANGITIS**

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Introduction Primary sclerosing cholangitis (PSC) is a chronic, immune mediated cholestatic disease that leads to progressive liver fibrosis and cirrhosis. There is a need for reliable markers of disease activity and prognosis in patients with PSC. In recent years Transient Elastography has been validated as a non-invasive screening tool for severe fibrosis and

cirrhosis in this patient cohort with cut-off values of 9.6 KPA for severe fibrosis and 14.4 KPA for cirrhosis.

Methods We retrospectively reviewed data from our PSC patient cohort to identify patients who had undergone a liver biopsy and transient elastography. We then used this data to work out sensitivity, specificity, positive predictive value and negative predictive value of transient elastography in PSC using a cut off of 9.6 KPA for severe fibrosis.

Results Data from 52 patients with PSC was available for this review. 16 patients had both liver biopsy and transient elastography. 5 patients had liver stiffness > 9.6 kpa and 3 had a liver stiffness of >14.4 KPA. 1 of the 5 patients had cirrhosis and had a liver stiffness of 22.6KPA. None of the remaining 4 had severe fibrosis or cirrhosis. Of the 11 patients with liver stiffness < 9.6 KPA, 1 had bridging fibrosis on biopsy. Using a cut off of 9.6KPA, the sensitivity, specificity, positive predictive value and negative predictive value for severe fibrosis was 50%, 71%, 20% and 91% respectively. All 5 patients with liver stiffness of >9.6 kpa had an ALP > 247 IU/L (range 247–832 IU/L) which is 1.9 x upper limit of normal (ULN) as per our reference ULN of 130 IU/L.

Conclusions In patients with PSC, using transient elastography cut offs suggested previously may overestimate the presence of advanced fibrosis. This is more likely in patients with a raised ALP of > 1.9 x ULN. The single false negative result seen in our cohort is likely due to patchy nature of fibrotic disease in this cohort and again warrants caution when interpreting liver stiffness results.

REFERENCE

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P208 **SUSTAINED VIROLOGIC RESPONSE IS ASSOCIATED WITH AN IMPROVED QUALITY OF LIFE IN HEPATITIS C PATIENTS**

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Introduction Cirrhosis and chronic infection with Hepatitis C Virus (HCV) is associated with fatigue, depression and neuro-cognitive deficits which profoundly affect health-related quality of life (QoL). Advances in antiviral therapy mean ~95% of patients receiving treatment achieve sustained virologic response (SVR), reducing progression to cirrhosis. Whether these improved clinical outcomes translate to improvements in QoL has not been empirically assessed. Therefore, this study examined the relationship between the presence of viraemia, fibrosis status and comorbidities on QoL in patients with HCV.

Methods Patients with HCV were recruited prospectively from viral hepatitis clinics at the Freeman Hospital, Newcastle upon Tyne. Data regarding patient's virus status, fibrosis status, comorbidities, and lifestyle behaviours were obtained, alongside QoL using a validated question (the Hepatitis Quality of Life Questionnaire; HQLQv2). In all domains of the questionnaire higher scores imply a better QoL.

Results 100 patients were recruited (67% male, 93% white, median age 52 years, median BMI 28.6 kg/m²), of which

71% had achieved SVR and 34% had advanced fibrosis/cirrhosis. 53% of patients had a diagnosis of depression. With the exception of the hepatitis specific limitations scale (HLIM), patients diagnosed with depression and those with a reduced level of physical activity scored significantly lower in all components of the HQLQv2 questionnaire (all $p < 0.05$). The median physical functional component score was significantly lower in patients with advanced fibrosis/cirrhosis (38.6) compared to those without (47.4, $p = 0.012$). Patients who achieved SVR scored significantly higher on the positive wellbeing score, HLIM, and the hepatitis specific health distress scale (HHD) compared to those with detectable HCV RNA ($p = 0.035$, $p = 0.029$ and $p = 0.004$, respectively). Multivariable linear regression adjusted for age, gender, BMI and level of physical activity illustrated that both the presence of depression (aOR-19.85 95%CI -34.37—5.32, $p = 0.008$) and achieving SVR (aOR 20.63 95%CI 4.02–37.24, $p = 0.016$) were independently associated with the HHD score.

Conclusions Our data, from a real world setting, suggests that achieving SVR is associated with an improvement in QoL by reducing physical, mental and emotional limitations associated with HCV. Depression is also highly prevalent in this population and independently impacts upon patients QoL. This suggests the importance of utilising a holistic approach when assessing these patients.

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OVERLAP PRIMARY BILIARY CHOLANGITIS-AUTOIMMUNE HEPATITIS SYNDROME: SINGLE TERTIARY REFERRAL CENTRE EXPERIENCE

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Background and Aims Features of primary biliary cholangitis (PBC) and autoimmune hepatitis (AIH) coexist in some patients; termed PBC-AIH overlap syndrome. The Paris Criteria are used for diagnosis. Treatment is determined by the predominant disease and those with active inflammation may respond to immunosuppression. This study aimed to review the characteristics and treatment response to immunosuppression in PBC-AIH overlap patients.

Method All prevalent patients with a clinical diagnosis of PBC-AIH overlap between 2010 and 2018 at a single tertiary centre were retrospectively reviewed. Patients who met the Paris criteria were termed 'True Overlap' and those who did not were classed 'Clinical Overlap'. The 2 groups were reviewed for clinical course and treatment outcome.

Results There were 39/66 (59%) patients with True Overlap. Approximately 97% of patients were female in both groups. Median age at diagnosis was 55 and 56 years in the True and Clinical Overlap groups, respectively, with median ALT (144 vs 114, $p = 0.07$) and ALP (175 vs 203, $p = 0.37$) at presentation. 36% (14/39) of True Overlap patients had advanced disease at diagnosis or progressed to cirrhosis, compared to 18% (5/27) in Clinical Overlap. More patients with True Overlap had moderate-severe interface hepatitis on biopsy than Clinical Overlap (38 vs 18, $p = 0.001$) but there was no difference in the presence of florid bile duct lesions. Immunosuppressants improved ALT ($p < 0.001$) in both groups. 61% (19/31) of True

overlap patients on immunosuppression achieved biochemical remission (normal ALT and IgG) for the AIH component as compared to 52% (10/19) of Clinical Overlap. Severe interface hepatitis ($p < 0.05$) at presentation and ductopenia ($p < 0.001$) were associated with incomplete response to immunosuppression in both groups.

Conclusion In our unit, patients are treated clinically as having PBC-AIH overlap syndrome without having to meet the current Paris Criteria. Both groups had similar baseline biochemical characteristics with improvement in markers of inflammation with treatment but those with True Overlap had more severe inflammation and poorer clinical outcomes. Approximately half of the Clinical Overlap patients treated with immunosuppressant achieved biochemical remission despite not meeting Paris Criteria and 39% of True Overlap patients failed to achieve biochemical remission. This study suggests that the criteria for diagnosing overlap syndromes would benefit from refinement so that we can better delineate these disease phenotypes to ensure that patients who will benefit from immunosuppression get the appropriate therapy.

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ENHANCED-LIVER-FIBROSIS SCORE WAS NOT INFLUENCED BY ALCOHOL CONSUMPTION IN A PATIENT COHORT WITH ALCOHOL-USE-DISORDERS

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Introduction Although only 20% of people with Alcohol Use Disorder (AUD) develop liver fibrosis/cirrhosis, those affected experience high morbidity and mortality. Better strategies are required to identify cases of advanced liver fibrosis amongst people with AUD. The Enhanced Liver Fibrosis (ELF) test has been used to good effect in NAFLD to identify people with liver disease. There has been concern that recent alcohol intake may elevate ELF scores, confounding diagnostic performance. We have investigated the relationship between ELF scores and alcohol consumption in people with AUD referred to a hospital-based alcohol specialist nurse (ASN).

Method Prospective service evaluation of liver fibrosis in consecutive patients referred to the ASN at the Royal Free Hospital from Nov' 2018-Dec' 2019. Patients were excluded if they were already known to have liver disease. Five ml of blood was collected and analysed for ELF score on an Advia Centaur. Data recorded included demographics, blood test and imaging results and self-reported alcohol history. Data were analysed using SPSS.

Results We included 100 patients (69% male, mean age 53.15 \pm 14.3). Average BMI was 26.52 (\pm 5.94) and 85% were current or past smokers. Median alcohol intake was 140 units/week (IQR 79.1–280), with duration of excess alcohol of 15 years (IQR 10–29). The vast majority (97/100, 97%) were drinking alcohol within the last month prior to ELF test. Liver function tests were abnormal in 64/96 (66.7%) patients. ELF scores ranged from 6.87 to 13.78, median 9.66 (IQR 8.94–10.6). Of the total cohort, 29/100 (29%) had an ELF score of ≥ 10.5 indicating advanced fibrosis, and 14/100 (14%) had ELF scores ≥ 11.3 indicating cirrhosis. ELF score increased with age ($p = 0.037$). Alcohol intake was not