P77 USE OF AUDIT C SCORE TO IDENTIFY ALCOHOL USE DISORDER AMONG INPATIENT POPULATION AT A SECONDARY CARE HOSPITAL

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Introduction Alcohol use disorder (AUD) is attributed to estimated 1.3 million hospital admissions per year, costs £3.5 billion annually to National Health Services (NHS)(1). Both Public Health England and the NHS Long Term Plan advocate for maximising every contact with patients with a focus on preventative medicine. The burden of such contacts has implications for both individuals and health care services. We aim to describe the prevalence of harmful alcohol use by AUDIT-C score among hospitalised patients at a secondary care hospital in England.

Methods A retrospective cohort included all adult patients (>16 years) admitted to a single, large, acute secondary care NHS hospital for 1-year from 1st April 2019. All patients were offered alcohol assessment by AUDIT-C. Increasing and high-risk alcohol use was defined as AUDIT-C 5–10 and alcohol dependence as 11–12. Variation in AUDIT-C was determined by age, sex, ethnicity and admission type/specialty. Patients admitted directly to intensive care were excluded.

Results Over 1-year period, AUDIT-C was offered to n=66403 hospitalised patients, with 97.7% accepting alcohol assessment. The proportion with harmful alcohol use was 14.4% (12.2% high risk and 2.1%alcohol dependence).

Variations in harmful alcohol use are shown in table 1.

Conclusion We demonstrated robust application of AUDIT-C tool in identifying alcohol misuse among a large contemporaneous cohort of hospitalised patients with high acceptance rate and found 1 in 7 admitted patients had harmful alcohol use. The findings support incorporation of AUDIT-C score into inpatient alcohol screening pathways as an effective way of identifying clients in most need.

Abstract P77 Table 1 AUDIT-C was determined by age, sex, ethnicity and admission type/specialty

	Increase and Higher risk%[1] (AUDIT-C 5-10)	Alcohol dependence%[1] (AUDIT-C 11-12)	P*,#, OR (95% CI) (AUDIT-C ≥ 5)
Age-group*			
18-19	23.69	0.29	11.7 (9.08-15.31)
20-29	16.54	0.94	8.3 (6.7-10.2)
30-39	15.20	4.70	9.6 (7.8-11.8)
40-49	16.61	6.21	11 (8.9-13.4)
50-59	18.42	3.87	10.2 (8.3-12.4)
60-69	15.91	2.55	8.6 (7.02-10.6)
70-79	10.84	1.03	3.8 (3.1-4.7)
80-89	5.18	0.31	2.4 (2-3.08)
>90	2.34	0.09	1.6 (1.29-2.05)
Sex*			
Male	67.48	72.19	0.397 (0.37-0.42)
Female	32.52	27.18	
Ethnicity			
White#	11.93	2.19	0.94 (0.9- 1)
Black*	6.41	1.71	2.3 (1.89-2.8)
Mixed#	13.66	4.83	1 (0.8-1.3)
Asian*	4.66	1.55	3.5 (2.5-5)
SE Asian*	3.47	1.08	4.04 (3.1-5.2)
Admission Type*			
Emergency	57.45	80.46	
Elective	21.22	8.21	
Clinic	1.80	1.23	
GP	11.29	8.71	
Other	2.49	1.38	
Top 5 Specialty	Inc & High Risk%	**Top 5 Specialty**	Dependence%
Burs care	27.0	Hepatology	9.01
Maxillo-Fascial	21.47	Endocrinology	8.70
Thoracic Surgery	20.62	Rheumatology	4.76
Cardiac Surgery	19.85	General Medicine	4.70
Plastic Surgery	19.56	A&E	3.58

*P significant <0.01 after adjusting for other variables (age, sex, ethnicity).
#P Non-significant >0.05
[1]The percentage was calculated for total number of admissions in individual groups

P78 PATIENTS WITH ALCOHOL RELATED LIVER DISEASE HAVE HIGH LEVELS OF OXIDATIVE STRESS

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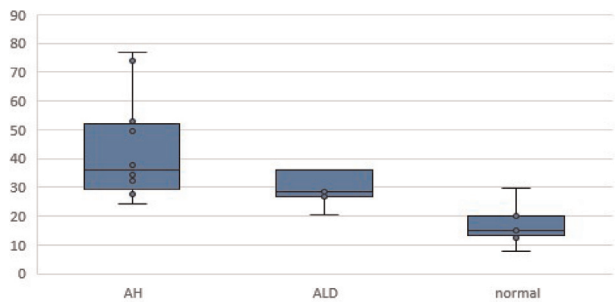
Background and Aims Chronic alcohol use generates reactive oxygen species (ROS) through the CYP2E1 pathway and contributes to the pathogenesis of alcohol-related liver disease (ALD). However, the understanding of the role of ROS in alcoholic hepatitis (AH) is lacking. We aimed to measure oxidative stress in well-defined cohort of ALD and AH patients and compare with healthy subjects using a well-validated and reproducible assay.

Method Patients from University Hospitals Plymouth with AH (new jaundice, coagulopathy, heavy alcohol use, discriminant function [DF]>32); ALD (ongoing alcohol use, no new jaundice, cirrhosis) and healthy volunteers (HV) were recruited. Model for end stage liver disease (MELD) and DF scores were used to evaluate liver disease severity. Thiobarbituric acid reactive substrate (TBARS) assay kit was used to measure



Abstract P78 Figure 1 MDA concentrations (micromolar)

levels of malondialdehyde (MDA)-TBA adduct, a naturally occurring product of lipid peroxidation.

Results 22 subjects were recruited: 10 AH (6 males; median MELD 12; DF 45.6); 5 ALD (2 males; median MELD 18) and 7 HVs (3 males). MDA was significantly higher in AH vs HVs (median 36.1μM vs 14.8μM; $p<0.01$) and in ALD vs HVs (median 28.6μM vs 14.8μM; $p = 0.03$) but similar between AH and ALD patients. In AH patients, there was no strong correlation between MDA levels with MELD or DF ($r=0.14$ and 0.57, respectively; both $p>0.05$) (figure 1).

Conclusion Oxidative stress as measured by lipid peroxidation is increased in patients with ALD and AH when compared to HVs.

P79 AUTOMATED CELL COUNT FOR THE DIAGNOSIS OF SPONTANEOUS BACTERIAL PERITONITIS: IS IT USEFUL IN CLINICAL PRACTICE?

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Introduction Spontaneous bacterial peritonitis (SBP) is both a common and severe complication of ascites. It carries a mortality rate of 11–19.1%,[1–3] thus early diagnosis and treatment is imperative in this vulnerable group.

The incidence of SBP ranges from 10–30% in hospital inpatients with cirrhotic liver disease.[4] However, asymptomatic outpatients carry a much lower rate.[5] A recent UK-wide report observing both inpatients and outpatients found a total SBP rate of 3.13%,[6] though underreporting may have affected this.

The gold standard for diagnosing SBP is an ascitic fluid manual cell count (>250 mm^3 polymorphonuclear leukocytes).[7] Our trust does not have access to same day manual counts and therefore relies on automated cell count for initial diagnosis. Our trust was identified to have a higher than expected rate of SBP compared to the UK average (11.01% vs. 3.13%).[6] Further to this, a local audit of ascitic samples identified 18.9% were positive for SBP, a significant outlier in the national trends. We reviewed our practice to establish the validity of automated cell count as a diagnostic method and establish its usefulness in the diagnosis of SBP.

Method We obtained a list of patients who had a fluid sample analysis between April 2018-April 2019 (n=300). Non-ascitic or non-processed samples were excluded. Samples were included for analysis if both an automated and manual cell count (gold standard) were sent. 211 patients met the inclusion criteria and results were reviewed using the electronic patient record. 103 (48.9%) were excluded for having automated count only and a further 10 (4.7%) for having one sample not suitable for analysis. 98-paired samples (46.4%) met inclusion criteria for analysis.

Results 20 automated samples were positive for SBP, of which 3 were positive on the corresponding manual count (positive predictive value (PPV) 15%). It must be noted that the negative predictive value (NPV) was 100% (n=78). Of 103 automated only samples, there were 37 positive results. With a PPV of 15% we would expect a further 5.5 cases. Therefore, potentially 31.5 cases of SBP were over diagnosed due to our reliance on the automated result.

Discussion A PPV of 15% suggests the automated count has little value in clinical practice. Its benefit lies in its strong NPV to rule out SBP, but reliance on this method results in inflated SBP rates and overtreatment with potentially harmful antibiotics.

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P80 DIVERGENT GUIDELINES REGARDING METHOTREXATE PRESCRIBING IN THE UK: TIME FOR HEPATOLOGISTS TO PROVIDE DIRECTION?

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Introduction Low dose methotrexate (MTX), an effective treatment for immune-mediated diseases, has been used by multiple specialities since the 1960s. Historically, MTX-induced hepatotoxicity dictated its potential use; only being advocated in patients with 'life-ruining' disease and regular liver biopsies were mandatory.[1] Guidelines have been divergent across various specialities since 1987, and this persists today.[2–4]

Aim To compare current guidelines regarding MTX prescribing, monitoring and action in the face of presumed hepatotoxicity.

Methods The archives of professional bodies and associations in rheumatology, dermatology and gastroenterology were searched for guidance pertaining to the use of methotrexate, dating back to 1950, within the UK, Europe and America.

Results A total of 17 guidelines related to MTX monitoring were published between 1972 and 2019 by dermatologists, rheumatologists and gastroenterologists. Guidelines differed across specialties to this day in regard to baseline investigations, monitoring and action required on liver blood test abnormality. The most recent of these are demonstrated in table 1.

Discussion Divergent guidelines regarding low dose MTX, particularly in relation to its apparent hepatotoxicity, have persisted for decades. Liver blood tests are a poor indicator of liver dysfunction and the advent of non-invasive measures of liver fibrosis provide a potential alternative. Hepatologists have stopped short of clear advice and guidance in this area.