

mcg/l had 92% sensitivity and 50% specificity for the detection of significant iron overload (LIC >2.5 mg/g).

In the remaining group (3 females, 22 males, average age 65), serum ferritin ranged 351–1957 mcg/l (mean 1113 mcg/l), transferrin saturation 21%–96% (mean 46%) and LIC 1.41–4.23 mg/g (mean 2.11 mg/g). Those with liver risk factors (including alcohol and high BMI) had higher serum ferritin (1254 vs 901 mcg/l, $p < 0.05$) with comparable LIC (2.19 vs 1.97 mg/g).

LIC was significantly higher in homozygotes compared with other groups for any given ferritin concentration. Of the 93 patients, 20 homozygotes and 4 compound heterozygotes were venesected to serum ferritin <100 mcg/l, requiring between 3120 and 16930 mls of blood removed to achieve this target (mean 8950 mls). Considering this group, LIC and venesection requirement (mls) were moderately positively correlated ($r = 0.70$) to a significantly greater extent than LIC and serum ferritin ($r = 0.05$).

Conclusion MR LIC correlates well with iron overload in HH as calculated by volume of blood removed; LIC is therefore likely to be discriminatory in non-homozygotes where additional risk factors contribute to hyperferritinaemia. Compound heterozygotes are more likely to benefit from venesection when serum ferritin is >1000 mcg/l.

P11 IMPACT OF OPIATE SUBSTITUTION THERAPY ON HEPATITIS C TREATMENT OUTCOMES FOR PERSONS WHO INJECT DRUGS AT INJECTING EQUIPMENT PROVISION SITES IN THE ADVANCE HCV TRIAL

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Background ADVANCE HCV participants are prescribed direct acting anti-viral (DAA) treatment (elbasvir/grazoprevir, ± sofosbuvir for 8/12 weeks) for Hepatitis C (HCV). Eligibility requires participants to be active (within prior 3 months) Persons Who Inject Drugs (PWID). The Injecting Equipment Provision Sites (IEPS) in the trial do not provide opiate

substitution therapy (OST) and there is no eligibility requirement to be on OST. This abstract reviews the potential impact of: receiving OST at baseline, commencing OST during treatment; and no OST, upon treatment outcomes.

Methods Participants are asked if they are prescribed OST upon study enrolment. At subsequent on-treatment study visits, they are asked if they have been prescribed or stopped OST since enrolment. Participants are tested for Sustained Viral Response at 12 weeks post-treatment (SVR12). If participants do not return for an SVR12 test, they were considered Lost to Follow-up (LTFU). OST, SVR12 and LTFU data were reviewed for all randomised participants, as follow-up is now complete.

Results Data are available for all 129 randomised participants.

Forty-nine were on OST prior to treatment. 43 (88%) achieved SVR¹² and 5 (10%) did not and 1 (2%) is deceased due to illicit drug overdose.

Ten were prescribed OST after commencing treatment. 9 (90%) achieved SVR¹², 1 (10%) is LTFU.

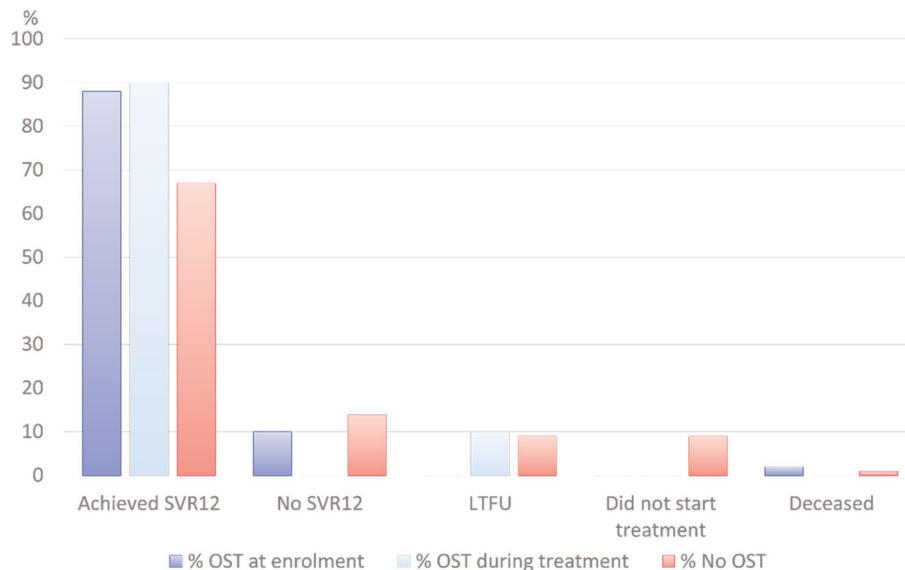
No participants in these two groups stopped their OST prescription at any point prior to finishing treatment.

Seventy participants reported no OST prescription. 47 (67%) achieved SVR¹² and 10 did not, 6 (9%) are LTFU and 1 deceased (illicit drug overdose). 6 (9%) did not initiate treatment following diagnosis.

Conclusions Receipt of OST appears to have a positive effect on commencing DAA treatment for HCV, with all participants that did not commence treatment belonging to the cohort who received no OST prescription at any point during or prior to treatment. Obtaining SVR12 also appears to be more likely for those receiving OST either during or prior to treatment in this cohort of PWID, and less likely for those who received no OST prescription at any point (figure 1). OST receipt prior to DAA treatment may decrease likelihood to become LTFU, with a higher proportion of LTFU observed in those with no OST prescription prior to treatment, and those who commenced OST during treatment.

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Abstract P11 Figure 1 Impact of OST on HCV treatment outcomes

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P12 EFFECT OF LIVER DISEASE, NEUROLOGICAL DISEASE AND MENTAL HEALTH ISSUES ON QUALITY OF LIFE IN PATIENTS WITH WILSON DISEASE

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Background Wilson Disease (WD) can result in a number of physical and mental health issues due to copper toxicity affecting the liver and brain. It is no longer acceptable to look at survival alone as an outcome measure in chronic disease. Our aim was to a) assess quality of life (QOL) in WD b) assess the relationship between mental health QOL (M-QOL) and physical health QOL (P-QOL) and severity of liver and neurological disease and mental health issues (major depressive disorder (MDD) and cognitive impairment).

Methods Adult WD patients in the WD registry study (n=52), were evaluated at enrollment over 1.5 y using questionnaires and administered exams assessing QOL (SF-12), cognition (MOCA) and mood (MINI-7). Patients also underwent hepatology and neurological assessments (UWDRS).

Results Adult patients with WD had lower M-QOL scores compared to P-QOL scores median 50.2 (range 19.3–62.2) vs. 56.0 (range 23.9–64.7), p=0.0018 indicating that the burden of mental health issues in WD is greater than that of physical health issues on quality of life.

Eleven patients had cirrhosis based on review of imaging, APRI and Fib4 scores. There was no significant difference in M-QOL scores in patients with cirrhosis vs. those without (median 54.5 (range 26.2–59.7) vs 46.5 (range 19.3–62.2), p = 0.11. Similarly, there was no significant difference in P-QOL in patients with cirrhosis vs. those without (median 55.7 (range 44.4–59.9) vs. 56.3 (range 23.9–64.7), p= 1.00. In those with cirrhosis, higher Child-Pugh scores were associated with a worse P-QOL (r=-0.84, p=-.0011) and M-QOL (r=-0.60, p=0.0488).

Patients with lifetime MDD (n=22) had worse M-QOL scores compared to those without MDD (median 42.3 vs 54.6, p<0.001). We found no significant difference for those with MDD in P-QOL scores in those with MDD compared to without (median 53.7 vs 54.0, p=0.39). We did not find an association with impaired cognition and QOL scores.

The P-QOL scores have a moderate negative association with the neurological UWDRS II Score (r=-0.44, p=0.001), UWDRS III Score (r=-0.42, p= 0.002) and total UWDRS score (r=-0.44, p=0.001). There are no associations with M-QOL and neurological UWDRS scores.

Conclusions While overall QOL in WD is affected by both mental and physical health, patients with WD have worse M-QOL than P-QOL scores and mental health issues may affect WD patient's QOL independent of their degree of liver or neurologic disease. Multivariate regression will be performed

to evaluate if mental health issues are independently associated with QOL.

P13 MAJOR DEPRESSIVE DISORDER IN PATIENTS WITH WILSON'S DISEASE: RELATIONSHIP WITH LIVER DISEASE, NEUROLOGICAL DISEASE AND QUALITY OF LIFE

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Introduction Mental health problems are underappreciated in Wilson disease (WD) (Schaefer et al. 2016). We aimed to determine: i) the prevalence and clinical features of major depressive disorder (MDD) in adults with WD ii) whether MDD correlates with liver and neurological disease and quality of life (QOL).

Method A multi-site international WD registry was developed and initiated in December 2017. At enrolment adults (n=55) were evaluated using questionnaires and administered exams assessing cognition, mood, psychosis, substance use, anxiety, perceived stress, personality change and QOL. MDD was determined using the investigator led MINI-7 questionnaire. Patients also underwent hepatology and neurological assessments (UWDRS). We reviewed patient reported depression at first presentation and diagnosis. Statistical analysis using SAS9.4 (SAS Institute; Cary, NC) included summary statistics, Wilcoxon Rank Sum test and categorical comparisons using Chi-squared or Fisher's exact test.

Results Depression was reported in 26% at first presentation of WD (33% at diagnosis). At enrolment 35% had a lifetime history of MDD. At evaluation 5 patients with lifetime MDD took antidepressants; 1 without. At enrolment 36.33% were suffering from symptoms of current depression based on the PHQ-9 (self-administered). Cirrhosis was present in 24% based on imaging, APRI and Fib4 scores. There was no association between cirrhosis and depression symptomology (PHQ-9 score >9). In those with depression symptomology, 1 had cirrhosis and 6 did not. Liver disease severity did not differ in cirrhotics with MDD and those without (median Child-Pugh 5 (5–9) vs. 5 (5–9), p=0.13). Two patients (1 with MDD) took medication for hepatic encephalopathy. No significant difference in neurological total UWDRS scores was found in those with MDD vs. without (median 8 (0–73) vs. 4 (0–40), p=0.22). A neurological UWDRS total score >0 was not associated with lifetime MDD status (79% vs. 81%, p=1.00).

Patients with MDD had worse mental health QOL (median 43 vs. 52.7 p=0.042), more suicidal ideation (32% vs. 8%, p=0.05), higher anxiety (p=0.008), higher perceived stress (median 19 vs. 9, p=0.007), and more neuroticism (median 7 vs. 4.5, p=0.006). We found no significant difference in physical health QOL in MDD (median 55.6 vs. 56.3, p=0.69).

Conclusion MDD is highly prevalent in WD and associated with worse mental health QOL. The risk appears higher than other liver diseases (Lee et al. 2013. Psychosomatics, 4:52–9). We did not find an association between the severity of liver, neurological disease and MDD. Screening for depression should be considered in patients with WD.