Characterisation of co-morbidities in patients with alcoholic liver disease and engaging them in treatment.

Khairunnessa Rahman, <u>Dheeraj Shukla</u>, Leigh Dahlenburg, Andrew Bailey, Robert Gribble, Paul Haber and Devanshi Seth

Drug Health Services, RPAH; Centenary Institute; University of Sydney







Trivia

- Economic burden of Alcoholic Liver disease (ALD)
- 1. 40 million AUD
- 2. 500 million AUD
- 3. 4 billion AUD
- 4. None of the above

Alcoholic Liver Disease (ALD):

a significant disease burden

- Alcoholic Liver Disease (ALD) is the most prominent endpoint of alcohol excess.
- Neglected clinical area with an estimated total economic burden of AUD3.8 billion per year.
- Associated with a significant mortality and 2 of 3 ALD patients have associated morbidity .
- Co-morbidities in these patients remain undefined.
- No effective treatment to date except abstinence and liver transplant.
- There is lack of appropriate strategies to achieve abstinence in this population .

Aims of the study

• To characterise co-morbidities in patients with alcoholic liver disease.

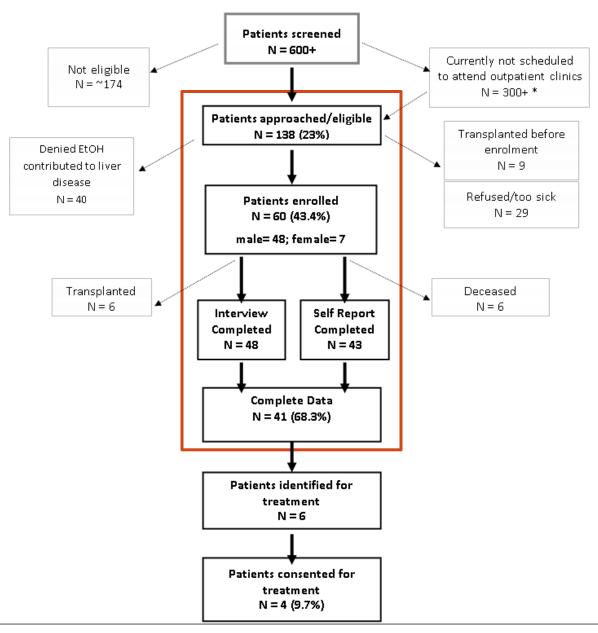
• To determine if co-morbidities act as barrier to the treatment.

• To engage patients into multi-disciplinary treatment for comorbidities to improve overall clinical outcome.

Methods

- Recruitment: Liver and Drug Health Clinics at RPAH (HREC/10/RPAH/421)
- Eligibility: ALD with comorbid conditions (HepC, HCC, mental health)
- Semi-structured interviews & self administered questionnaires:
 - Alcohol history (TFLB), AUDIT, dependence (SADD), craving (PENN), recognition (DRINC), readiness to change (SOCRATES)
 - Demographics
 - Physical examination
 - Clinical, Biochemical, Anthropomorphic
- Mental health assessment
 - Mini International Neuropsychiatric Interview (MINI): major depression, manic episode, PTSD, alcohol dependence, suicidality, general anxiety and antisocial behaviour
 - Anxiety & depression (HADS), quality of life (WHOQOL), mental state (MMSE)
- Routine Reviews: Researchers, Clinical Psychologist, Hepatologist
- Identify patients with co-morbid conditions
- Participants with mental health issues approached for recruitment into the multidisciplinary clinic

Recruitment



Disease Progression

| | Actively drinking (%) | Not actively drinking (%) | P value |
|----------------|-----------------------|---------------------------|---------|
| Ascites | 9/15 (60) | 30/36 (83.3) | 0.08 |
| Encephalopathy | 6/15 (40) | 19/36 (52.8) | 0.42 |
| O. Varices | 6/15 (40) | 24/36 (66.7) | 0.08 |
| HCC | 4/15 (26.7) | 12/36 (33.3) | 0.65 |
| Deceased | 1/18 (5.6) | 4/39 (10.3) | 0.57 |

Biochemical Markers

| | Actively drinking Mean (SD) N=15 | Not actively drinking Mean (SD) N=36 | P value |
|------------|---|---|---------|
| MELD | 14.18 (7.3) | 17.3 (8.32) | 0.19 |
| INR | 1.2 (0.27) | 1.5 (0.47) | 0.02* |
| Albumin | 37.5 (6.4) | 33.1 (7.3) | 0.04* |
| Bilirubin | 37.9 (44.1) | 97.03 (163) | 0.15 |
| Creatinine | 82.24 (46.2) | 88.35 (45.8) | 0.65 |

Alcohol: Features of Dependence

| | Actively drinking Mean (SD) N=11 | Not actively drinking Mean (SD) N=26, 29, 20 | P value |
|---------------------------|---|---|---------|
| Alcohol dependence (SADD) | 15.45 (10.07) | 5.54 (12.03) | 0.02* |
| Alcohol Craving (PENN) | 15.18 (9.18) | 4.69 (8.90) | 0.002* |
| Recognition (SOCRATES) | 26.91 (9.71) | 18.70 (8.34) | 0.02* |

Alcohol and mental health problems

| | Actively drinking (%) | Not actively drinking (%) | P value |
|--|-----------------------------|---------------------------|---------|
| Major depression (current) | 6/15 (40) | 4/32 (12.5) | 0.03* |
| Post traumatic stress disorder (PTSD) | 6/15 (40) | 4/32 (12.5) | 0.03* |
| Antisocial personality | 3/15 (20) | 3/32 (9.4) | 0.32 |
| Generalised anxiety disorder | 4/15 (26) | 3/32 (9.4) | 0.13 |

Disease Progression

| | HCV (%) | Non HCV (%) | P value |
|----------------|--------------|----------------|---------|
| Ascites | 18/27 (66.7) | 21/26 (87.5) | 0.08 |
| Encephalopathy | 11/27 (40.7) | 14/24 (58.3) | 0.22 |
| O. Varices | 18/27 (66.7) | 12/24 (50) | 0.24 |
| HCC | 13/27 (48.1) | 3/24 (12.5) | 0.005* |
| Deceased | 3/31 (9.7) | 2/26 (7.7) | 0.80 |

Biochemical markers

| | HCV Mean (SD) N=28 | NON HCV Mean (SD) N=26 | P value |
|------------|--------------------------|------------------------------|---------|
| MELD | 17.29 (9.03) | 15.23 (6.87) | 0.36 |
| INR | 1.5 (0.51) | 1.5 (0.32) | 0.17 |
| Albumin | 34.4 (8.01) | 35.04 (6.5) | 0.62 |
| Bilirubin | 104.4 (186.4) | 50.42 (43.30) | 0.16 |
| Creatinine | 80.46 (30.22) | 92.85 (57.74) | 0.32 |

Alcohol: Features of Dependence

| | HCV Mean (SD) N=19,21,14 | NON HCV Mean (SD) N=18,19,17 | P value |
|---------------------------|--------------------------------|------------------------------------|---------|
| Alcohol dependence (SADD) | 7.32 (10.32) | 9.72 (14.19) | 0.56 |
| Craving (PENN) | 6.19 (9.03) | 9.11 (11.12) | 0.37 |
| Recognition (SOCRATES) | 22.21 (9.36) | 21.12 (9.98) | 0.76 |

Alcohol and Mental health problems

| | HCV (%) | NON HCV (%) | P value |
|--|-------------|----------------|---------|
| Major depression (current) | 6/24 (25) | 4/23 (17.4) | 0.53 |
| Post traumatic stress disorder (PTSD) | 7/24 (29.2) | 3/23 (13) | 0.19 |
| Antisocial personality | 5/24 (20.8) | 1/23 (4.3) | 0.09 |
| Generalised Anxiety disorder | 4/24 (16.7) | 3/23 (13) | 0.73 |

MELD predictors?

| | Adjusted R ² | R ² change | Sig F change |
|-------------------------------------|-------------------------|--------------------------|-----------------|
| 1. HCV, Sex | -0.12 | .024 | .523 |
| 2. Actively drinking | -0.12 | .019 | .311 |
| 3. Packyears, SADD, AUDIT, SOCRATES | .048 | .175 | .201 |
| 4. SBQR, Depression, Anxiety | .078 | .074 | .229 |

Quality of Life (QOL) predictors?

| QOL predictors? | Adjusted R ² | R ² change | Sig F change |
|--------------------------------------|----------------------------|--------------------------|-----------------|
| 1. MELD, HCV, sex | .025 | .077 | .231 |
| 2. Actively drinking | .006 | .000 | .991 |
| 3. Packyears, SADD, AUDIT, SOCRATES, | .063 | .170 | .209 |
| 4. SBQR, Depression, Anxiety | .162 | .124 | .053 |

Summary and Conclusion

- Study is ongoing preliminary analysis
- 6 out of the 41on which complete date was available were found eligible for the treatment and so far 4 have been consented for the treatment
- Prevalence of alcohol dependence, depression and PTSD are higher in patients who are actively drinking
- Prevalence of HCC was significantly higher in patients with HepC
- Psychological intervention may help improve QOL in ALD patients

Acknowledgement

- Dr Devanshi Seth
- Prof Paul Haber
- Khairunnessa Rahman
- Andrew Bailey
- Dr Leigh Dahlenburg
- Dr Kirsten Morley

Funding

- Foundation for Alcohol Research and Education (FARE)
- NSW Health, Mental Health, Drug & Alcohol (MHDAO)

All participants without whom this study could not have been made possible

Discussion and comments



"I guess what I miss most is being drunk."