Motivational interviewing for people with chronic viral hepatitis and who drink alcohol: a randomised controlled trial

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Background
A significant synergy exists between heavy alcohol consumption and hepatitis virus infection (hepatitis B and C), which may suggest a common pathway for hepatocarcinogenesis1,2. Additionally it has been reported that Hepatitis C (HCV) is a common cause of cirrhosis3,4 with alcohol consumption further leading to an accelerated development of fibrosis4. Furthermore patients with chronic hepatitis virus infections should consider abstaining from consuming alcohol in order to lower the harmful effects especially when combined with these risks factors. The provision of assessment and brief interventions for behaviour change in health care is increasingly being advocated for reducing harmful alcohol consumption5,6.

Measurements
- Demographic information about the participants was collected using a data collection form developed by the researcher.
- Alcohol use was measured using The Alcohol Use Disorders Identification Test-Consumption (AUDIT-C)7, which is a validated brief assessment tool for identifying risk drinking, alcohol abuse and dependence.
- The Timeline Follow-back Survey-Alcohol (TLFB_A) is a validated self-report measure for assessing recent drinking behaviour and was used to estimate a person’s alcohol use.
- The WHOQOL-BREF8 is a validated self-report instrument and was used to provide a profile of the quality of life of the participants. Scores were derived from the four domains which identify an individual’s perception of their quality of life.

Interventions
Participants were blinded to the intervention; computer generated numbers were used for randomisation and the randomisation process was blinded to the clinicians. Group 1 (assessment and B) were assessed for alcohol use using the Audit-C and received via the NP, the BI using the 5As model. The 10 minute intervention was conducted as a part of the routine 10 minute appointment. The BI comprised of Assessing people for their alcohol use, readiness to quit/reduce, and level of alcohol dependence; Advising how they may stop drinking and the provision of evidence based written information; Agreeing on a realistic set of goals with the patient; Assisting with a plan to stop drinking and Arranging follow up with a specialist Alcohol and Drug service where necessary[11].

Group 2, the control group received routine care i.e., they were asked if they drink alcohol and were advised to stop; no formalised assessment or intervention was provided as per usual care.

Data Collection
Data was collected at 3 time points: baseline (time 1), week 4 (time 2) and week 8 (time 3) after commencement.

Data Analysis
Data for this study were analysed using SPSS.

Figure 1. Flow Chart

Results

Demographic Variables
- A significant synergy exists between heavy alcohol consumption and hepatitis virus infection (hepatitis B and C), which may suggest a common pathway for hepatocarcinogenesis1,2. Additionally it has been reported that Hepatitis C (HCV) is a common cause of cirrhosis3,4 with alcohol consumption further leading to an accelerated development of fibrosis4. Furthermore patients with chronic hepatitis virus infections should consider abstaining from consuming alcohol in order to lower the harmful effects especially when combined with these risks factors. The provision of assessment and brief interventions for behaviour change in health care is increasingly being advocated for reducing harmful alcohol consumption5,6.

Analysed (n=21) Give reasons:

Allocated to intervention (n=31) Give reasons:

Received allocated intervention (n=31)

Did not receive allocated intervention (n=10)

Did not meet inclusion criteria: n = 53

Lost to follow up (n=10) Give reasons: /unable to be contacted

Lost to follow-up (n=5) Give reasons: Did not attend appointment (unable to be contacted)

Discontinued intervention (n=5) Give reasons: Excluded from analysis (n=4)

Excluded (n=13) Not meeting inclusion criteria: n = 13

Refused to participate: n = 28 Other reasons: n = 6

Allocation

Assessed for eligibility

Enrolment

Randomisation

Analysis

Follow-up

Table: Linear mixed model results for AUDIT and TLFB_A

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>baseline</th>
<th>4 weeks</th>
<th>8 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIT C</td>
<td>control</td>
<td>6.8 (5.8, 7.4)</td>
<td>6.0 (4.7, 7.4)</td>
<td>5.7 (4.5, 7.0)</td>
</tr>
<tr>
<td></td>
<td>intervention</td>
<td>7.2 (6.2, 8.3)</td>
<td>5.4 (4.6, 6.4)</td>
<td>5.1 (4.8, 6.3)</td>
</tr>
<tr>
<td>TLFB_A</td>
<td>control</td>
<td>47.3 (31, 7.3, 7.1)</td>
<td>31.1 (15, 6.2, 6.1)</td>
<td>22.8 (8.5, 1.5, 1.6)</td>
</tr>
<tr>
<td></td>
<td>intervention</td>
<td>55.4 (37, 8.2, 5.1)</td>
<td>34.0 (6.4, 2.6, 3.1)</td>
<td>8.6 (3, 20, 1)</td>
</tr>
</tbody>
</table>

NB: Models adjusted for age, 2 TLFB_A has been logarithmically transformed and back transformed means and 95% confidence intervals are reported.

Implications for Practice
Assessing for alcohol use using the AUDIT C and TLFB_A, and providing a brief intervention using motivational interviewing and the 5As model by the Nurse Practitioner, Hepatology compared to routine care was an acceptable and feasible intervention to reduce alcohol consumption in people with chronic viral hepatitis in this specialist outpatient setting. Finally the results from this study support the National Hepatitis B and C Strategies10,11 by increasing capacity of nursing services to provide an effective response to hepatitis B and C treatment in this population.

Implications for Research
Larger and more robust studies using this intervention and outcome measures, with larger sample sizes over longer periods of time are needed in this patient group to confirm the benefits of the interventions found in this study in relation to patient outcomes. This brief intervention should be further developed and tested as part of a clinical pathway for people with chronic viral hepatitis attending a specialist outpatient setting.

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References