Hepatic fibrosis and quality of life in people who inject drugs living with hepatitis C virus

On behalf of the Treatment and Prevention Study group
Disclosure of interest

The TAP Study is an investigator-initiated study supported by research grants from Gilead Sciences Inc and the National Health and Medical Research Council.
Evidence that quality of life (QoL) is lower in people who inject drugs (PWID) and people living with HCV compared to general population.

- Few studies look at overall QoL in PWID living with HCV.
- Most studies compare QoL to general population and not across liver disease stage.

Background

Aim

To determine the association between the level of fibrosis and QoL, accounting for multiple sociodemographic and health factors
Methods

• Data from Treatment and Prevention (TAP) Study (n=146)

• Cross sectional (screening)

• QoL measured by
  - Personal wellbeing Index (PWI)
  - Short-Form 8 (SF-8) survey

• Level of fibrosis measured by FibroScan (liver stiffness)
  - < 9.5 kPa = low level of fibrosis
  - ≥ 9.5 kPa = high level of fibrosis
Sample characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age, years, mean (SD)</strong></td>
<td>40 (± 8.5)</td>
</tr>
<tr>
<td><strong>Gender, male, n (%)</strong></td>
<td>106 (73%)</td>
</tr>
<tr>
<td><strong>Country of birth, Australia, n (%)</strong></td>
<td>119 (82%)</td>
</tr>
<tr>
<td><strong>BMI, overweight/obese, n (%)</strong></td>
<td>46 (37%)</td>
</tr>
<tr>
<td><strong>Education, completed high school, n (%)</strong></td>
<td>22 (16%)</td>
</tr>
<tr>
<td><strong>Employment, employed, n (%)</strong></td>
<td>14 (10%)</td>
</tr>
<tr>
<td><strong>Main source of income, government pension, allowance and benefit, n (%)</strong></td>
<td>133 (91%)</td>
</tr>
<tr>
<td><strong>Accommodation, stable accommodation, n (%)</strong></td>
<td>115 (79%)</td>
</tr>
<tr>
<td><strong>Age of first injection, years, median (IQR)</strong></td>
<td>18 (23-16)</td>
</tr>
<tr>
<td><strong>Alcohol consumption</strong></td>
<td></td>
</tr>
<tr>
<td>Non-drinker, n (%)</td>
<td>72 (49%)</td>
</tr>
<tr>
<td>Non-hazardous drinker, n (%)</td>
<td>26 (18%)</td>
</tr>
<tr>
<td>Hazardous drinker, n (%)</td>
<td>48 (33%)</td>
</tr>
</tbody>
</table>
Fibrosis and health related QoL (SF-8)

<table>
<thead>
<tr>
<th>Component</th>
<th>Australian norm</th>
<th>Sample mean</th>
<th>Low level fibrosis mean</th>
<th>High level fibrosis mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical health component</td>
<td>50</td>
<td>41.8</td>
<td>44.6</td>
<td>40.2</td>
</tr>
<tr>
<td>Mental health component</td>
<td>50</td>
<td>44.2</td>
<td>42.2</td>
<td>40.5</td>
</tr>
</tbody>
</table>

- No association between fibrosis and physical health related QoL or mental health related QoL
  - (adjusted for age, gender, BMI, level of education, employment status, accommodation status, injection frequency and alcohol consumption (n=109)
Fibrosis and subjective wellbeing (PWI)

Factors associated with quality of life, adjusted for age, gender, BMI, level of education, employment status, accommodation status, injection frequency and alcohol consumption (n=109)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>â\text{coeff} (95% CI)</th>
<th>(P) value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level fibrosis (vs low level)</td>
<td>-17.61 (-29.14, -6.09)</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Mean domain score (out of ten)

- **Standard of living**
- **Personal Health**
- **Achieving in life**
- **Personal relationships**
- **Personal safety**
- **Community connectedness**
- **Future security**

High level fibrosis (n=10)

Low level fibrosis (n=116)

*Personal Wellbeing Index domains*
Conclusions

• High level fibrosis associated with poorer life satisfaction but not health related QoL

• Sample is early in disease stage

• May be affected by participants’ interpretation of health

• SF-8 scale may not be sensitive enough in this context
Limitations

- Sample size

- Confounders (duration of infection, living with partner, opioid substitution therapy?)

- Cross sectional (no temporality)
Clinical implications

- Need for increased supportive care including peer support for PWID living with HCV

- Highlights importance of considering psychosocial aspects of people’s lives in cascade of HCV care

- Reinforces the need for early testing and acceptable treatment in this group
Acknowledgements

- Conference organisers for scholarship
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