

Does severity of liver disease affect quality-of-life in patients living with Hepatitis C? Baseline results from the TRACER study.

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Introduction

Health related quality-of-life (QoL) can be used to assess the impact of a chronic disease on patient health and wellbeing (1). Patients with hepatitis C (HCV) have shown an obvious reduction in the QoL (2). The short form 36 (SF 36) can be used to assess QoL (3). Liver stiffness (LS) is widely used as a marker for liver health (4) and elastography methods such as transient elastography (TE), measure by FibroScan®, have been determined to correlate well with fibrosis/cirrhosis stage (4).

Objectives

This poster aims to describe the quality-of-life of patients living with HCV and to investigate whether markers of liver disease severity as indicated by liver stiffness measurements (FibroScan®) are associated with decreased quality-of-life.

Methods

Patients were recruited to the Chronic Hepatitis C Treatment Radiographic and Clinical Outcomes Cohort (the TRACER Study), at the Mater Misericordiae University Hospital and St. Vincent's University Hospital. We used FibroScan® to obtain liver stiffness measurements and grouped fibrosis scores with FibroScan® scoring card (F0-F1, F2/F3 and F4). Participants completed the SF-36 Health Survey Version 2 which assesses 8 domains of HRQOL. Normalized-base scores were used, and each scale was scored to have the same average (50) and the same standard deviation (10). Mean scores for HQLQv2™ questionnaire domain were calculated for the total population and stratified by liver stiffness scores. Mean values of each quality-of-life domain were compared across liver stiffness groups (F0-F1, F2/F3 and F4) using an ANOVA test.

Results

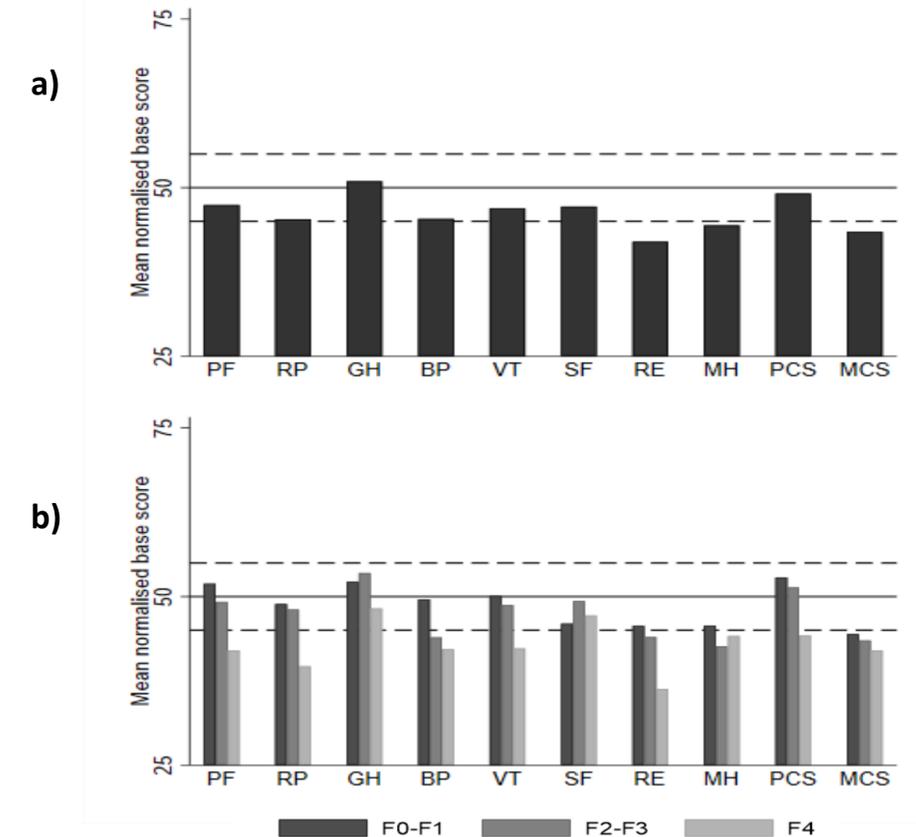
- 88 patients were recruited to the study; median age was 44 (IQR 39, 50), 27.3% were female (n=24) and 72.7% were male (n=64). 96.6% of patients (n=85) and were Caucasian and 3.4% (n=3) were of another ethnicity. 90% (n=81) of participants were genotype 1a or 3.
- Patients scored lower than the population norm (50) on all quality-of-life indicators apart from bodily pain at a value of 51.1 (SD 11.4).

Table 1. Quality-of-life indicators of SF-36, by liver stiffness score (as measured by FibroScan®)

QoL indicator	Value	F0-F1	F2-F3	F4	p-value
N	83	34	20	29	
Physical-health component summary, mean (SD)	49.5 (10.5)	52.8 (8.9)	51.3 (10.1)	44.2 (10.8)	0.003
Mental-health component summary, mean (SD)	43.4 (12.6)	44.4 (14.2)	43.5 (11.7)	42.0 (11.5)	0.75
Physical functioning, mean (SD)	47.8 (10.5)	51.9 (7.8)	49.2 (10.8)	42.0 (10.8)	<0.001
Role physical, mean (SD)	45.5 (11.8)	48.9 (11.4)	43.9 (9.8)	39.7 (11.5)	0.003
General health, mean (SD)	45.6 (11.1)	49.6 (9.6)	43.9 (12.8)	42.2 (10.3)	0.02
Bodily pain, mean (SD)	51.1 (11.4)	52.2 (11.5)	53.5 (10.3)	48.2 (11.9)	0.22
Vitality, mean (SD)	47.0 (11.3)	50.1 (11.5)	48.7 (11.3)	42.3 (9.7)	0.02
Social functioning, mean (SD)	47.2 (11.8)	46.0 (13.8)	49.3 (10.2)	47.2 (10.1)	0.61
Role-emotional, mean (SD)	42.0 (13.9)	45.6 (13.6)	44.0 (13.8)	36.3 (12.7)	0.02
Mental health, mean (SD)	44.4 (10.6)	45.7 (10.6)	42.6 (11.3)	44.1 (10.2)	0.58

- The physical-health component summary values, which are composed of physical functioning, role physical, bodily pain and general health, reduced as liver disease progressed, with a mean value of 52.8(SD 8.9), 51.3 (SD 10.1) and 44.2 (SD 10.8) in groups F0-F1, F2-F3 and F4 respectively, with a p-value of 0.003.
- While the mental health component summary score was found not to correlate with disease severity overall, the mean scores for the cohort as a whole were low with an overall mean of 43.4 (SD 12.6).

Figure 1. (a) Normalized QoL indicators measured by SF-36, normalised score based on US population (b) QoL indicators, by liver stiffness



PF: physical functioning; RP: role-physical; GH: general health; BP: bodily pain; VT: vitality; SF: social functioning; RE: role-emotional; MH: mental health; PCS: physical component summary; MCS: mental component summary.

Conclusion

- Patients with chronic HCV infection reported a reduction in their quality-of-life, compared to population norms. The reduction in quality-of-life scores may be attributed to chronic HCV infection, or it may reflect a general reduction in well-being associated with the knowledge of a serious illness or the patients' social circumstances.
- Ultrasound elastography methods showed that as liver disease severity increased patient reported quality of life decreased.

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