Chronic hepatitis D associated with worse patient-reported outcomes than chronic hepatitis B

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Table of contents

Supplementary methods........................................................................................................2

Table S1...............................................................................................................................3

Table S2...............................................................................................................................4

Supplementary references..................................................................................................5
Supplementary methods

The PRO questionnaires used were the Chronic Liver Disease Questionnaire (CLDQ), the Functional Assessment of Chronic Illness Therapy-Fatigue (FACIT-F) and the Work Productivity and Activity Impairment (WPAI). ¹

The Chronic Liver Disease Questionnaire (CLDQ), the first liver-specific instrument developed, includes 29 items in the following domains: Abdominal Symptoms, Fatigue, Systemic Symptoms, Activity, Emotional Function, and Worry. The CLDQ responses are rated on a scale of 1 to 7, ranging from having a problem or experiencing a symptom “all of the time” to “none of the time”, respectively. Thus higher scores indicate better HRQOL. The original CLDQ was shown to have construct validity in studies on chronic liver diseases.²

The FACIT-F questionnaire is a fatigue-specific PRO instrument that includes 4 well-being domains (physical, emotional, social, and functional), and a fatigue subscale.³ It is designed as a scale of 0-160, where the higher the punctuation, the higher the HRQoL.

The WPAI–Specific Health Problem is used to evaluate impairment in patients’ daily activities and work productivity associated with a specific health problem (in this study, HDV or HBV infection). The Work Productivity Impairment domain is a sum of the Absenteeism (lost hours of work) and Presenteeism (self-reported decreased productivity while working) domains; it is assessed only in employed patients. The Activity Impairment domain focuses on impairment in daily activities other than work and is assessed in all participants regardless of their employment status.⁴ The sum of specific health problem impairment and impairment due to other health reasons is equal to impairment due to all health reasons. WPAI outcomes are expressed as impairment
percentages, with higher numbers indicating greater impairment and less productivity.

Table S1. Patient reported outcomes in patients with CHD and CHB. T-student test and Mann-Whitney U-test were used for parametric and non-parametric categories, respectively. P-values of 0.05 or less were considered statistically significant.

|                        | Chronic hepatitis D N° cases = 43 | Chronic hepatitis B N° cases = 82 | p    |
|------------------------|-----------------------------------|-----------------------------------|------|
| CLDQ                   | 5.77 ± 1.06                       | 5.88 ± 0.94                       | 0.7277|
| Abdominal              | 5.26 ± 1.76                       | 5.66 ± 1.58                       | 0.2719|
| Activity               | 6.34 ± 1.08                       | 6.13 ± 1.20                       | 0.1865|
| Emotional              | 5.94 ± 1.13                       | 5.92 ± 1.07                       | 0.6436|
| Fatigue                | 5.57 ± 1.54                       | 5.41 ± 1.43                       | 0.3057|
| Systemic               | 5.73 ± 1.23                       | 5.91 ± 1.06                       | 0.5770|
| Worry                  | 5.77 ± 1.10                       | 6.27 ± 0.77                       | 0.0118|
| FACIT-F                | 131.4 ± 24.5                      | 128.1 ± 25.2                      | 0.3285|
| Physical Well-Being    | 24.0 ± 4.6                        | 25.0 ± 5.0                        | 0.0572|
| Emotional Well-Being   | 18.6 ± 4.2                        | 19.5 ± 3.3                        | 0.3224|
| Social Well-Being      | 22.2 ± 6.6                        | 20.6 ± 6.2                        | 0.0906|
| Functional Well-Being  | 21.6 ± 5.6                        | 19.2 ± 5.8                        | 0.0281|
| Fatigue Scale          | 45.0 ± 9.9                        | 43.8 ± 10.0                       | 0.0957|
| WPAI                   |                                   |                                   |      |
| Work Productivity      | 0.120 ± 0.267                     | 0.058 ± 0.192                     | 0.3636|
| Absenteeism            | 0.001 ± 0.004                     | 0.009 ± 0.062                     | 0.7679|
Table S2. Patient reported outcomes in matched cohort of patients with CHD and CHB. T-student test and Mann-Whitney U-test were used for parametric and non-parametric categories, respectively. P-values of 0.05 or less were considered statistically significant.

|                          | Chronic hepatitis D | Chronic hepatitis B | p      |
|--------------------------|---------------------|---------------------|--------|
|                          | N° cases = 35       | N° cases = 35       |        |
| CLDQ                     | 5.76 ± 1.06         | 6.27 ± 0.53         | 0.0723 |
| Abdominal                | 5.36 ± 1.62         | 6.16 ± 1.15         | 0.0364 |
| Activity                 | 6.19 ± 1.14         | 6.59 ± 0.62         | 0.2723 |
| Emotional                | 5.90 ± 1.12         | 6.26 ± 0.82         | 0.3504 |
| Fatigue                  | 5.47 ± 1.58         | 5.93 ± 0.87         | 0.5253 |
| Systemic                 | 5.75 ± 1.20         | 6.23 ± 0.77         | 0.1462 |
| Worry                    | 5.85 ± 1.03         | 6.48 ± 0.73         | 0.0021 |
| FACIT-F                  | 129.4 ± 24.5        | 136.8 ± 14.2        | 0.4416 |
| Physical Well-Being      | 23.6 ± 4.9          | 26.6 ± 2.1          | 0.0036 |
| Emotional Well-Being     | 18.7 ± 4.1          | 20.7 ± 2.5          | 0.0541 |
| Social Well-Being        | 21.2 ± 6.8          | 21.8 ± 6.1          | 0.7438 |
| Functional Well-Being | 20.8 ± 5.6 | 20.4 ± 4.9 | 0.6460 |
|-----------------------|------------|------------|--------|
| Fatigue Scale         | 45.0 ± 9.3 | 47.3 ± 3.1 | 0.6618 |

| WPAI                   |            |            |        |
|------------------------|------------|------------|--------|
| Work Productivity      | 0.108 ± 0.232 | 0.033 ± 0.132 | 0.2979 |
| Absenteeism            | 0.001 ± 0.005 | 0.000 ± 0.000 | 0.3594 |
| Presenteeism           | 0.107 ± 0.230 | 0.033 ± 0.132 | 0.3146 |
| Activity Impairment    | 0.197 ± 0.288 | 0.023 ± 0.091 | 0.0008 |

CLDQ, Chronic Liver Disease Questionnaire; FACIT-F, Functional Assessment of Chronic Illness Therapy-Fatigue; WPAI, Work Productivity and Activity Impairment.

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