Health-related quality of life and stigma related to chronic hepatitis B: a systematic literature review

Poster No. PO-1725

Vera Gielen[1], Stuart Kendrick[1], Rishabh Pandey[2*], Ruchika Mittal[2], Kajal Thapa[2], Lee Evitt[1**]

[1]GlaxoSmithKline Research and Development, UK, Ltd; [2]Parexel International, India.

*Employee of Parexel at time of study research. Now an employee of IQVIA
**Employee of GlaxoSmithKline at time of study commencement. Now an employee of ViiV Healthcare

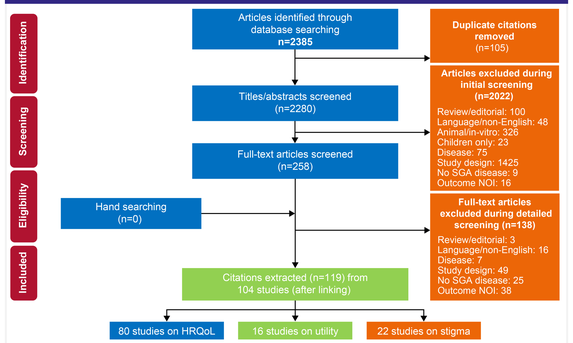
Background

- The adverse impact of CHB infection on patients' HRQoL and patients' assessments of their health status (health utilities) has been investigated in numerous studies with diverse methodologies
- This is the first SLR to comprehensively identify and assess the published evidence on the HRQoL, utilities and stigma experienced by patients with CHB infection

Methods

- **Data sources:** Embase, MEDLINE, MEDLINE-In-Process and Cochrane Central from January 2004 to February 2020. Conference abstracts from 2017 to 2019
- **Data extraction and quality assessment:** data were extracted into a predefined data extraction form. Quality/risk of bias of included studies was assessed using the NICE critical appraisal checklist for RCTs and the Downs & Black (1998) checklist for nonrandomised/observational/single-arm studies[1,2]
- **Flow of studies through the review process:** conducted and reported in accordance with PRISMA guidelines[3]
- Representative examples of data from these studies are shown in this poster

PRISMA flow for study selection



Assessment tools included:

Generic/nondisease-specific tools, e.g.
- SF-36 (n=36)
- EQ-5D (n=11)
- World Health Organization Quality of Life Instrument, Short Form (WHOQOL-BREF, n=7)

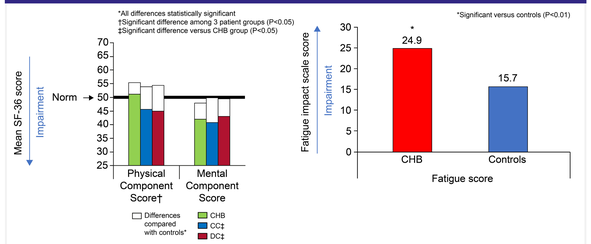
Liver-disease-specific tools, e.g.
- Chronic Liver Disease Questionnaire (CLDQ, n=16)

Hepatitis-specific tools, e.g.
- Hepatitis B Quality of Life (HBQOL, n=3)
- Hepatitis Quality of Life Questionnaire (HQLC, n=2)

Generic PRO instruments assessing:
- Depression
- Anxiety
- Fatigue

Results

HRQoL of patients with CHB infection versus healthy controls is impaired, particularly mental health and fatigue domains

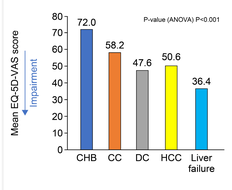


Zhuang, et al. *Health Qual Life Outcomes.* 2014;12:101 Wang, et al. *Health Qual Life Outcomes.* 2019;17:130

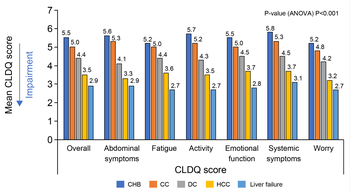
- In addition to seeing consistent impact on mental health and fatigue domains, domains sometimes impacted included general health, vitality and physical health

HRQoL declined significantly with worsening disease severity, from CHB to liver failure

Generic tool EQ-5D



Liver disease-specific tool CLDQ shows consistent decrease across domains



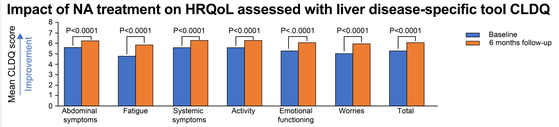
Che, et al. *Asian Pac J Cancer Prev.* 2014;15:4765 Che, et al. *Asian Pac J Cancer Prev.* 2014;15:4765

ANOVA used to compare mean scores among the five disease groups

- HUV showed a similar trend to declining HRQoL with worsening disease severity: HUVs ranged from 0.75 to 0.81 in asymptomatic carriers, 0.56 to 0.89 in compensated cirrhosis, down to 0.30 to 0.85 in decompensated cirrhosis and 0.32 to 0.85 in hepatocellular carcinoma. HUVs ranged from 0.54 to 0.63 in the first year after liver transplant, increasing to 0.62 to 0.86 in subsequent years after transplant. The ranges provided are lowest and highest values from different studies

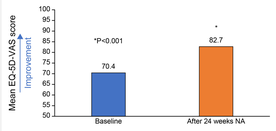
NA therapy improved HRQoL in some studies, which correlated with viral suppression. In particular, improvements were seen in physical health, with less consistency in impact on other domains. IFNs were associated with worse HRQoL across all domains

Impact of NA treatment on HRQoL assessed with liver disease-specific tool CLDQ



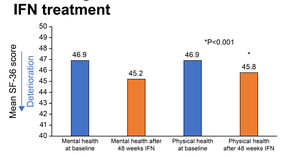
Kim, et al. *Clin Gastroenterol Hepatol.* 2012;10:291

Impact of NA treatment on HRQoL assessed with generic tool EQ-5D



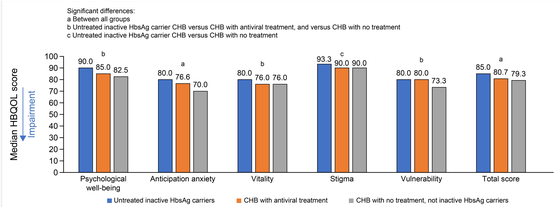
Kim, et al. *Clin Gastroenterol Hepatol.* 2012;10:291

Worsening in HRQoL with IFN treatment



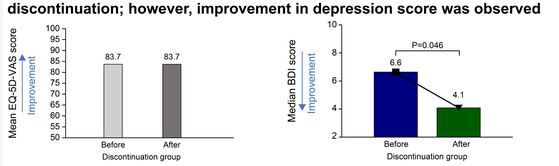
Marcellin, et al. *Liver Int.* 2008;28:477

Patients receiving and eligible for treatment have better HRQoL than patients eligible but untreated. However, HRQoL is highest in untreated inactive carriers



Karacaer, et al. *Health Quality Life Outcomes.* 2016;14:153

No significant change in total HRQoL for patients eligible for treatment discontinuation; however, improvement in depression score was observed



Xue, et al. *Patient Pref Adher.* 2017;11:85 Xue, et al. *Patient Pref Adher.* 2017;11:85

Conclusion

- Patients with CHB have impaired HRQoL, particularly in fatigue, mental health, emotional and social functioning, with no consistent improvement in these domains with current treatments
- The impact of interventions on HRQoL in clinical practice and trials should be further evaluated with disease-specific instruments like HBQOL that focus on psychological well-being and stigma
- Stigma has been shown to have a major impact on patients with CHB infection. Research is needed on how best to reduce stigma and its effects

Stigma was shown to have a major impact on people living with CHB

Individual factors contributing to CHB-related stigma
- Knowledge gaps
- Fear of discrimination
- Level of education
- Marital relationships

Socio-cultural & community factors contributing to CHB-related stigma
- Cultural constraints
- Beliefs related to CHB (e.g. caused by a curse)
- Public health messages
- Access to health services
- Behaviors of health personnel
- Barriers to engagement

Impact and consequence of CHB-related stigma
- Willingness to screen
- Employment (CHB and caregivers)
- Seeking care
- Diagnosis acceptance
- Interpersonal relationships

Assessment tools

BDI: self-reported measure of depression severity, involving 21 items, each rated on a scale from 0 to 3. Global depression score is calculated from the mean score

CLDQ: liver disease-specific questionnaire, including 29 items divided into six domains: fatigue, abdominal pain, motional function, systemic symptoms, activity, and worry. Summary scores for each domain range from 1 (most impairment) to 7 (least impairment). Overall CLDQ score is calculated from the mean score

EQ-5D visual analogue scale (VAS): records patient's self-rated health as a vertical line, with 0 representing worst and 100 the best possible health

HBQOL: hepatitis B-specific tool for assessment of HRQoL. Subscales include psychological well-being, anticipation anxiety, vitality, stigma, transmissibility, and vulnerability, each using Likert type scoring from 1 to 5

SF-36: generic tool with eight domains: physical functioning, role physical, bodily pain, general health, vitality, social functioning, role emotional, and mental health, on a range of 1 to 100. Two summary scores summarise physical and mental health-related components of SF-36

Abbreviations

BDI, Beck Depression Inventory; CC, compensated cirrhosis; CHB, chronic hepatitis B; DC, decompensated cirrhosis; HBV, hepatitis B virus; HCC, hepatocellular carcinoma; HRQoL, health-related quality of life; HUV, health utility value; IFN, interferon; NA, nucelos(t)ide analogue; NOI, not of interest; PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-analyses; RCT, randomised clinical trial; SGA, subgroup data availability; SLR, systematic literature review.

References

1. National Institute for Health and Care Excellence (NICE). *Specification for manufacturer/sponsor submission of evidence. 2015.* Available at: http://www.nice.org.uk/About/What-we-do/Our-Programmes/NICE-guidance/NICE-technology-appraisal-guidance. Accessed 2 June 2021.
2. Downs SH, Black N. *J Epidemiol Community Health.* 1998;52:377-384.
3. Liberati A, et al. *BMJ.* 2009;339:b2700.

Disclosures

- This study was funded by GlaxoSmithKline (Study 209774).
- On behalf of all authors, a video recording of this poster was prepared by Vera Gielen, who did not receive any payment for this recording.
- The presenting author, Vera Gielen, declares the following real or perceived conflicts of interest during the last 3 years in relation to this presentation: employee of GlaxoSmithKline Research and Development, UK, Ltd and holds GlaxoSmithKline stocks/shares.
- Coauthor conflict of interest: Stuart Kendrick, Lee Evitt: employees of GlaxoSmithKline Research and Development, UK, Ltd and hold GlaxoSmithKline stocks/shares. Rishabh Pandey, Ruchika Mittal, Kajal Thapa: employees of Parexel International. Parexel International received funding from GlaxoSmithKline to conduct this research.
- Editorial support (in the form of writing assistance, including preparation of the draft poster under the direction and guidance of the authors, collating and incorporating authors' comments for each draft, assembling tables and figures, grammatical editing, and referencing) was provided by Bill Wolvey, BSc, of Parexel International and was funded by GlaxoSmithKline.

Presented at The International Liver Congress™ 2021 (European Association for the Study of the Liver), Virtual, 23–26 June 2021

Scan to download the poster

Viral hepatitis
Vera Gielen

PO-1725
ILC2021