



REVIEW ARTICLE

Determinants of health-related quality of life in Crohn's disease: A systematic review and meta-analysis



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Received 3 December 2012; received in revised form 4 April 2013; accepted 4 April 2013

KEYWORDS

Crohn's disease;
Health-related quality
of life;
Patient-reported outcomes;
Determinants;
Systematic review

Abstract

Background and aims: Understanding the determinants of Crohn's disease (CD) patients' health-related quality of life (HRQOL) may facilitate interventions that improve HRQOL. Therefore, we systematically assessed determinants of HRQOL in adult CD patients.

Methods: The databases PubMed, EMBASE, the Cochrane Library, PsycINFO and CINAHL were searched for English abstracts, related to socio-demographic, psychological, clinical and treatment-related determinants of HRQOL in CD disease. Two independent reviewers extracted study characteristics and assessed the methodological quality according to the criteria of Hayden et al. The main outcome was the number of studies showing a statistically significant association between the above-mentioned determinants and HRQOL. A meta-analysis was performed to quantify the relationship between disease activity and HRQOL.

Results: Of the 2060 articles identified, 29 eligible studies were included. The majority of studies were cross-sectional and had a moderate to high quality. Data on psychological determinants were scarce. Work disability, increased disease activity, number of relapses, corticosteroid treatment and hospitalization rate were significantly associated with a lower HRQOL in the majority of included studies. Biological treatment positively influenced HRQOL. The pooled data on the association between disease activity and HRQOL resulted in a weighed mean correlation coefficient of -0.61 (CI -0.65 to -0.57).

Conclusions: HRQOL of adult CD patients is consistently determined by markers of active disease, including work disability, increased disease activity, number of relapses, biological treatment and hospitalization rate. As disease activity contributed to only 37% of HRQOL, there remains a need for additional, possibly modifiable, determinants. These determinants may refine possibilities to improve HRQOL.

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1. Introduction

Crohn's disease (CD) is a chronic, progressive and potentially disabling disease. CD patients often deal with unpredictable and potentially debilitating symptoms, including diarrhoea, fatigue and urgency. In addition, they require long-term treatment with frequent adverse effects, the need of surgery and hospitalizations.¹ Therefore, CD patients report a lower HRQOL compared with healthy individuals.²

HRQOL represents the functional effect of an illness and its consequent therapy upon a patient, as perceived by the patient. It encompasses several dimensions of life, including physical functioning, psychosocial functioning, role functioning, mental health and general health perceptions.³ HRQOL is determined by socio-demographic, clinical and psychological and treatment-related determinants.^{4,5} Although disease activity is an important determinant of HRQOL in CD, even asymptomatic patients report a lower HRQOL, suggesting a role for other determinants.^{6,7}

A comprehensive understanding of the above-mentioned determinants of CD patients' HRQOL may facilitate clinicians in clinical decision making, defining risk groups and allowing more accurate prediction of HRQOL.⁸ This latter is especially relevant when choosing between two interventions with an equal clinical efficacy or when treating asymptomatic patients.⁹

In two previous reviews, clinical determinants (mainly disease activity) and psychosocial determinants of HRQOL in CD have been meticulously described – however none have performed a systematic search strategy.^{4,5} This may have resulted in an incomplete retrieval of articles, thereby biasing results. In addition, the methodological quality of included studies has not been ascertained, making it difficult to interpret and compare results.

Therefore, we conducted a systematic review to assess and critically appraise the socio-demographic, clinical, psychological and treatment-related factors determining HRQOL in adult CD patients.

2. Material & methods

This systematic review was conducted in line with the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) statement.¹⁰

2.1. Search strategy (Supplementary; Table 1)

In collaboration with a librarian a search strategy was designed to identify articles concerning determinants of HRQOL in adult CD. PubMed (since 1966), EMBASE (since 1966), Cochrane Library (since 1996), PsycInfo (since 1960) and CINAHL (since 1982) were systematically searched for titles and abstracts published between inception date of the database and July 9th, 2012. The search strategy contained a combination of keywords (and their synonyms) and Medical Subject Headings (MESH)/EMTREES (in the case of EMBASE), including "Crohn's disease", "determinant", and "health-related quality of life". Both search strategy and search filter were modified for each database. The search strategy was supplemented with reference tracking from all included studies, relevant reviews and by using Web of Science.

2.2. Study selection

Titles and abstracts were identified as potentially eligible by two independent reviewers [KA, MH]. Titles and abstracts

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