

Introduction

Research into people living with idiopathic Multicentric Castleman disease (iMCD) is ongoing, with the rarity of the disease limiting research. This series of posters presents the exploration of patient reported symptoms and the impact these have on their daily lives (Poster 1). It goes onto test the internal validity of the method of measurement employed (Poster 2). Lastly, it reports on the methodology for a new study that aims to develop a patient reported outcome, leading to the development of an iMCD scale that can be used in clinical practice and future clinical trials (Poster 3).

POSTER 1

Introduction

Idiopathic Multicentric Castleman disease (iMCD) is a subcategory of MCD and is characterised by enlargement of the lymph nodes and lymphatic system. The primary aim of this study was to establish a comprehensive iMCD symptom scale from a patient perspective and to quantify the impact of symptom burden on various aspects of daily living.

Methods

Following a search of the literature, the questionnaire was developed through collaboration between patients, clinicians, caregivers, and researchers. A survey consisting of 45 questions was constructed, consisting of 11 open ended, 34 closed-ended questions. These questions related to the symptomatology, severity, and symptom impact on daily life experienced in the past week. The survey was available to iMCD patients from April to November 2021. Descriptive analyses were performed on closed-ended questions and ordinal logistic regression analysis was used to assess the relationship between number of symptoms and impact on different aspects of daily life.

Results

51 patients reported clinician-diagnosed iMCD. Survey participants were predominantly female (56.9%) with a mean age of 47.4 years (22-78 years). Four one percent of the participants (n=22/51) reported being cared for by an informal caregiver, primarily their partner. A total of 27 unique symptoms were experienced in the week prior to completing the survey. Five patients experienced no symptoms. In patients reporting symptoms, tiredness was the most prevalent (78.4%). Nausea/vomiting (60%), sluggishness (53.3%), weakness (52.4%) had the most severe impact on daily life. The aspects of daily life most affected by these symptoms were patient pain/discomfort, ability to travel, and sexual function.

Discussion

This study created an extensive symptom inventory for iMCD that demonstrates the debilitating consequences of high symptom burden on various aspects of daily life for both patients and caregivers.

POSTER 2

Introduction

Idiopathic Multicentric Castleman disease (iMCD) is a subcategory of MCD for which there is no cure, and the primary focus of clinical management remains symptom control. Through our recent international survey involving iMCD patients we identified the reporting of a wide array of symptoms affecting daily life with various levels of severity. To establish the internal validity of the questionnaire, we conducted an exploratory analysis of our recent survey. This analysis aimed to assess the adequacy, relevance, and utility of the questionnaire in gauging the symptom burden experienced by patients.

Methods

Survey development has been discussed previously and is presented in poster 1. Hypotheses (HS) were generated through collaboration between clinicians, patients, and caregivers and explored whether questions and response options could be grouped together and if they were related to one another. HS-1 hypothesized that there were 3 positive convergent relationships and 6 divergent relationships. HS-2 hypothesized that having more symptoms has a negative convergent-relationship with how these symptoms are reported to effect daily life. HS-3 hypothesised that receiving treatment was associated with patients reporting less of a symptom burden on their daily life. Spearman's rank absolute correlation strength and associated value are used for HS-1 and HS-2 and Cohen's d was used to quantify effect sizes for HS-3.

Results

Fifty-one patients reported clinician-diagnosed iMCD. Thirty-six patients reported receiving treatment for their iMCD. For HS-1 no convergent relationships ($ACS > 0.3$) were identified from the three variables explored. However, two of the divergent relationships were supported. HS-2 was supported by our analysis ($ACS < 0.01$) and HS-3 was not supported.

Conclusions

These exploratory internal construct validity analyses provide some support for the bespoke iMCD patient survey. It also highlighted where improvements can be made in the next phase of the research, the development of the iMCD disease burden scale.

POSTER 3

Introduction

Idiopathic Multicentric Castleman disease (iMCD) is a rare lymphoproliferative disorder. Currently, no patient reported outcome measure (PROM) exists to measure changes in the symptom burden of patients living with iMCD. The development of such a PROM would allow for greater understanding of iMCD and the burden it carries and may result in more timely treatment and symptom monitoring. The aim of this study is to produce a PROM that can be used to assess symptom burden in people living with iMCD facilitate better clinical management and be available for use in future clinical trials.

Methods

The study consists of a four-stage development process, including a patient advisory group (PAG) and a wider multi-stakeholder advisory group (MAG). The development of the PROM follows Federal Drug Administration (FDA) Guidelines on the development of PROMs. Stage 1 incorporates the drafting of the PROM content, that was generated from existing literature (including the MCD-Symptom Scale – MCD-SS) and expert opinion (patient, caregiver and clinical). Activities from stage 2 onward require ethics approval, which will be obtained from 5 to 6 countries. Stage 2 will explore the content validity of the draft PROM via online qualitative interviews with people living with iMCD. This stage will also include revisions to the PROM following input from the two advisory groups PAG and MAG. During Stage 3 the revised PROM will be administered to people living with iMCD. Also administered will be health-related quality of life measures (e.g., EQ-5D) to evaluate psychometric performance and inform decisions on final PROM content. This stage will also incorporate further consultation with the MAG. During the final Stage 4, the PROM will be re-administered to observe symptom burden change over time (responsiveness of PROM). This stage also incorporates the estimation of the minimally important clinical difference (MCID) for the measure. In addition to the re-administration of the survey, an ‘anchor variable’ and qualitative interviews will be undertaken to strengthen the estimation of the MCID. Recruitment of people living with iMCD for stages 1-4 is twofold. Firstly, participating iMCD centres will provide their iMCD cohort with a flyer inviting them to participate in the MAG and PAG workshops, as well as the survey. Secondly, through our collaboration with the Castleman Disease Collaborative Network (CDCN), the iMCD community will be sent a flyer asking them to participate in the study (NCT05995834). All participants will be screened to ensure they have been diagnosed with iMCD.

Statistical Analysis Plan

Qualitative data from Stage 2 will be analysed thematically against an existing content validity framework. Psychometric data from stages 3-4 will be analysed through classical test theory or Rasch analyses, and this will be dependent on the eventual sample size.

Conclusion

The study (NCT05995834) aims to produce a novel, validated symptom burden scale by following good clinical practice, FDA Guidance, and multi-stakeholder collaboration. It is anticipated that it will be an effective tool that can be used in the clinical management of iMCD.