Update on the development of the Idiopathic Multicentric Castleman Disease Symptom BUrden Scale (ISBUS) (NCT5995834)

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Background

Idiopathic multicentric Castleman disease (iMCD) is a rare lymphoproliferative condition that significantly impacts symptom burden and health-related quality of life. Currently, there is no validated condition-specific patient-reported outcome measure (PROM) to reliably assess symptom burden in iMCD, which is essential for supporting research and clinical decision-making. The Idiopathic Multicentric Castleman Disease Symptom Burden Study (ISBUS) is an international collaboration aimed at developing a novel iMCD PROM, involving participants from Australia, Brazil, Canada the United Kingdom (UK) and the United States (US). This poster presents an update on the study.

Results

Twenty patients responded to the recruitment flyer for Stage 2 interviews. Of these, ten patients were successfully interviewed. Five of the twenty respondents were deemed ineligible for participation: three lacked a confirmed diagnosis of idiopathic Multicentric Castleman Disease (iMCD), one was excluded due to the absence of ethics approval in their country, and one had insufficient English proficiency. Among the remaining eligible respondents (n=15), ten participated in the interview process, while five did not complete interviews due to a lack of response to the research team's attempts to schedule. The interview phase is now complete. Table 1 presents the sociodemographic data for the ten participants, as well as for the five eligible patients who were not interviewed.

Interviewed Patients

Of the 10 interviewed eight were women (80%), with an average age of 49.7 years (SD = 14.08; range 37-75. The average time since diagnosis was 7.7 years. Eighty percent were *White* with the remainder being either *Native Hawaiian or other Pacific Islanders* (20%). Fifty percent had a degree, 50% were employed, and 60% were either married or in a de facto relationship. Eighty percent were receiving treatment for their iMCD. All participants reported active symptoms related to iMCD, with 60% indicating that these symptoms impacted their daily lives. Of those interviewed, two were based in Australia, three were based in the UK and five in the US.

Eligible Non-Interviewed Patients

Of the five eligible non-interviewed patients, the mean age was similar to those interviewed 47.2 (SD = 15.50; range 28-69). The average time since diagnosis was 2.4 years, thus they were more recently diagnosed patients compared to those interviewed. Eighty percent were *White* with the remainder being either *Hispanic or Latin American* (20%). All eligible non-interviewed patients had a degree, 60% were employed, and all were either married or cohabiting under common law. All eligible non-responders were receiving treatment for their iMCD. Additionally, they all reported active symptoms related to iMCD, with 60% indicating that these symptoms impacted their daily lives. In terms of location, one was based in the UK and three in the US.

In Stage 1, 42 potentially relevant iMCD symptoms were identified. Draft frequency and impact questions were developed for each symptom (Fig. 1) using 4-point response scales. During interviews, participants found the symptom scale comprehensive and inclusive of key iMCD-related symptoms. Most symptoms were well understood, with minor revisions suggested (e.g., "unintentional weight loss" vs. "weight loss"). They suggested minimal additions, like symptoms related to being immunocompromised (e.g., sinus and chest infections) and anemia. Some overlap was noted, with preferences for certain terms (e.g., "tiredness" vs. "fatigue". The PROM instructions were generally very well understood. There were mixed opinions regarding the recall period (i.e., "past week").

At the end of the interview process the number of symptoms were reduced from 42 to 30 items. Upon completion of the interviews, Patient Advisory Group (PAG) and Multistakeholder Advisory Group (MAG) meetings were held to discuss emerging issues from the interviews. We are now in the process of finalizing the PROM content. The revised PROM will be utilized in Stage 3 of the project for final item selection.

Table 1: Sociodemographic Characteristics of Interview Eligible Patients

	Eligible (interviewed)	Eligible (not interviewed)
	(N = 10)	(N = 5)
Age (mean, sd) years	49.7, 14.08 (range: 37-75)	47.2, 15.50 (range: 28-69)
Age at diagnosis iMCD (mean, sd) years	42, 15.25 (range: 18-68)	44.8, 15.29 (range: 27-66)
Gender [N(%)]		
Male	2 (20)	2 (40)
Female	8 (80)	3 (60)
Country [N(%)]		
UK	3 (30)	1 (20)
US	5 (50)	3 (60)
Australia	2 (20)	0 (0)
Brazil (responded to US survey)		1 (20)
Employment status [N(%)]		
Employed	5 (50)	3 (60)
Unemployed	1 (10)	2 (40)
Retired	1 (10)	0 (0)
Caring for family	1 (10)	0 (0)
Other	2 (20)	0 (0)
Further education after minimum age or after grade/year 10		
Yes	9 (90)	5 (100)
No	1 (10)	0 (0)
Have a degree or equivalent professional qualification [N(%)]		
Yes	5 (50)	5 (100)
No	5 (50)	0 (0)
Ethnicity [N(%)]		
White	8 (80)	4 (80)
Hispanic or Latin American	0 (0)	1 (20)
Native Hawaiian or other Pacific Islander	2 (20)	0 (0)
Relationship status [N(%)]		
Married/civil partnership	5 (50)	3 (60)
Cohabiting couple/Common Law/De factor relaptionship	1 (10)	2 (40)
Not married	3 (30)	0 (0)
Widowed	1 (10)	0 (0)
The symptoms I am experiencing: [N(%)]		
Are impacting daily activities	6 (60)	3 (60)
Are not impacting daily activities	4 (40)	2 (40)

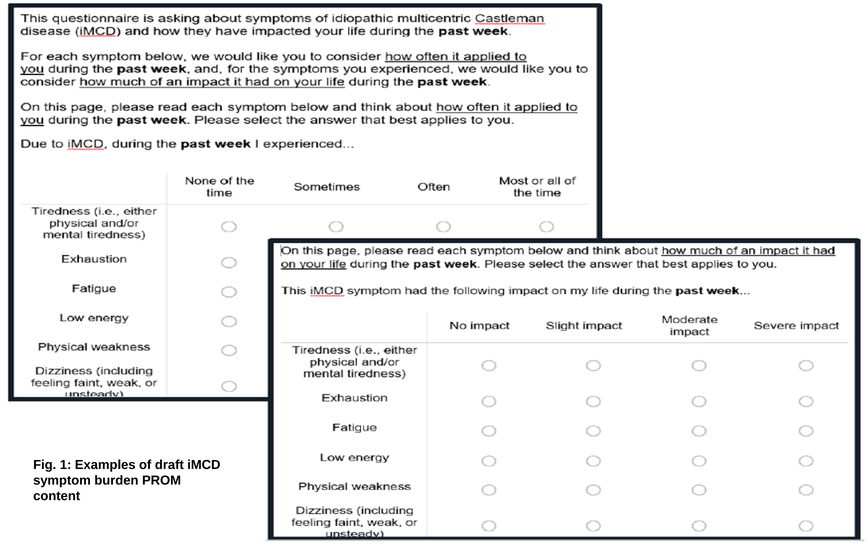

Fig. 1: Examples of draft iMCD symptom burden PROM content

Methods

The project consists of **four stages** (Fig. 2).
Stage 1: Item (content) generation
Stage 2: Item testing and refinement (involving patient interviews)
Stage 3: Final item selection (involving online surveying)
Stage 4: Preliminary measures of change (involving surveying and interviews)

Consultative input during these stages is provided by the PAG and the MAG. Ethics approvals have been obtained for Australia, Canada, the UK and the US. Still outstanding are approvals for Brazil and potentially New Zealand.

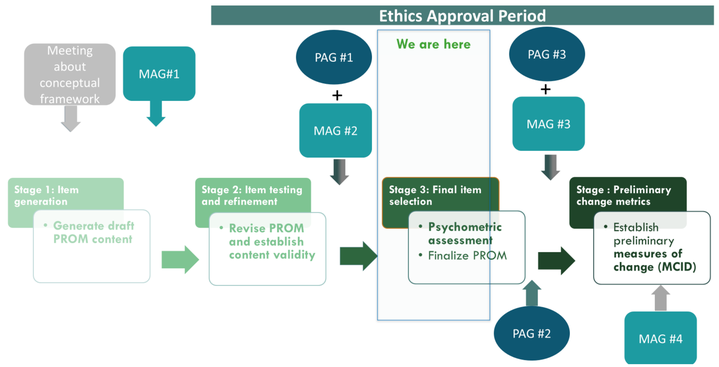

Fig. 2: iMCD symptom burden PROM development process.
MAG = Multi-stakeholder advisory group; MCID = Minimally clinically important difference; PAG = Patient advisory group; PROM = Patient-reported outcome measure

Summary

This poster outlines an international collaboration involving iMCD patients, clinicians, academics, and industry experts to develop a novel symptom burden PROM as part of ISBUS. Achievements include a well-performing draft symptom burden scale that has been positively received by individuals with iMCD. However, challenges persist, such as ongoing recruitment issues in this highly rare disease and the need for necessary adaptations to standard PROM development protocols.