#956

Development of a Goal Area Inventory for Limb Girdle Muscular Dystrophy to Facilitate Potential Implementation of a Personalized Endpoint

Ivana Audhya[1], Alise Nacson[1], Chamindra G.Laverty[2], Tina Duong[3], Meredith K. James[4], Linda Lowes[5], Sue Nesto[6], Chere Chapman[6], Gunes Sevinc[6]

1.Sarepta Therapeutics, Inc., Cambridge, MA, USA; 2.University of California San Diego, San Diego, CA, USA; 3.Stanford University, Palo Alto, CA, USA; 4.The John Walton Muscular Dystrophy Research Center, Newcastle Upon Tyne Hospitals NHS Trust and Newcastle University, Newcastle Upon Tyne, UK; 5.Center for Gene Therapy, The Research Institute at Nationwide Children's Hospital, Columbus, OH, USA; 6.Ardea Outcomes, Halifax, Nova Scotia, Canada

Introduction

- Limb-girdle muscular dystrophy (LGMD) sarcoglycanopathy subtypes are ultra-rare genetic conditions that present with heterogeneity
  - in the age of onset,
  - disease progression,
  - and level of physical disability

  giving rise to challenges in the assessment of meaningful change in drug development.
- Personalized endpoints may assist with the measurement of the effects of an intervention based on individualized goals. This can help to assess and quantify meaningful change among patients across a spectrum of ages and baseline health states[1].
- This is particularly valuable in ultra rare diseases where patient symptoms and impacts may be heterogeneous, and traditional standardized measures may lack the sensitivity to capture meaningful change.

Objectives

- We created a goal inventory for LGMD to explore development of a personalized endpoint by synthesizing data from literature, previously collected patient interviews, and clinician interviews. A goal inventory can facilitate the pursuit of personalized endpoints in LGMD drug development.

Methods

- A targeted literature review was conducted to identify symptoms, challenges, and issues related to LGMD to guide the development of a draft goal inventory to support a personalized endpoint such as Goal Attainment Scaling.
- The draft goal inventory was revised based on results of the secondary analysis of de-identified patient interview transcripts collected as part of a previous qualitative study (Johnston et al., 2023).
- Expert feedback to further refine the draft goal inventory was obtained through individual and group interviews with clinicians experienced in rehabilitation, neurology, neuromuscular disorders, physiotherapy and physical therapy.

Results

The final goal inventory consisted of 45 potential goal areas across the domains of upper body function (n=10), lower body function (n=6), activities of daily living (n=11), disease manifestations (n=8), social and emotional concerns (n=5), and related disease areas and issues (n=5).

***T1** LGMD Goal Area Inventory*

Upper Body Function	Lower Body Function	Activities of Daily Living
Carrying Objects	Standing*	Meal Preparation and Cooking
Lifting Objects	Balance or Falling*	Eating or Drinking
Pulling	Walking*	Personal Grooming and Hygiene
Reaching	Going Up and Down Stairs*	Getting Dressed
Bending (Touching Floor)	Physical Activity	Toileting
Transfers (Getting Up from Surfaces Using Upper Body)	Transfers (Getting up from Surfaces Using Lower Body)	Childcare
Head and Neck Weakness		Household Chores
Trunk Control or Core Strength		Writing or Typing
Physical Activity		Driving
Grip Strength		Going to Work or School
		Participating in Social Activities

Manifestations of the Disease	Social and Emotional Concerns	Related Disease Areas and Issues
Muscle Cramping or Soreness	Social Engagement	Management of Other Conditions (Heart, Gastrointestinal)
Pain	Relationships	Preventative Care or Health Maintenance
Fatigue	Mood and Emotions	Sleep
Headaches or Migraines	Body Image or Self-esteem	Weight Management
Affected by Cold Temperatures	Anxiety or Worry	Low Bone Density
Issues with the Spine or Other Bones		
Swallowing or Speaking		
Breathing or Using a Ventilator		

*Goals that may not be relevant for non-ambulatory patients

- In LGMD, there is tremendous heterogeneity in how symptoms manifest in prognosis, making it challenging to capture treatment response.
- The challenges associated with each symptom and the lived experience of the disease are unique to each patient.
- Note that goal inventories differ from other standardized instruments in that they are not exhaustive. Patients can set individualized goals even if they are not in the inventory. Furthermore, the inventory can be revised at each iteration and updated based on the ambulatory status of the patients and/or age.

Key Findings

This goal area inventory may enable the development of a personalized endpoint in LGMD clinical studies to quantify meaningful change across a spectrum of ages and baseline health states.

Conclusions

This draft goal inventory lists symptoms, challenges, and impacts associated with LGMDs, ranging from emotional concerns to the management of other conditions. It provides a basis for developing individual treatment goals and measures progress over time using a personalized endpoint such as GAS.

A personalized endpoint may complement functional assessments for complex diseases such as LGMDs, allowing for a comprehensive understanding of LGMD impacts and/or treatments on patient experiences in research.

ACKNOWLEDGMENTS & DISCLOSURES

This study was funded by Sarepta Therapeutics, Inc. **Disclosures: IA, AN**: Employees of Sarepta Therapeutics, Inc., and may own stock in the company. **CGL**: Participated in advisory boards for Sarepta Therapeutics, Inc., Dyne, Biogen, Novartis, and Catalyst. **TD**: Received honoraria for scientific advisory boards or consultancy from Biogen, Novartis, F. Hoffmann-La Roche Ltd, Genentech, Pfizer, Sarepta Therapeutics, Audentes, Astellas, and Dyne. **MKJ**: Served on scientific advisory boards for Sarepta, Roche, Pfizer, and Genethon, and has received fees for consulting and training services for PTC, Sarepta, Italfarmaco, Dyne, Pfizer, Summit, Catabasis, Capricor, Santhera, Amicus, NS Pharma, Antisense, Edgewise, and BridgeBio. **LPL**: Received fees from Sarepta Therapeutics, Inc., for licensure of the LGMD natural history data set, and participated on advisory boards of Sarepta Therapeutics. Nationwide Children's Hospital received salary support. **SN, CC, GS**: Employees of and may own equity in Ardea Outcomes, a privately held contract research organization that receives funding from pharmaceutical, biotech companies, and nonprofit organizations.

REFERENCES

1- Kiresuk, T. J., & Sherman, R. E. (1968). Goal attainment scaling: A general method for evaluating comprehensive community mental health programs. *Community mental health journal*, 4, 443-453.

2- Johnston, K., Casstevens, C., Patel, V. P., Merikle, E., Presnall, C., & Audhya, I. (2023). Concept elicitation interviews and conceptual model to understand the patient experience of limb girdle muscular dystrophy. *Advances in therapy*, 40(5), 2296-2310.

SCAN THE QR CODE

The QR code is intended to provide scientific information for individual reference, and the information should not be altered or reproduced in any way.

https://www.website.com/NAME/CONGRESS2023//
AUTHOR SURNAME

Presented at the 2024 Neuromuscular Study Group Annual Scientific Meeting

September 20–23, 2024

Tarrytown, NY, USA