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Speaking the same language: the Fabry lexicon and the implications for how the healthcare community understands the impact of ERT

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Declaration: This research was conducted in accordance with the British Healthcare Business Intelligence Association's Legal & Ethical Guidelines for Market Research. The survey was non-interventional, and all participants signed a consent form.

Background

- Fabry disease, a rare X-linked lysosomal storage disorder, results from deficient or absent α-galactosidase A activity.[1] The disease is highly heterogenous and presents a broad spectrum of symptoms which vary significantly across patients[1]
- Individuals with Fabry disease often feel their experiences are not fully understood by family, friends, or healthcare professionals[2]
- Fabry disease may be treated with enzyme replacement therapy (ERT) to prevent or delay the progression of clinical symptoms.[3] However, there has been limited research on how patients experience this therapy and its impact on their daily lives during their two-week infusion cycles[2]

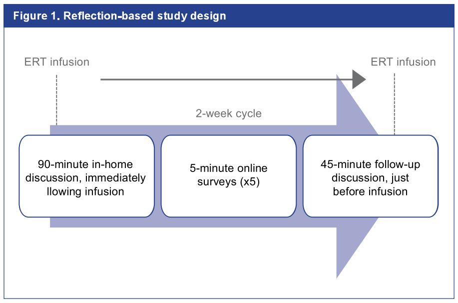
Objective

- To explore the patients' experience of ERT tracked over a 2-week cycle to gain a deeper understanding of real-world experiences and needs of patients

Methods

- Reflection-based interviews and online surveys **(Figure 1)** were conducted by a UK market research agency, between June 2024 to September 2024 with UK patients diagnosed with Fabry disease, aged 18 years or older and prescribed ERT. Consent was provided
- Patients were recruited via partnering with Rare Disease Research Partners and HCP professional and patient referrals. Interviews were scheduled by Survey Healthcare Global
- Five short online surveys were collected every few days between infusions **(Figure 1)**, that tracked symptoms, feelings, and the impact of both Fabry disease and their ERT on daily activities
- Lexical analysis was used to categorise phrases and words into various topics to identify the most frequently used words related to themes. Thematic analysis software, Infranodus, was utilised to assess the significance of a word within a theme and its relationship to other words being used

Figure 1. Reflection-based study design



90-minute in-home discussion, immediately llowing infusion

5-minute online surveys (x5)

45-minute follow-up discussion, just before infusion

Results

Patient demographics

- A total of 17 patients were included in this study **(Table 1)**. All were receiving infusions of ERT every 2 weeks

Table 1. Patient demographics

	Current ERT		
	Agalsidase alfa	Agalsidase beta	Pegunigalsidase alfa
Patient number	6	6	5
Average age years, (min, max)	48 (27, 81)	42 (28, 60)	50 (39, 58)
Female, n (%)	4 (67%)	3 (50%)	2 (40%)
Previous ERT, n (%)			
Yes	2 (33%)	5 (83%)	3 (60%)
No	4 (67%)	1 (17%)	2 (40%)

The Fabry Lexicon

- **"More"** and **"less"** (than usual) emerged consistently in patients' vocabulary, **signalling shifts in symptom severity, emotion, and behaviour** vs. their individual baseline. This is how patients convey change and their unmet needs
- There is a feeling from patients that HCPs often struggle to interpret these words as indicators of improvements/ worsening of symptoms that may require probing

Language used to describe symptoms

- Fabry patients frequently reported multiple symptoms exacerbating each other, creating a cycle of heightened discomfort and reduced functionality.
- Patients describe their symptoms as **"frustrating," "unpredictable," "relentless," "reactive," and "debilitating,"** illustrating how they are at the mercy of their disease, something they feel HCPs and others do not always understand

Describing tiredness/fatigue

- Low energy/fatigue is the most common symptom experienced by patients - a perceived constant. It was often at the centre of their symptoms and interconnected/ exacerbated other symptoms
- Patients tended to have their own tiredness scale. Tiredness was considered a baseline state by patients. Fatigue was a debilitating state, where patients were unable to work or handle daily self-care **(Figure 2)**
- Some patients did not directly use the word 'fatigue' but communicated along a similar vein by saying they were feeling **"run down," "wiped out," "very tired/ more tired," "exhausted," "sluggish," or "unable to get out of bed" (Table 2)**

Figure 2. The Fabry tiredness spectrum

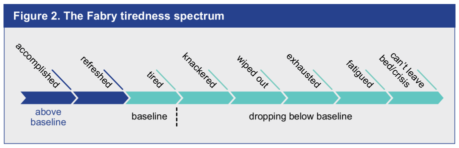


Table 2. Words used to describe fatigue

Functionality is often used to describe the severity of tiredness		
tiredness	bone deep exhaustion	energy more steady
wiped out	crash	stay in bed/can't get out of bed
washed out	lethargic	keeps me awake (pain)
low energy/ zapped of energy	want to go to bed	knackered
fatigue	don't have the energy	kick starts system
nap	burst/boost of energy	take a lot of breaks
sleep	slow down	run down
very very tired	more energetic	sleep disturbances
do not sleep	does not last long	fragile
exhausted	no energy	pace myself

Describing pain

- Many patients use expressive words to explain their pain; as pain is not visible, patients use vivid imagery to convey the intensity and nature of their discomfort. common descriptors include **"burning," "sharp," "stabbing," "shooting," "electric shock," and "zapping,"** illustrating the diverse manifestations of pain in Fabry disease and their desire to accurately depict what their true experiences are **(Table 3)**
- Patients had their own individual pain scale, many saying they would feel symptoms and some form of pain every day. A good day, however, was often described as 'similar to their daily baseline'

Table 3. Words used to describe pain

Vivid imagery is used to convey the intensity of and nature of pain		
sharp	stung	severe pain
shooting	stabbing	debilitating
tingling	nerve pains	frustrated
burning	collapsed crying	comes so fast/ hits you
on fire	skin peel off	no time to prepare
electric shock	crisis	zapping
struggle	pointless/stupid	excruciating pain
	constant	

Communicating symptom impact

- Patients express they are in a fragile state by saying they are **"doing less"** of something or **"avoiding"** situations
- This vocabulary supports HCPs to gauge the severity of the symptoms and whether a treatment plan change is required

> *"I am still **pacing** myself at the moment because I do not want to overdo it, and I am still wary of causing a crisis"*

Language patterns used to describe ERT experiences

- To understand the patient experience of ERT, positive, neutral and negative experience categories were created after reviewing all patient interviews and short-survey data **(Table 4)**. These categories are also heavily influenced by how the patient interprets their ERT experiences and not just their experiences and symptom exacerbations/improvements
- Patients' experience of their ERT differed between ERTs and they perceived that HCPs did not always accept this **(Table 4)**

Table 4. Patient experience of ERT based on lexical analysis

Positive experience	Neutral experience	Negative experience
Notices a boost in energy, improvement in symptoms, and enhancement in quality of life	Little to no improvement, generally stable health without significant ups or downs	Perception of decline over time, lack of improvement, or increased discomfort with ERT, sees no point or motivation for it

- Changes in energy levels served as a crucial metric for assessing improvements or declines while on ERT. Some patients used the metaphor of a **"battery"** being **"charged"** and **"drained"** over the course of an infusion cycle
- Patients used **"more"** language when describing what they could achieve during the infusion cycle **"walking for longer," "staying awake and alert for longer"**

> *"I have had a little more energy, probably about 3-4 days after, and my brain… 24 hours after [the infusion], my brain is quite clear"*

Language patterns reveal desired HCP qualities

> *"...there is a massive disconnect between doctors and patients' realities"*

- Fabry patients expressed a desire for **"more support," "more understanding,"** and **"more responsiveness,"** from their HCPs, as well as "less bias" and less focus on just their organs
- Patients who did value their relationship with HCPs described them as: **"listening," "available," "prompt in response," "trustworthy,"** and **"willing to explore new treatments"**

Study limitations

- Learnings are based on trends from a limited qualitative sample that would benefit from further validation

Conclusions

- Treatment experience is highly individualised with every patient having their own 'normal' and a lexicon to indicate changes from their norm
- There is a need for healthcare professionals to become more fluent in Fabry patients' language to better identify those struggling with ERT
- By improving communication and understanding, healthcare professionals can offer more tailored support and ensure Fabry patients receive adequate care and consideration in their treatment plans

References: 1. Germain DP. Fabry disease. Orphanet J Rare Dis. 2010;5:30. 2. Berry L et al. Orphanet J Rare Dis. 2024:11;19(1):153. 3. Mehta A, Hughes DA. Fabry Disease. 2002 [updated 2024]. In: Adam MP et al. editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993–2024.

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