Poster 722

Complexity of Severity Classification in Hereditary Angioedema: Rethinking Severity Assessment in Hereditary Angioedema: Insights from Patient Experiences

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BACKGROUND

- Hereditary angioedema (HAE) is characterised by recurrent attacks causing severe swelling in the extremities, face, genitals, gastrointestinal tract and throat.[1]
- In recent years, various new treatments for HAE have become available, including long-term prophylactic (LTP) treatments which aim to reduce the severity and frequency of attacks.
- In many countries, when new treatments are approved, to secure patient access to the treatment the benefit of the treatment is evaluated in part based on the impact it has on patients' health-related quality of life (HRQoL).
- Therefore, to evaluate the benefit of new LTPs, it is important to fully understand the HRQoL impact of attacks of different severities.
- HTA agencies, such as NICE, have highlighted the importance of considering attack severity in economic evaluations in HAE[2], however previous evaluations have used simple classifications of attack severity.[3-6] Little research has explored how patients define the severity of attacks they experience.

OBJECTIVES

- To qualitatively explore patients' definitions of attack severity across anatomical locations and attack phases (prodromal, main and recovery)
- To identify other factors that may influence severity definitions

METHODS

- An overview of the methods is shown in Figure 1
- Recruitment quotas aimed for diversity in terms of the severity of attacks experienced and locations of attacks experienced

Recruitment via patient advocacy group
- Adults with a self-reported diagnosis of HAE Type I or II
- US resident
- History of ≥ 5 lifetime attacks
- ≥1 attacks in the previous 90 days
- Experience of ≥1 severe attack or attack affecting throat, face, abdomen, hands, or feet

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Informed consent

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Background questionnaire
Demographics, clinical details, HRQoL (EQ-5D-5L) today, during most recent attack and during worst attack

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60-minute interview
Exploring experience of attacks: locations, phases (prodromal, main, recovery), severities, factors influencing attack severity

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Thematic analysis

Figure 1 Overview of methods

RESULTS

Sample

- A total of 25 participants took part in the study
- Most were white (n=20; 80%), female (n=19; 76%) and had HAE Type 1 (n=20; 80%)
- Most had been prescribed preventative medication (n=21; 84%) and experienced a mean of 27 attacks in the previous year

RESULTS

HRQoL Results

- Participants' HRQoL measured using the EQ-5D-5L at the time of the survey (between attacks) and when recalling their most recent attack by severity is shown in Table 1.
- EQ-5D-5L is scored on a scale from 0 (equal to dead) to 1 (full health)
- The results indicate that HRQoL is only slightly impaired by a mild attack (compared to in-between attacks), however a severe attack has a considerable impact on HRQoL.

Table 1. EQ-5D-5L index scores

Characteristics	Mean (SD)
Current health	
In-between attacks (n=21)[1]	0.77 (0.28)
Most recent attack	
Mild (n=4)	0.73 (0.46)
Moderate (n=14)	0.60 (0.20)
Severe (n=7)	0.24 (0.36)

[1]n=4 excluded from this analysis as they were experiencing an attack when they completed the survey

Qualitative results

- Participants discussed multiple overlapping considerations when defining attack severity. Table 2 summarises the drivers of attack severity.

Table 2. Factors influencing patient severity classification

Concept	Description	Example quote
Physical factors	Anatomical location Symptom intensity Speed of onset Functional impact	*"Because of how fast it was moving…that's why I said it was moderate."*
Treatment	Need for ODT Hospitalisation	*"When I think severe, I think about like when I was hospitalized and like – at that point, like I could eat. I just kind of like didn't have an appetite."*
Contextual factors	Access to treatment Setting/timing	*"I think it was because the situation that I was in, that um, if I was at home, I would not have considered that severe but because we're in, in [location], I'm on a bus, I don't know the medical facilities around"*
Emotional factors	Fear of attack progression Anxiety about initiating treatment Embarrassment	*"Um the emotional impact that it had on me, um it was scaring to the point where I'm like, 'Okay…why am I injecting a second injection?'…It was getting to the point where I was like how severe is this gonna go if my first injection is not working, […] so that's why I would say that's more severe to me"*

Location-based severity patterns

- Participants reported different considerations about severity depending on the location of the attack (Figure 2)

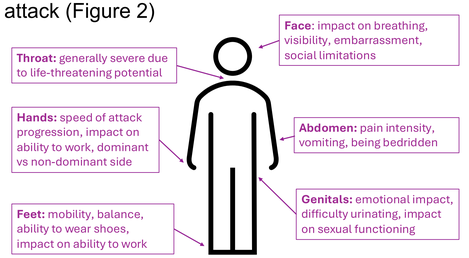

Figure 2: key factors based on attack location

Attack phases: severity considerations

- Participants discussed different severity considerations depending on the phase of the attack (Figure 3)

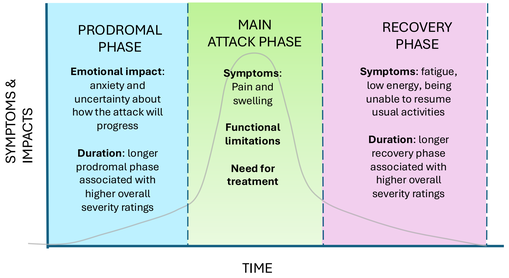

Figure 3: key factors based on attack phase

CONCLUSIONS

- The results highlight the various factors that patients consider when rating the severity of an attack and confirm the need to consider attack location, phase (prodromal, main, recovery) and symptoms when defining severity
- Current severity classifications may oversimplify the complex patient experience and could underestimate the HRQoL burden of HAE.
- Accurate classification of attack severity is important to ensure the value of new treatments for HAE are appropriately represented in cost effectiveness analysis.

DISCLOSURES

Acaster Lloyd were commissioned by Ionis Pharmaceuticals to undertake this study. KG, GS, MG are employees of Acaster Lloyd. SA is company director and employee of Acaster Lloyd and holds shares in the company. AZ is an employee of Biopoint Pharmaceutical and Biotech Consulting and may hold shares in the company. MVL is an employee of Ionis Akcea and may hold shares in the company.

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