Hereditary Angioedema (HAE) Patients Answer: Why Do Attacks Go Untreated?

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Rationale

- Hereditary angioedema (HAE) is a rare genetic disease associated with unpredictable, painful, and debilitating attacks of tissue swelling in various locations of the body that can be life-threatening depending on the location(s) affected
- Global HAE treatment guidelines recommend that people living with HAE should consider treating all attacks early upon recognizing them in order to reduce morbidity and mortality[1-3]
- Despite availability of on-demand therapies, patients do not universally treat attacks[4]
- We explored, from a patient perspective, the rationale for not treating attacks and the potential consequences

Methods

- The US Hereditary Angioedema Association recruited participants with Type 1 or 2 HAE between April and June 2023
- Recruitment was stratified to include approximately 50% of participants taking on-demand only and 50% receiving non-androgen long-term prophylaxis (LTP) plus on-demand, at the time of their last treated attack
- Participants completed a 20-minute, self-reported, online survey that inquired about their last untreated HAE attack
- Participants had to be at least 18 years old and had at least 1 untreated attack in the past 3 months

Table 1. Respondent Characteristics

	Total (n=20)	On-Demand Treatment Only (n=9)	On-Demand Treatment + LTP (n=11)
Current Age (years) Mean (SD)	39 (14.6)	45 (14.2)	33 (13.1)
HAE Type			
Type 1	16 (80%)	8 (89%)	8 (73%)
Type 2	4 (20%)	1 (11%)	3 (27%)
Gender			
Female	75%	67%	82%
Race / Ethnicity			
White	87%	89%	79%
Hispanic or Latino	9%	8%	14%
Black/African American	3%	3%	7%
American Indian/Alaskan Native	2%	0%	14%
Asian	3%	4%	0%
Other	1%	1%	0%

Results

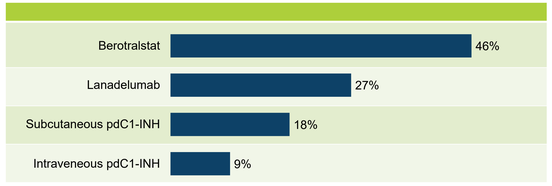
- The sample consisted of 20 respondents (80% Type 1 HAE-C1-INH; mean age 39 years; 75% female)
- Participants reported having an average of 10 attacks (10 on-demand treatment; 10 on-demand + LTP) over the past year
  - On-demand treatment only participants treated 22% of these attacks
  - On-demand + LTP participants treated 64% of these attacks

Figure 1. Prescribed but Unused On-demand Treatment at Time of Last Untreated Attack

On-Demand Therapy		On-Demand Treatment Only (n=9)	On-Demand Treatment + LTP (n=11)
Icatibant	75%	78%	73%
pdC1-INH	30%	22%	36%

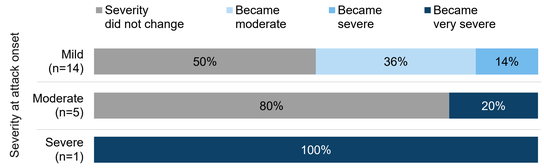
- 45% of respondents indicated they were using on-demand treatment only
- 55% reported self-administering their on-demand treatment for their attacks

Figure 2. Long-Term Prophylaxis at Time of Last Untreated Attack



- Eleven (55%) were being treated with non-androgen long-term prophylaxis

Figure 3. Attack Severity at Peak



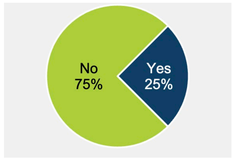
- 14 participants (70%) described their last untreated attack as mild at onset and of these, 7 participants (50%) progressed to moderate/severe
- Severity changed for 45% of all attacks, either becoming moderate, severe, or very severe
- Untreated HAE attacks lasted a mean (standard deviation) of 2.3 (1.9) days and a median (interquartile range) = 2 (1,3) days
- Patients taking LTP had somewhat longer attacks (mean = 2.6 [2.2] days; median = 2 [1,3] compared to on-demand only (mean = 1.9 [1.4] days; median = 2 [1,2])

Figure 4. Initial Site of Attack

		On-Demand Treatment Only (n=9)	On-Demand Treatment + LTP (n=11)
Peripheral / Trunk (net)	55%	78%	36%
Peripheral (e.g., hands, legs, feet, etc.)	45%	67%	27%
Trunk	10%	11%	9%
Abdominal/stomach	20%	11%	27%
Face	15%	11%	18%
Throat	5%	--	9%
Other	5%	--	9%

- One in five patients reported that their last untreated attack affected their face (15%) or throat (5%)

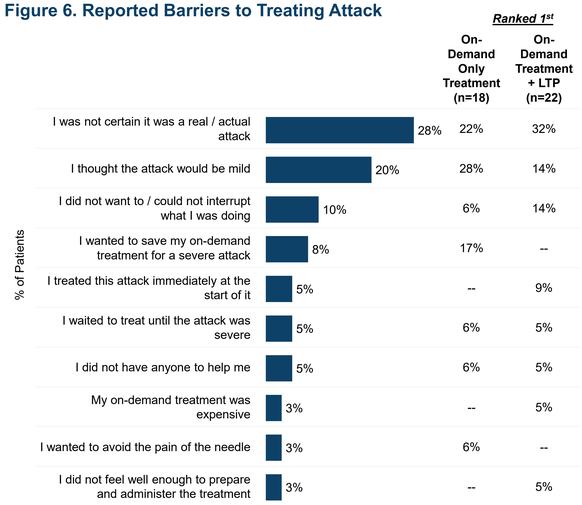
Figure 5. Spread of Symptoms to another site (n = 20)



	% Yes
On-Demand Treatment (n=9*)	22%
Long-Term Prophylaxis (n=11*)	27%

- Five attacks (25%) spread to other locations, including 1 to the throat and 1 to the face

Figure 6. Reported Barriers to Treating Attack



- The top-ranked reasons for not treating were: (1) uncertainty of whether the attack was real; (2) presumption the attack would stay mild; (3) did not want to interrupt what they were doing

Conclusions

- For a substantial proportion of patients, their untreated attack progressed in severity or migrated to other locations including throat
- The primary reasons for not treating were uncertainty that the attack was real and the belief that the attack would be mild
- These data support guideline recommendations to consider treating all attacks due to the unpredictable nature of HAE attacks.

References

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Disclosures

Cristine Radojicic reports honorarium from the following participation: Medical Advisory Board- KalVista, BioCryst, CSL Behring, Astria, Safety Monitoring Board- Astria, Speakers Bureau- CSL Behring; Paula Busse reports consulting fees: Takeda, KalVista, CVS Specialty, BioCryst, CSL, Behring, ADAx, Astria, Pharvaris. Cristine Radojicic reports honorarium from the following participation: Medical Advisory Board- KalVista, BioCryst, CSL Behring, Astria, Safety Monitoring Board- Astria, Speakers Bureau- CSL Behring; Maeve O'Connor reports speaker/consultant/advisor or research: KalVista, Pharming, CSL, GSK, Blueprint, TEVA, AZ, Sanofi, Grifols, Abbvie. She is the Chief Medical Officer of the CIIC . ; Julie Ulloa and Sherry Danese have received consulting fees from KalVista; Vibha Desai and Paul Audhya are employees of KalVista Pharmaceuticals; Sandra Christiansen reports advisory boards: KalVista, BioCryst, US HAEA Medical Advisory Board

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