

## 063 Despite Prophylactic Treatments, Break-through Attacks Continue among Patients with Hereditary Angioedema



**Cristine Radojicic, MD<sup>1</sup>**, Jessica Best, DHSc, PA<sup>2</sup>, Jinky Rosselli, MPH<sup>3</sup>; <sup>1</sup>Duke Asthma, Allergy, and Aiway Center, <sup>2</sup>BioCryst Pharmaceuticals, Inc, <sup>3</sup>BioCryst Pharmaceuticals.

**RATIONALE:** There are several FDA-approved medications for prophylactic treatment of Hereditary Angioedema (HAE). Despite increased use of these therapies, patients continue to experience HAE attacks. We sought to evaluate attack frequency in patients receiving prophylactic treatment.

**METHODS:** A chart audit study was conducted among physicians treating HAE to collect anonymized information regarding HAE treatments and attacks documented within their patient's medical record. Physicians were primarily Allergists/Immunologists (n=47) or other specialties (n=28). The study received IRB exemption.

**RESULTS:** A total of 282 patient charts were reviewed, with an average of 3.8 charts per physician. Overall, 83% of patients utilized HAE treatment prophylaxis. The most common medications were lanadelumab-flyo (Takhzyro®, 21%), C1 esterase inhibitor (C1-INH) administered subcutaneously (Haegarda®, 20%), C1-INH administered intravenously (Cinryze®, 18%), and oral androgens (15%). Most patients (n=244, 87%) were also prescribed an on-demand (acute) medication. Among patients prescribed both acute and prophylactic medications for whom on-demand usage was known, 42% used their on-demand medication monthly, for an average of 0.7 times/month. Although the rate of attacks decreased with prophylactic medication use, 30% of patients on prophylaxis experienced one attack in the past month and 52% in the past three months, for an average of 0.5 and 1.2 attacks, respectively. The attack frequency ranged from 0.6-1.7 for Takhzyro® and 0.3-0.9 for Haegarda® during the past one-three months. Physicians (78%) believe patients accurately report their attack frequency.

**CONCLUSIONS:** Many patients with HAE on prophylactic medication, including newer subcutaneous therapies, still experience attacks and require on-demand medication treatment. Attack rates should be assessed regularly.

## 064 Response to lanadelumab is not affected by race and ethnicity: findings from phase 3 studies



**Timothy Craig, DO FAAAAI<sup>1</sup>**, Rafael Zaragoza-Urdaz<sup>2</sup>, John Anderson, MD<sup>3</sup>, Huamin Li<sup>4</sup>, Kim Paes<sup>5</sup>, Clinical Scientist<sup>5</sup>, Hong Ren, MS<sup>6</sup>, Salome Juethner, NP<sup>7</sup>; <sup>1</sup>Penn State University, <sup>2</sup>Rafael H Zaragoza Urdaz MD CSP, <sup>3</sup>Alabama Allergy & Asthma Center, <sup>4</sup>IAA Clinical Immunology Laboratory, <sup>5</sup>Takeda Pharmaceuticals, Inc, <sup>6</sup>Takeda Pharmaceuticals, <sup>7</sup>Takeda.

**RATIONALE:** Increasing attention has been drawn to racial and economic disparities in health care. We thus initiated an analysis to determine the impact of race and ethnicity on lanadelumab safety and efficacy.

**METHODS:** We searched the databases of the HELP and HELP OLE studies for minority subjects. In HELP, patients ≥12 years old with HAE-1/2 received placebo or lanadelumab (150mg Q4W, 300mg Q4W, 300mg Q2W) for 6 months. In HELP OLE, patients received one dose of 300mg lanadelumab on Day 1 then 300mg Q2W after their first attack (rollovers), or 300mg Q2W starting on Day 1 (nonrollovers) for ≤132 weeks. HELP OLE data collected up to 31August2018 were analyzed.

**RESULTS:** HELP (N=125) included n=10 Black, n=2 Asian, and n=113 White patients; n=9 were Hispanic, and n=115 were non-Hispanic. HELP OLE (N=212) included n=10 Black, n=2 Asian, n=198 White, n=13 Hispanic, and n=198 non-Hispanic patients. In HELP, lanadelumab reduced attack rates from 2.0 attacks/month at baseline to 0.5 during treatment (79.0% reduction from baseline) in Black patients, and 3.7-0.4 (88.2%), 3.7-0.3 (92.5%), and 3.5-0.5 (84.1%) in White, Hispanic, and non-Hispanic patients, respectively. In HELP OLE, attack rates were reduced from 1.8-0.3 (78.3% reduction from

baseline), 3.1-0.3 (87.4%), 3.4-0.1 (97.0%), and 3.0-0.3 (86.2%) attacks/month in Black, White, Hispanic, and non-Hispanic patients, respectively. Adverse event occurrence was comparable between race and ethnicity groups in both studies.

**CONCLUSIONS:** Although there were few non-White and Hispanic patients enrolled in these studies, the response to lanadelumab was similar regardless of race and ethnicity.

## 065 Real World Data of Canadian Adults Living with Angioedema: Part 4 - Health Economic Burden



**Jacque Badiou<sup>1</sup>**, Anne Rowe<sup>1</sup>, Michelle Cooper<sup>1</sup>, Kim Roberts<sup>1</sup>, Daphne Dumbrille<sup>1</sup>, Robert Bick<sup>2</sup>, marguerite Dao<sup>1</sup>, Suzanne Kelly, PhD<sup>3</sup>, William Yang, MD FAAAAI<sup>4</sup>; <sup>1</sup>Hereditary Angioedema Canada, <sup>2</sup>Health Policy Consultant, <sup>3</sup>Red Maple Trials Inc., Ottawa, ON, <sup>4</sup>Ottawa Allergy Research Corporation, Ottawa, ON.

**RATIONALE:** Hereditary angioedema (HAE) is a rare inherited disorder characterized by recurrent painful episodes of severe swelling in different parts of the body. The direct health care costs of HAE are significant but are little studied. We sought to understand the health care utilization of patients with HAE in Canada

**METHODS:** In 2017 a comprehensive email survey was sent to all members of HAE Canada to gather information on multiple aspects of HAE. The data from respondents was collected and analysed as the percentage of respondents. Responses to questions on health care use were analysed for this report.

**RESULTS:** The survey collected data from 113 respondent adults living with HAE. In the prior year, 11/79 (14%) reported <3 attacks while 34/79 (43%) reported ≥12. Routine HAE treatment was mainly performed at home (58/75, 77.3%) but some received treatment in a hospital (12.0%) or clinic (9.3%). In response to questions regarding health care use in the past year, most (43/71, 60.6%) saw a physician 1-3 times for HAE-related problems but 22% had 4-10 and 10% had >10 physician visits. Planned hospital visits were made 1-3 times by 32/69 (46.4%); 7.3% went >10 times and 33.3% not at all. Unplanned ER visits were made: never by 32/71 (45%), 1-6 times by 48%, and >7 times by 7%.

**CONCLUSIONS:** These findings suggest that having HAE leads to substantial health care costs which would be higher but for the high proportion of patients who receive treatment at home.