Assessing the Burden of Injection with Parenteral Hereditary Angioedema Therapies

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Background

• Hereditary angioedema (HAE) is a rare, genetic disease characterized by debilitating swelling episodes in various parts of the body.
• Currently, most prophylactic HAE treatments and all on-demand HAE treatments are parenteral, requiring intravenous (IV) or subcutaneous (SC) injection, and have been associated with significant burden and adherence challenges1
• Drug route of administration can impact patient preference, quality of life, disease outcomes, and costs of care2
• As the HAE therapeutic landscape evolves and new treatments emerge, gaining a better understanding of the patient-reported clinical, humanistic, and economic burden of parenteral HAE therapies is critical to facilitating optimal, patient-centered disease management

Methods

• We conducted a targeted literature review (TLR) to assess the clinical, humanistic, and economic burden of on-demand and prophylactic parenteral HAE therapies on individuals living with HAE
• We conducted searches in PubMed and Google Scholar
• We prioritized peer-reviewed articles and conference proceedings published in English from January 1, 2017-November 1, 2022 for inclusion
• We considered older articles, if relevant
• No study design restrictions were applied
• We identified 9 publications.1 3-10 Most studies were observational (78%), peer-reviewed (78%), and conducted in the United States (67%) (Table 1)

Results

• Nearly half of patients reported feeling nervous when starting new prophylactic treatment (47%) (Figure 2)
• Adverse events related to parenteral HAE therapies were also a concern, with one study reporting 98% of patients using on-demand katocan had injection site reactions2
• Common reactions included: pain, bruising, hemotoma, burning, numbness, edema, pruritus, and urticaria
• Results also revealed the types of attack-related parenteral HAE therapy costs that burden patients and payers, including healthcare visits and associated travel to obtain treatment as well as the cost of injection supplies, such as syringes and alcohol swabs
• Additionally, patients required significant training to be able to administer on-demand therapies, with half of patients in one study requiring 3-5 training sessions to be able to self-administer1 (Table 2)

Conclusions

• This TLR found that parenteral HAE therapies are burdensome for patients, yielding significant clinical and mental burdens that may impact quality of life
• Fear of injection, lack of skills, and perceived inconvenience of injection were commonly reported, leading to adherence challenges. Injection site reactions were frequently experienced
• Findings also illuminated the economic impact of parenteral HAE therapies on patients and payers, as healthcare services and supports, such as repeated medication administration trainings, were often required
• Novel, easy-to-administer HAE treatments, especially in the on-demand space – where only parenteral therapies exist – provide an opportunity to address unmet patient needs and improve treatment outcomes

References