A Cross-sectional Survey of Prevailing Opinions From Headache Specialists Regarding Status Migrainosus Management

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Introduction

- Status migrainosus is an intractable, debilitating migraine complication with intense symptoms lasting >72 hours[1,2]
- Although status migrainosus epidemiology is not well characterized, estimates range from 3% to 20% among individuals with migraine[2,3]
- A recent population-based study of patients with status migrainosus in Minnesota reported an incidence rate of 26.6 cases per 100,000 people, and it found that 15% of individuals with status migrainosus experienced a recurrent attack during the following year[4]
- Status migrainosus attacks can last a debilitatingly long time, with an average duration of 4.8 weeks and some attacks lasting 3 to 10 weeks[5,6]
- Although there are no evidence-based treatment guidelines for status migrainosus, treatment can include steroids, nerve blocks, nonsteroidal anti-inflammatory drugs, triptans, neuroleptics, ergotamine, and dihydroergotamine mesylate (DHE)[2,4,7]
- There is an unmet need for consensus-defining clinical trial end points for status migrainosus to improve future research and treatment outcomes[2]

Objective

- To gather the prevailing opinions of headache specialists regarding status migrainosus management based on clinical experience and exposure to scientific data via phone survey, with a focused interest in patterns of DHE use[8]

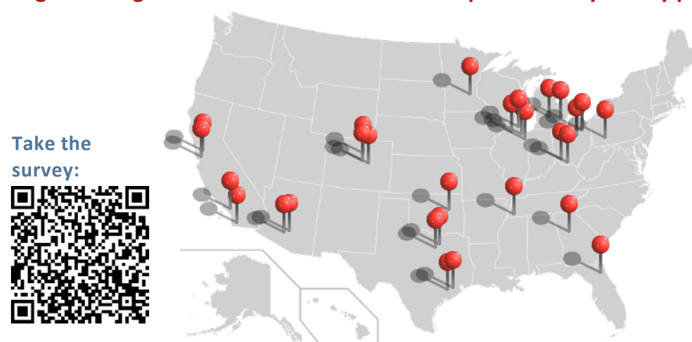
Methods

Study Design

- A cross-sectional phone survey interviewing 33 headache specialists from tertiary headache centers across the United States (Figure 1)
- 8 questions were asked at random about status migrainosus patterns observed and treatment protocols used for management by the specialist
  - In some interviews, some questions were not asked directly if the answers were extracted from previous responses
- All data were collected as verbal responses

Figure 1. Regional distribution of US clinics represented by survey participants

Take the survey:

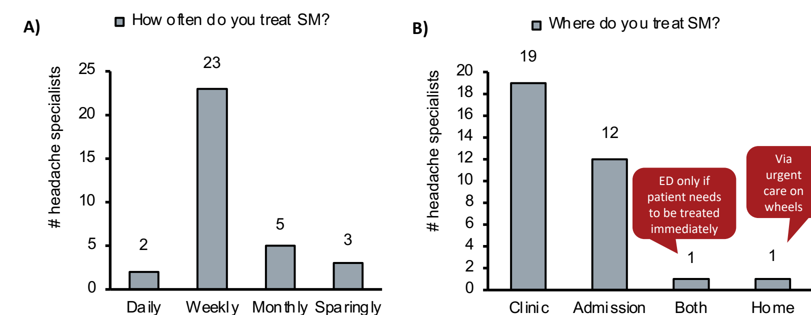


Results

Survey responses

- Cases are most frequently observed within the clinic, but some require hospital admission, or an emergency department (ED) visit when clinics are considered inadequate for immediate status migrainosus treatment (Figure 2)

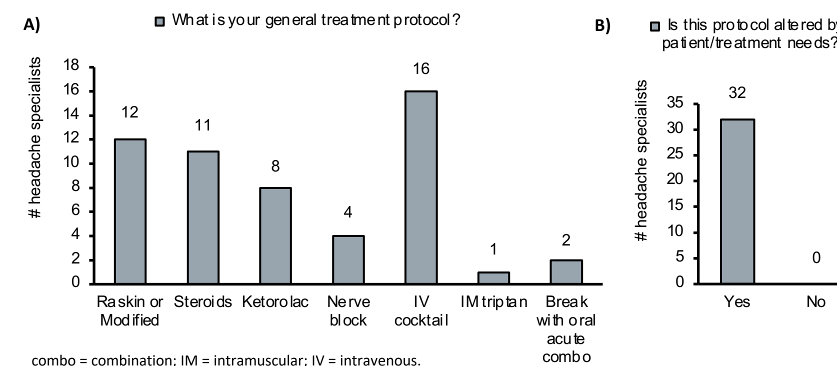
Figure 2. Most headache specialists reported treating patients with status migrainosus every week, sometimes several per day, primarily in the clinic



ED = emergency department; SM = status migrainosus.

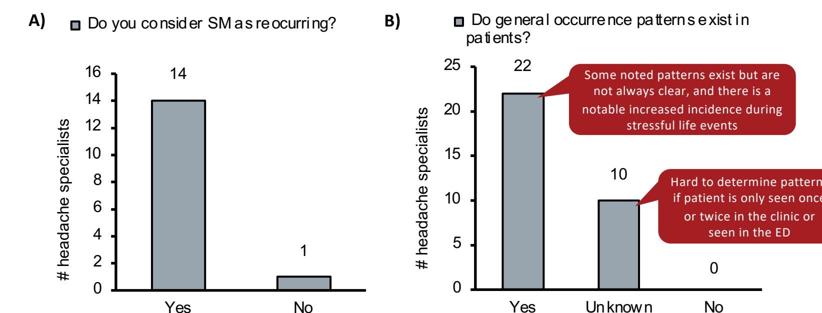
- Most headache specialists treat status migrainosus using drug infusions, the Raskin or modified DHE protocol, or steroids (Figure 3)
  - Headache specialists modify the treatment protocol based on the patient, complaints, prior treatment failures, history, contraindications, and/or the ability to undergo treatment
  - Specialists reported that they sometimes followed the Raskin (generally 1 mg IV DHE every 8 hours) or Modified (other doses/frequencies) with ketamine or nasal DHE at home
  - Intravenous (IV) drug cocktail included IV fluids plus ketorolac and ondansetron, magnesium, diphenhydramine (n=10), or IV fluids plus valproate and/or DHE, chlorpromazine (n=5)

Figure 3. IV infusion drug cocktail was the most common treatment given by headache specialists, with the protocol often altered as needed based on patient or treatment needs



combo = combination; IM = intramuscular; IV = intravenous.

Figure 4. Some specialists note that status migrainosus may be recurring and exhibit patterns of occurrence, but it is difficult to define

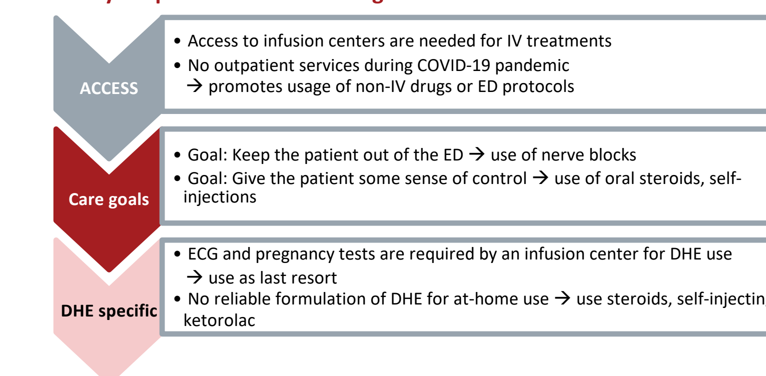


ED = emergency department; SM = status migrainosus.

Survey responses, continued

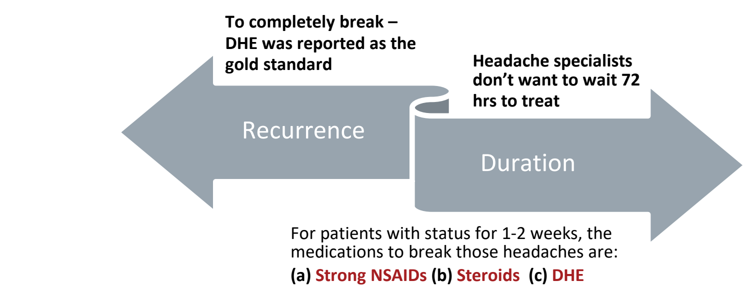
- Most headache specialists expressed that refractory patients appear to be more prone to recurrent status migrainosus attacks, though patterns are difficult to identify in patients who are seen only once or twice in the clinic or if a patient is seen in the ED (Figure 4)
- Some headache specialists viewed status migrainosus as a recurring condition presenting in patients with migraine who have severe, frequent, usually treatment-resistant migraine attacks
- Treatment goals included avoiding ED visits and providing patients with autonomy, greater sense of control, and at-home treatments (eg, self-injections, oral steroids) (Figure 5)
- While IV DHE is considered the gold standard to completely break recurrence, drug inaccessibility and hesitation to send patients to hospitals limit its use (Figure 5, 6)
  - Other IV drugs included in the cocktail to treat prolonged status migrainosus included: metoclopramide (n=10), valproic acid (n=6), prochlorperazine (n=4), magnesium (n=3), diphenhydramine (n=2), promethazine (n=1), and ketamine (n=1)

Figure 5. What effect does hospitalizations or health care resource utilization have in your protocol for status migrainosus?



DHE = dihydroergotamine mesylate; ECG = echocardiogram; ED = emergency department; IV = intravenous.

Figure 6. Are variables such as recurrence and duration of migraine considerations with your treatment paradigm?



DHE = dihydroergotamine mesylate; hr = hour; NSAID = nonsteroidal anti-inflammatory drug.

Conclusions

- Status migrainosus is a debilitating complication of migraine, in which outcomes are affected by a lack of clear epidemiological data and strong evidence-based treatment guidelines[2,4]
- Headache specialists frequently treat status migrainosus, seeing multiple patients per week
- Specialists value treatments that break through the headache and offer sustained pain relief without necessitating ED visits
- Although IV DHE was viewed favorably for status migrainosus, it was underutilized due to accessibility issues at some centers and was sometimes viewed as a last resort

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Disclosures and Acknowledgments

J Robblee has received grant support from the Barrow Neurological Foundation and investigator support from Eli Lilly and AbbVie. She participated in a paid advisory board for AbbVie and is a speaker for Impel Pharmaceuticals. She also has a paid editorial relationship with MedLink® Neurology and Neurodiem™. A family member has partial ownership of the Scottsdale Providence Recovery Center. RE Vann, C Fitzpatrick, M Murphy, S Ray, and SK Aurora are full-time employees of Impel Pharmaceuticals and are stockholders in Impel Pharmaceuticals. SB Shrewsbury was formerly a full-time employee of and an officer of Impel Pharmaceuticals. He remains a stockholder. Editorial support was provided by IMPRINT Science and funded by Impel Pharmaceuticals Inc. IMPEL and POD are registered trademarks of Impel Pharmaceuticals Inc.