Unlocking the Therapeutic Potential of Botulinum A Toxin Injections for Migraine Attacks Lina Abdulhussein and Marc Nahmani

Migraine attacks, a chronic neurological condition, are characterized by recurrent and intense headaches that severely impact an individual's daily life activities. These agonizing episodes can last anywhere from a few hours to several days, leaving those affected in distressing and sometimes critical conditions. In the United States alone, over 37 million individuals are affected and suffer from migraine attacks. While some medications (triptan and NSAID) offer relief, they trigger various side effects, including nausea and dizziness. With the least adverse effects, OnabotulinumA toxin (BotN or Botox) works by preventing acetylcholine release from the presynaptic terminal, leading to reduced migraine frequency as well as intensity. To determine if BoNT can serve as a potential treatment for migraines, we performed a comprehensive review of existing primary literature on the efficacy of BoNT on migraine attacks. Several studies suggested the effectiveness of Botox injections in terms of reducing the number of headache days by around 8-9 days per month, making it a valuable treatment. Though, the frequent visits for obtaining full treatment for migraine as well as the cost, present challenges to some patients. Additionally, such treatment is not ideal for all patients due to age as well as gender differences. Thus, a visit to a professional is necessary to ensure the long-term safety and suitability of treatment for the patient. Moreover, further research is required to compare BoNT's costeffectiveness and long-term efficacy with other treatments.