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USING OVER-THE-LABEL DOSES IN REAL-LIFE MANAGEMENT OF POST-STROKE SPASTICITY WITH BOTULINUM TOXIN TYPE A: TREATING MORE MUSCLES TO ENSURE SUCCESS

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Introduction: Poststroke spasticity is common and very disabling. This study aims to compare the number of muscles targeted and therapeutic results of different formulations of botulinum toxin type A used in real-life management of poststroke spasticity.
Methods: A sample of 216 patients (108 females) with poststroke spasticity was divided into 2 groups: on-label dose (Group 1) and over-the-label dose (Group 2). Each group was categorized by gender, age, BoNT-A formulation used (abobotulinumtoxinA [ABO]), incobotulinumtoxinA [INCO]), and onabotulinumtoxinA [ONA]), treatment outcomes (evaluated with Goal Attainment Scale [GAS]), and number of muscles injected per session. A total of 2083 treatment sessions were evaluated. On-label doses considered were: ABO 1500 U, ONA 400 U, and INCO 500 U. Treatment success was defined as a GAS score $\geq$ 0 per goal.
Results: Group 2 patients were treated in more upper limb muscles than Group 1 (ABO Group 1 vs Group 2: 5.17 ± 2.46 vs 6.89 ± 1.95, P<0.001; ONA Group 1 vs Group 2: 3.98 ± 2.62 vs 5.93 ± 2.12, P <0.001; INCO Group 1 vs Group 2: 4.59 ± 2.78 vs 6.83 ± 2.37, P <0.001), as well as in lower limb muscles (ABO Group 1 vs Group 2: 3.08 ± 2.32 vs 5.21 ± 2.15, P <0.001; ONA Group 1 vs Group 2: 2.14 ± 2.27 vs 4.78 ± 1.79, P <0.001; INCO Group 1 vs Group 2: 2.92 ± 2.55 vs 4.69 ± 1.49, P <0.001).
A comparison of treatment outcomes, showed no difference between groups, independent of the formulations used (ABO Group 1 vs Group 2: X^2 (1) = 0.071, P =0.79; ONA Group 1 vs Group 2: X^2 (1) = 0.259, P =0.61; INCO Group 1 vs Group 2: X^2 (1) = 0.10, P =0.92).
Conclusion: Our data suggest that higher total doses allowed clinicians to increase the number of targeted muscles per limb in selected cases. On the other hand, Group 2 showed the same treatment success rate as Group 1. Hence, if Group 2 had received lower total doses it would mean either fewer muscles treated or lower doses per muscle, with predictably lower rates of success, ie, the use of over-the-label doses was worthwhile.
Keywords: Botulinum Toxin; GAS score; Poststroke spasticity; Targeted muscles

SPASTICITY MANAGEMENT OF INDIVIDUALS WITH SPINAL CORD INJURY IN ERA OF SOCIETAL RESTRICTIONS DUE TO COVID 19 PANDEMIC

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Introduction: With the emergence of the novel coronavirus (SARS-CoV-2), the COVID-19 pandemic has swept the world and left us with serious public health concerns and the need for significant modifications in healthcare operations all around the globe. These unprecedented times have been hard for everyone with or without disability; however, we feel that there has been a serious lack of information targeted specifically to spinal cord—injured (SCI) individuals. Inaccessibility to hospitals or health care systems for their routine follow up visits and treatments and psychological distress due to quarantine measures are among the common problems that persons with SCI may face during the COVID-19 pandemic. Most of the outpatient services, including botulinum toxin type A (BoNT-A) injections for the management of spasticity, were postponed.[1] We aimed to study the spasticity management and activities of daily living of individuals who have spasticity due to SCI in this socially restricted era.
Methods: A telephone interview was conducted with individuals with SCI who had moderate and severe spasticity. Twenty-four volunteers participated in this cross-sectional study. All of the patients received ultrasound-guided BoNT-A injections at two rehabilitation centers in Istanbul, between 15th September, 2019 and 15th March, 2020. A questionnaire prepared by the authors was used and all participants were interviewed by the same author (KG) between 15th June and 15th July, 2020.
Each participant was asked about increases in spasticity during the societal restrictions of the COVID-19 pandemic and the need for a new BoNT-A injection. The spasticity severity of the previous week was rated on a numeric rating scale (NRS). Activities of daily living complicated by spasticity were addressed with open-ended questions. Accessibility to the health care system and medications was also queried.
Results: The demographic characteristics of the 24 participants are summarized in Table 1. Eighteen (75%) patients reported a moderate increase in spasticity, while 3 (12.5%) patients reported a severe increase and 3 (12.5%) reported no difference during this time period. The m ean NRS score was 6 (±2). Twenty-one (87.5%) of the patients reported a need for BoNT-A treatment because of symptom re-emergence.
In relation to spasticity-induced deterioration in activities of daily living, 10 (42%) individuals reported difficulty in walking. Ten (42%) patients reported difficulty in sitting in the wheelchair, and 11 (46%) experienced lack of sleep due to spasticity symptoms.