Introduction and Objectives:
Variability in botulinum toxin A (BoNT-A) injection practice is a common issue, and real-life practice data are scarce in the literature. In order to investigate practical clinical experience, we describe local practices at a public health clinic in Spain where poststroke spasticity patients were treated at least once with botulinum toxin A.

Methods:
This was a retrospective study of poststroke patients in a spasticity unit who started BoNT-A treatment during the years 2008 to 2011. Patients were included if 5-year follow-up data after first BoNT-A injection were available. Basic demographic data, treatment dynamics, and BoNT-A usage are reported.

Results:
The study population comprised 43 patients (21 male, 22 female) aged 65.81±12.34 years (mRankin scale: 1[0], 2 [6], 3 [9], 4 [27], 5[1]). At 5-year follow-up, 22 patients were still receiving active treatment, whereas 21 patients were inactive (11 patients had died; 1 rejected treatment; 4 were lost to follow-up; in 3 cases, the physician considered continuation of BoNT-A to be unnecessary; and 2 patients had moved to another city). Of the 43 patients in the study, 36 (83.7%) had received a second BoNT-A treatment (Image 1), with the mean time-to-second treatment being 198±82.9 days (Image 2). The number of injection sessions per patient averaged 5.95±3.34 range, 1 to 12 sessions) (Image 3).
The average number of vials used per patient in 5 years was 18.72±13.73 (Image 4).
The total amount of BoNT-A administered in this population over 5 years was as follows: onabotulinumtoxinA (Botox®), 55505 U; incobotulinumtoxinA (Xeomin®), 20840 U; and abobotulinumtoxinA (Dysport®), 10100 U.
The number of injection sessions for the active patients was statistically significant (P=0.001, student t test). (Image 5)
The mean interval between injections was 208.7±96.1 days (Image 3).
The mean interval between the last injection and death was 519.6±508.8 days (P=0.008 using the Mann-Whitney test).

Conclusions:
In our study, a high percentage of retreatment with BoNT-A was common in patients with post-stroke spasticity. About a quarter of patients died during follow-up. No death could be directly attributed to botulinum toxin injection, attesting to a temporal plausibility. The study identified 2 subgroups of BoNT-A users: short-term users, defined by a smaller number of sessions; and long-term users, who received injections on a more regular basis.
The long intervals between the last BoNT-A injection and death in our series suggests either that BoNT-A injection is not a priority in poststroke spasticity as patients enter the last period of life or that social or contextual factors preclude continuing injections.

Bibliography: