Conversion from onabotulinumtoxinA to incobotulinumtoxinA for aesthetic treatments: a Canadian multicenter, real-world, retrospective study

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BACKGROUND

- Botulinum toxin Type A (BoNT-A) is a well-established cosmetic treatment.
- Aesthetic uses of BoNT-A include glabellar frown lines (GFLs), lateral periorbital lines (LPLs, also known as crow's feet), and horizontal forehead lines (HFLs).[1]
- IncobotulinumtoxinA (INCO) is approved for the treatment of GFLs in Canada and for the single and combined treatment of upper facial lines in Europe.[2-4]
- Head-to-head prospective comparison trials have demonstrated that INCO and onabotulinumtoxinA (ONA) result in comparable safety and efficacy for both aesthetic and therapeutic use.[5-8]
- Real-world data comparing INCO after switch from ONA is more limited, but essential to validate the conclusions drawn from the large prospective randomised clinical trials.

OBJECTIVE

- This study aimed to compare injection intervals and doses per area between ONA and INCO for the treatment of dynamic facial lines as a proxy measure of duration and clinical effect, in a real-world clinical practice setting.

METHODS

- This was a retrospective medical record study review conducted at two dermatology centers in Canada that treated patients for temporary improvement of dynamic facial lines.
- All patients' information collected was de-identified prior to conducting the analysis.
- All patients included in the analysis were switched from ONA to INCO after INCO (Xeomin Cosmetic) had been granted Health Canada approval in April 2012.
- As part of routine clinical practice, patients signed an informed consent, which was written in a generic manner.
- The discussions between the patient and the physician were also non-specific (i.e. the brand names of the neuromodulator used were never mentioned to the patients).
- In total, 175 patients were included in the analysis which collectively comprised 689 injection sessions.
- Data collected included doses (U), areas of injection or muscles treated and injection visit dates.
  - Injection intervals and total dose per treatment area were used as proxy measures of duration and relative potency, respectively.
- Analysis was performed on single isolated areas (i.e., glabellar region, crow's feet and frontalis).

RESULTS

- The study population was representative of a typical patient seeking neuromodulator treatment (**Table 1**).

Table 1. Patients' demographics

Characteristics	
Age*	
Mean, years	56
Range, years	31–89
Gender	
Male, n (%)	13 (7.5%)
Female, n (%)	160 (92.5%)

*Age at last treatment cycle.
Gender not available for 2 patients.

- No significant difference between INCO (105.0 ± 29.8 days) and ONA (107.3 ± 28.4 days) injection interval was observed (**Table 2**).

Table 2. Treatment interval lengths

	Mean interval length (days)	SD (days)	# cycles	p-value
IncobotulinumtoxinA	105.00	29.75	297	
OnabotulinumtoxinA	107.30	28.37	392	0.30

- The mean dose used to treat glabellar lines was higher (p=0.03) with ONA (23.3 ± 6.3U) vs. INCO (22.2 ± 6.4U) (Table 3), but was not considered clinically relevant.
- Similarly, the mean dose used to treat crow's feet was also greater (p=0.01) with ONA (14.2 ± 9.3U) vs. INCO (12.0 ± 8.8U) per side (**Table 3**), but not clinically relevant.
- The mean doses used to treat the frontalis were not statistically different (ONA: 8.5 ± 4.7U vs. INCO: 8.2 ± 5.2U) (**Table 3**).

Table 3. Doses per treatment area

	Average dose (Units)	SD (Units)	p-value
Glabellar lines			
IncobotulinumtoxinA	22.23	6.40	
OnabotulinumtoxinA	23.31	6.32	0.03
Crow's feet lines (per side)			
IncobotulinumtoxinA	12.00	8.82	
OnabotulinumtoxinA	14.21	9.25	0.01
Frontalis lines			
IncobotulinumtoxinA	8.29	5.28	
OnabotulinumtoxinA	8.51	4.66	0.75

CONCLUSIONS

- Results suggest that inter-injection intervals and dose utilization of INCO and ONA are comparable for aesthetic treatments of dynamic facial lines.
- These data, collected in a real-world clinical setting, support previous studies which reported a clinical dose conversion ratio of 1:1.

References: 1. Kerscher M et al. J Drugs Dermatol 2013;12:e111–20. **2.** Canadian Xeomin Cosmetic Product Monograph, May 2018. **3.** US Xeomin Cosmetic Product Monograph, July 2018. **4.** RCP Bocouture, Merz France, 2018. **5.** Kane MA et al. Dermatol Surg 2015;41:1310–9. **6.** Sattler G et al. Dermatol Surg 2010;36(Suppl 4):2146–54. **7.** Benecke R et al. Neurology 2005;64(11):1949–51. **8.** Roggenkämper P et al. J Neural Transm (Vienna) 2006;113(3):303–12.

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