

## Letter to the Editor

### Do different formulations of botulinum toxin type A really have different migration characteristics?

The dose units of the two main botulinum toxin A products are not equivalent, and there is continuing controversy about the appropriate dose conversion ratio. Cliff *et al.*<sup>1</sup> report on a study of anhidrotic halos after injections of Dysport and Botox to the forehead at a dose ratio of 3 : 1. They note that the areas of the halos are significantly greater after Dysport and conclude that this product diffuses more. Similar results and conclusions have been published by de Almeida and De Boule.<sup>2</sup> Both studies were sponsored by Allergan. We performed a non-commercially sponsored study on the effects of Dysport and Botox at a dose ratio of 3 : 1 on forehead wrinkles and electromyographic activity, and found Dysport to have significantly more effect on both.<sup>3</sup> We therefore agree with the results of Cliff *et al.* but not their conclusion. The simplest explanation for both sets of results is that the dose of Dysport is higher (i.e., a ratio 3 : 1 is too high). In this context, it should be noted that the registered doses of Dysport and Botox/Vistabel for glabellar frown lines are 50 and 20 units, respectively (i.e., a unit ratio of 2.5 : 1). Although

higher ratios are often quoted in the literature, more modern investigations in human models suggest that the correct conversion ratio is around 2.5 : 1 or lower and physicians using both products should be aware of this issue and not overdose with Dysport.

Syrus Karsai, MD<sup>1</sup> & Christian Raulin, MD<sup>1,2</sup>

<sup>1</sup>Laserklinik Karlsruhe, Karlsruhe, Germany, <sup>2</sup>Department of Dermatology, University of Heidelberg, Heidelberg, Germany

### References

- 1 Cliff SH, Judodihardjo H, Eltringham E. Different formulations of botulinum toxin type A have different migration characteristics: a double-blind, randomized study. *J Cosmet Dermatol* 2008; **7**: 50–4.
- 2 De Almeida AT, De Boule K. Diffusion characteristics of botulinum neurotoxin products and their clinical significance in cosmetic applications. *J Cosmet Laser Ther* 2007; **9** (Suppl. 1): 17–22.
- 3 Karsai S, Adrian R, Hammes S, Thimm J, Raulin C. A randomized double-blind study of the effect of botox and dysport/reloxin on forehead wrinkles and electromyographic activity. *Arch Dermatol* 2007; **143**: 1447–9.

---

Correspondence: Syrus Karsai, MD, Laserklinik Karlsruhe, Kaiserstrasse 104, 76133 Karlsruhe, Germany. E-mail: info@raulin.de