

Upper Face Injection Technique with DaxibotulinumtoxinA Positively Influences Observer Perceptions

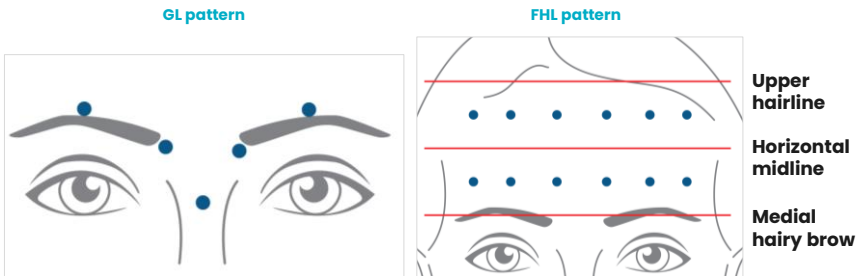
Heike Klepetko MD,¹ Brian S Biesman MD FACS,² Julia Sparrow PhD,³ Jason Stephenson PhD,³ Todd Gross PhD,³ Conor J Gallagher PhD³
¹Radetzky Villa Private Clinic, Vienna, Austria; ²Vanderbilt University Medical Center, Nashville, TN; ³Revance, Nashville, Tennessee, USA

Introduction

- Previous analyses of daxibotulinumtoxinA for injection (DAXI) studies have identified aspects of glabellar (GL) injection technique that produce natural eyebrow position and enhance social perceptions such as trustworthiness and attractiveness.^{1,2}
- Treatment of the frontalis can often over-weaken this muscle leading to brow drop, with undesirable aesthetic outcomes.¹
- In this analysis of a phase 2 study of the efficacy, safety and effect on skin quality of DAXI treatment of the GL and forehead lines (FHL) we evaluate the impact of optimized DAXI injection patterns in the frontalis and glabella on observer and self perceptions.

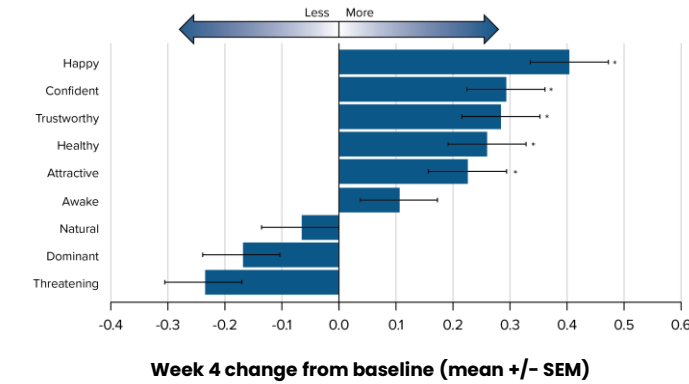
Methods

- Subjects with moderate to severe GL/FHL and visible static lines and/or visibly rough skin texture were included.
- Dosing: subjects received 40U of DAXI in the GL (8 U in 5 injection sites) and 24 U of DAXI in the FHL (2 U in 12 injection sites) using an optimized injection pattern. Frontalis injections were placed in two rows relative to the horizontal midline (HM), with the lower row halfway between HM and the medial hairy brow, and the upper row halfway between the upper hairline; the muscle was targeted just below the skin.
- Assessments: Ratings of wrinkle severity, clinical photographs, and patient-reported outcomes (FACE-Q scale evaluating satisfaction with the appearance of forehead and eyebrows) were obtained at baseline and 4 weeks after treatment.
- Photographs were analyzed using a validated machine-learning artificial intelligence (AI) algorithm trained to assess facial first impressions.
- Scores were generated across 9 different social perception domains including: attractive, trustworthy, awake, happy, dominant, healthy, threatening, confident, and naturalness.



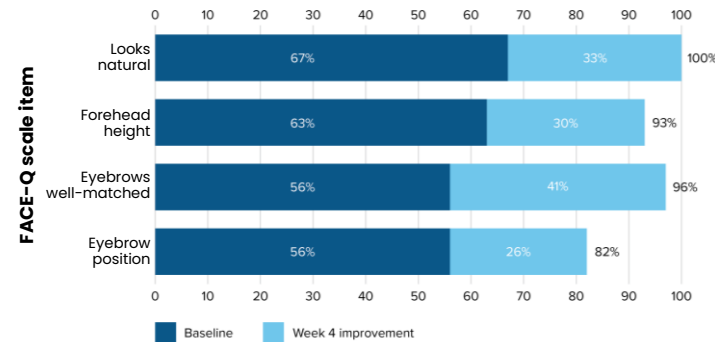
Results

Figure 1. Change from baseline in measured attributes at Week 4



N=27, *p<0.05 (change from baseline), Threatening p=0.053

Figure 2. FACE-Q item analysis: satisfaction with forehead and eyebrow treatment at Week 4



- High patient satisfaction was observed at Week 4 on forehead and eyebrow FACE-Q items, specifically: Naturalness (100%), Eyebrows Well Matched (96%), Forehead Height (93%), and Eyebrow Position (82%)

Figure 3. Patient example of measured attributes at Week 4



Conclusions

These results demonstrate an optimized DAXI injection paradigm in the upper face enhanced AI-assessed first impressions across multiple traits.

- Despite the inclusion of a row of injection points in the lower half of frontalis, social perception was enhanced and subjects indicated high satisfaction with forehead and eyebrows. This may be related to DAXI's low spread following injection and lower dosing across multiple injection points.
- When combined with an optimized GL injection pattern, this DAXI-specific treatment paradigm preserved naturalness in the upper face, and participants were perceived as being more attractive, trustworthy, happy, healthy, confident, and less threatening.
- These findings support the importance of injection techniques on facial first impressions and patient-reported satisfaction with forehead and eyebrow appearance following treatment.

References 1. Salish N, et al. Optimized aesthetic outcomes when treating glabellar lines with botulinum toxin type A: GLO 3 + 2: a precise technique based on anatomy. *Plast Reconstr Surg Glob Open*. 2024;12(3):e5650. 2. Klepetko H, et al. Impact of eyebrow position on facial first impressions: comparison of four injection techniques with botulinum toxin type A for treating glabellar lines. Presented at the ASDS Annual Meeting, October 17-20, 2024; Orlando, FL. 3. Stone HF, et al. Characterization of diffusion and duration of action of a new botulinum toxin type A formulation. *Toxicon*. 2011;58(2):159-167. 4. Mariwalla K, et al. Clinical benefits of daxibotulinumtoxinA for injection: beyond glabellar line effacement? *Dermatol Surg*. 2024;50(9S):S18-S23.

Disclosure This study was sponsored by Revance, Nashville, TN, USA.