Physician Confidence in Fillers and Neurotoxins: A National Survey

Reservations regarding the use of neurotoxins and facial fillers inevitably arise for both patients and physicians. Patients look to their physicians for reassurance and guidance regarding the safety and efficacy of various materials. Nothing speaks louder than trusting a procedure performed on ourselves. We decided to explore and probe further into the use and ultimately the trust we have in these products. Pursuing the most transparent method possible, we distributed an anonymous survey to reveal whether aesthetic surgeons as a group take our own advice by using these products. Specifically, which injectable products do we prefer and have enough confidence in enough to use on ourselves? This information would likely provide some insight into our clinical practices and further convey our industry’s confidence in and commitment to these types of products.

To gather the necessary information we developed an anonymous survey that was sent to members of the 4 core aesthetic specialties: facial plastic surgery, dermatology, plastic surgery, and oculoplastic surgery. The survey was specifically aimed at the use of botulinum toxin and the most commonly used fillers. Fillers included hyaluronic acid, calcium hydroxylapatite, poly-L-lactic acid, and polymethylmethacrylate. Surgeon demographics were collected along with history of self-injection and administration by colleagues.

Methods. A brief 10-question survey was formulated and dispersed via e-mail to the 4 aforementioned core aesthetic specialties in the United States. The questions were corroborated by a leading member of each of the 4 specialties listed. The National Injectables Survey was sent to a total of 6546 surgeons via e-mail. The questions were listed in multiple-choice, check-box format with single or multiple answers available dependent on the question presented. Free text responses were allotted for 3 of the questions to gather additional data.

Questions 1 and 2 inquired about the use of botulinum toxin and fillers by the participants. Questions 3 to 5 reviewed demographics. Question 6 asked if the participant had ever been injected with either botulinum toxin and/or facial fillers. Question 7 asked about self-injection of either product. Question 8 asked those who had been injected with fillers which specific products they would avoid self-injection with. Questions 9 and 10 asked those who do not self-inject who they enlist to inject for them.

Results. Of the 6546 surveys dispersed, a total of 599 were completed. Responses to the survey were collected over a 3-month period from February through April 2011. The data were analyzed independently and anonymously using the SurveyMonkey Web site and data analyzer.

According to our survey, 98% of those who responded offer botulinum toxin in their practice, whereas 96% inject various facial fillers (Figure 1). Of those offering facial fillers, nearly 100% (571 of 572) use hyaluronic acid. In order of decreasing frequency, calcium hydroxyapatite (70% of responders), poly-L-lactic acid (50%), and polymethylmethacrylate (11%) were carried and used in the various practices (Figure 2).

Demographics of respondents acquired included age range, sex, and surgical specialty. Most surgeons in this...
survey were male (65% vs 35% female), with the majority of participants (61%) ranging in age from 36 to 55 years. Notably, most of those responding were in the field of dermatology and dermatologic surgery (46%), the greater proportion of whom were female. In contrast, the remaining specialties were composed mainly of male surgeons.

Our results indicate that a large subset of the physicians participating in this study have been injected with either neurotoxin or fillers. An impressive 70% confirmed that they have been injected with botulinum toxin, whereas a lesser proportion (40%) have been injected with fillers. Remarkably, roughly half (46%) of the physicians who have been injected with botulinum toxin and a fifth of those injected with fillers (21%) have actually injected themselves (Figure 1).

Of the 102 participants who confirmed self-injection with fillers, 96 attested to which types of fillers they would inject themselves with. Responders seemed to be least averse to hyaluronic acid as 81% of those responding would self-inject with this type of filler; 45% would use calcium hydroxyapatite, and 43% would use polymethylmethacrylate, whereas only 30% would use poly-L-lactic acid (Figure 2).

Those injected by another practitioner were asked to reveal which type of colleague they would elect to perform their injection for either botulinum toxin or fillers. Not surprisingly, for the application of botulinum toxin, 65% would prefer a physician colleague; 27% reported treatment by a certified physician assistant (PA), certified registered nurse anesthetist (CRNA), or registered nurse (RN); and 8% would choose another type of medical assistant or aesthetician. When dealing with facial fillers, it seems as though a larger percentage (76%) would prefer injection by a physician colleague, whereas 22% have opted for injection by a certified PA, CRNA, or RN, and only 2% would permit a medical assistant or aesthetician to perform the procedure. The allotted free text responses suggest that the participants in this study for the most part prefer to be injected by colleagues in the same field.

Comment. This brief survey reveals notable support for the injection of neurotoxins and facial fillers both by and to aesthetic physicians from the 4 core specialties. Amazingly, almost half of those responding have gone further by actually injecting themselves with botulinum toxin, whereas 21% of respondents have reported self-injection with fillers. Of those physicians who chose others to inject them, two-thirds trusted a physician colleague, and 27% a PA, CRNA, or RN. Eight percent were injected by lesser credentialed individuals. Fillers commanded a higher level of injector: 76% of physicians trusted a fellow physician; 21% chose a PA, CRNA, or RN; and only 2% allowed injection by other, non-medically credentialed individuals.

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Author Affiliations: American Board of Facial Plastic and Reconstructive Surgery, Alexandria, Virginia (Drs Pearlman and Kane); Department of Otolaryngology–Head and Neck Surgery, Columbia University, New York, New York (Dr Pearlman); Department of Otolaryngology–Head and Neck Surgery, New York Presbyterian Hospital–Columbia/Cornell University, New York (Dr Talei); American Board of Dermatology, Detroit, Michigan (Dr Waldorf); Department of Dermatology, Mount Sinai School of Medicine, New York (Dr Waldorf); Department of Surgery, Manhattan Eye, Ear, and Throat Hospital, New York (Dr Kane); and Department of Ophthalmology, Oregon Health and Sciences University, Portland (Dr Dailey).

Correspondence: Talei, Department of Otolaryngology-Head and Neck Surgery, New York Presbyterian Hospital–Columbia/Cornell University, 1320 York Ave, Ste 22J, New York, NY 10021 (muybenno@aol.com).

The Effect of Rhinoplasty on Perceived Age

The aging nose tends to undergo characteristic changes. With increasing age, there is weakening of the major and minor nasal tip support mechanisms leading to nasal tip depression and development of the so-called dorsal pseudohump. Furthermore, ligamentous laxity leads to lobular descent, causing nasal lengthening and counterrotation. Posterior-superior remodeling of the premaxillary bony skeleton, which acts as the platform for the nasal base (ie, midface retraction), also contributes to a more acute nasolabial angle (NLA).2-4

Steven J. Pearlman, MD
Benjamin A. Talei, MD
Heidi A. Waldorf, MD
Michael A. C. Kane, MD
Roger A. Dailey, MD

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