

# Safety of Storing and Reusing Hyaluronic Acid Fillers: A Retrospective Chart Review

Patrick K. Safo, MD, PhD; Christina Wahlgren, MD; Suzan Obagi, MD

Injectable dermal fillers are an integral component of cosmetic dermatology for soft tissue augmentation. Many patients request intermittent, subtle augmentation that does not require use of the complete syringe of filler material. The ability to safely store and reuse dermal fillers is of paramount importance to the cosmetic dermatologist. We investigated potential infectious complications associated with the reuse of hyaluronic acid (HA) dermal fillers stored in a medical-grade refrigerator. We performed a retrospective review of patient records for infectious complications associated with the use of stored HA fillers (Restylane and Juvéderm Ultra Plus) from January 1, 2007, to May 31, 2009. No infections were associated with the reuse of stored HA fillers. The number of syringes reused during this time period was 83 of Restylane and 199 of Juvéderm Ultra Plus. Patients were retreated at mean days of 190 (7–456 days) and 195 (5–490 days) with stored Restylane and Juvéderm Ultra Plus respectively. Even with subsequent reuse, 12.9% of the stored Restylane and 13.6% of the stored Juvéderm Ultra Plus syringes were incompletely used and discarded after 1 year of storage or upon their expiration date. This large-size, retrospective study shows that there is minimal risk of bacterial infection associated with the use of stored HA fillers.

**S**tabilized hyaluronic acid (HA) gels compose the majority of dermal fillers used by practitioners for soft tissue augmentation.<sup>1,2</sup> The low immunogenicity, long duration of tissue correction, and reversibility of these

agents with hyaluronidase have contributed to the increased use of HA fillers.<sup>1,3,4</sup> Because a growing number of patients request subtle tissue augmentation that requires small filler volumes, it is common to incompletely use the contents of filler syringes obtained from the manufacturer. A major concern for reuse of stored syringes is bacterial contamination of the product with increased risk for infectious complications in patients. Bellew et al<sup>5</sup> demonstrated an absence of cultured bacteria (aerobic and anaerobic) from 30 partially used HA filler syringes stored for up to 9 months at room temperature. Similarly, Bhatia et al<sup>6</sup> observed no bacterial growth in cultures from the contents of 34 HA filler syringes stored for up to 12 months at room temperature. However, there are no studies documenting the potential infectious complications associated with reuse of stored HA fillers in vivo in patients. Using a larger study population and a different

*Dr. Safo is a resident and Dr. Wahlgren is a former resident at the Department of Dermatology, Cosmetic Surgery & Skin Health Center at the University of Pittsburgh Medical Center, Pennsylvania. Dr. Wahlgren is now in private practice in Seattle Washington. Dr. Obagi is Associate Professor of Dermatology, Associate Professor of Surgery-Division of Plastic Surgery, and Director, Cosmetic Surgery & Skin Health Center, University of Pittsburgh Medical Center.*

*The authors report no conflict of interest in relation to this article.*

*Correspondence: Suzan Obagi, MD, Cosmetic Surgery and Skin Health Center, Blaymore II, 1603 Carmody Ct, Ste 103, Sewickley, PA 15143 (obagimd@gmail.com).*







