

Because of their versatile and accessible nature, soft-tissue fillers lend themselves to a variety of aesthetic applications. Increasing interest in these agents has led to the introduction of new soft-tissue fillers in recent years. As a result, clinicians can now choose among several types of soft-tissue filler substances. Biologically derived fillers include bovine and human collagen, autologous fat, and hyaluronic acid. Synthetic fillers include silicone and “permanent implantables,” such as expanded polytetrafluoroethylene.¹ Most recently, Restylane (a nonanimal hyaluronic acid product) (Medicis, Scottsdale, Ariz.) and Sculptra (injectable poly-L-lactic acid) (Dermik Laboratories, Berwyn, Pa.) have been approved for facial use in the United States. As noted by Tzikas in his review of soft-tissue fillers for facial augmentation, existing options are not without their limitations. For example, biological products such as collagen may be limited by rapid resorption or biodegradation or immunologic reactivity. Although it has been shown by Shepard et al. that non–cross-linked hyaluronic acid stimulates fibroblasts and collagen formation, cross-linked hyaluronic acid does not stimulate fibroblast and collagen formation.² Silicone has been associated with chronic inflammation, persistent foreign body reaction, or granulomas. Constriction of expanded polytetrafluoroethylene under the skin and visible extrusion has been reported following injection. In the search for injectable fillers that are both long lasting and biocompatible, clinicians are looking at potential compounds outside the aesthetic marketplace but with potential aesthetic applications. One such compound is calcium hydroxylapatite (Radiesse; BioForm Medical, San Mateo, Calif.), which is presently approved for use in the United States in injectable form for oral/ maxillofacial defects and as a radiographic tissue marker. Furthermore, Radiesse is approved for soft-tissue augmentation in patients with vocal fold insufficiency and stress urinary incontinence. Radiesse is a formulation of calcium hydroxylapatite in a carrier-based gel. The off-label use of Radiesse for facial soft-tissue augmentation and other aesthetic applications, such as nasolabial folds, marionette lines, and glabellar lines has been well documented in the literature.^{3–10} Current alternatives for nasal shaping are limited to surgical procedures requiring general anesthesia, postoperative recovery time, and significant cost. Providing a nonsurgical alternative to traditional rhinoplasty to correct minor defects of the nasal dorsum would be a welcome addition to the physician’s choice of procedure. This article describes our experience with the use of Radiesse for nonsurgical nasal contouring in 24 patients ranging in age from 28 to 72 years. RADIUSSE Radiesse is an amalgam of uniform calcium hydroxylapatite particles (25 to 45 m), suspended in an aqueous carboxymethylcellulose carrier gel that can be injected by means of a fine-gauge needle. The synthetic calcium hydroxylapatite in Radiesse is composed of calcium and phosphate ions, identical in composition to the mineral portion of human bone and teeth. Thus, calcium hydroxylapatite particles are inherently biocompatible and are metabolized through similar mechanisms as the natural compound. By nature, calcium hydroxylapatite is a nonirritant to the body. The gel ingredients are classified as “generally recognized as safe” by the U.S. Food and Drug Administration.¹¹ The biocompatibility and safety of calcium hydroxylapatite have been extensively studied in vivo and in vitro. The small particle size, proven safety and biocompatibility, and relative durability sugReceived for publication May 31, 2006; accepted November 16, 2006. Copyright ©2008 by the American Society of Plastic Surgeons DOI: 10.1097/PRS.0b013e3181712368 Disclosure: Dr. Becker has received consulting fees for his

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