Rhinoplasty is arguably one of the most difficult procedures to perform in plastic surgery. Subtle defects of only a few millimeters can mean the difference between a satisfied and unsatisfied patient. In some cases, nasal defects can be addressed by revision surgery; revision rates are estimated to range from 4 to 7%, although revisions are probably greatly underreported. Yet nasal revision surgery has potential drawbacks. For example, it can increase the risk of nasal collapse or worsening of the deformity. Moreover, many patients may not be good candidates for surgical revision for financial, physical, or psychological reasons. For these patients, minor contour irregularities may be addressed and effectively improved with an office-based injectable implant.

Several injectable fillers have been used for augmenting nasal defects. Hyaluronic acids and collagen are well accepted by physicians and patients alike, but the expected correction lasts only days to weeks. Silicone has been reported to be very successful in permanently filling and correcting nasal defects, but there is always the risk of a long-term complication such as granuloma formation or a persistent foreign-body reaction. Also, in view of...
silicone's permanent nature, its presence may make any future revision surgery extremely difficult.

Radiesse is a long-lasting implant material that has been approved by the federal Food and Drug Administration (FDA) for the treatment of oral and maxillofacial defects, for vocal fold augmentation, for radiographic tissue marking, and for other indications that are under review. The compound is made up of calcium hydroxylapatite particles suspended in a carboxymethylcellulose gel. It is a sterile product that is injected directly into the desired area. Although Radiesse is not approved by the FDA for the augmentation of facial soft tissues, it is commonly used off-label to correct age-related facial deformities such as wrinkles, folds, and other depressions.

One of the many advantages of Radiesse is its durability. It has been reported to be effective for up to 18 months in facial soft tissues. Injections with Radiesse have been associated with high patient satisfaction, little downtime, and a low risk of complications. The most commonly reported side effects—mild bruising, nodularity, and overcorrection—are temporary.

Within the past 2 years, we have used Radiesse to treat 8 patients who had nasal defects (figure). We have experienced high patient satisfaction and long-lasting results with Radiesse injections for minor nasal defects, especially those that involve the bony dorsum or radix. Persistent convexity of the dorsum can be camouflaged with the implant placed into the radix and into the supratip area.

Each of our patients received between 0.3 and 1.6 ml of Radiesse. A 27-gauge needle was used to inject the implant into the subcutaneous tissues or into a subperiosteal plane at the nasal defect. The material was then massaged and shaped into place. Only a topical anesthetic was necessary, and patients reported minimal discomfort. Improvement was immediate, and patients were discharged from the office within minutes of the completion of the procedure. Bruising and swelling were minimal. Patient and physician satisfaction with the result lasted approximately 1 year, and we have observed no significant adverse events.

We have also performed rhinoplasty revision surgery on a patient who had received 0.6 ml of Radiesse 14 months earlier. Her surgery was performed uneventfully and without unanticipated difficulty. No residual implant material was noted, nor were there any significant changes in the skin/soft-tissue envelope to compromise surgical techniques.

Many patients today desire rapid office-based solutions to their problems. Injection with Radiesse is a potential option for improving the appearance of bony nasal defects and contour irregularities in some patients. It can be injected without significant concern about long-lasting complications and without compromising future surgical revision. While surgery is the optimal choice for improving nasal defects, Radiesse is a possibility for those for whom this is not practical.

References
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