

Injectables in the Nose

Facts and Controversies



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KEYWORDS

• Injectable • Filler • Nasal reconstruction • Hyaluronic acid • Triamcinolone • Rhinoplasty

KEY POINTS

- All injectable types have been reported to cause rare but serious ocular and cerebral complications; exercise even greater caution following nasal surgery because the altered blood supply may increase risk.
- Hyaluronic acid is commonly used to smooth out minor irregularities following nasal surgery; hyaluronidase may be used to minimize the severity of complications. Hyaluronic acid lasts longer in the nose compared with other areas of the face.
- Autologous fat is commonly injected into the post-rhinoplasty nasal deformity, particularly when significant volumes are needed.
- Steroid injections may be used to reduce edema and scarring following nasal surgery and nasal reconstruction.
- Skin resurfacing can improve scars, and is especially useful for full-thickness skin grafts and paramedian forehead flaps.

INTRODUCTION

The use of injectable fillers has soared over the past 10 years. The American Society of Plastic Surgeons reports an increase from 650,000 filler procedures in 2000 to 2.3 million procedures in 2014.¹ As with many new technologies and medications, increased experience by physicians has led to “pushing the envelope” and using the materials for ever-increasing indications.²⁻⁵ Before the current era, medical-grade silicone injections had been used for many years to correct thousands of postrhinoplasty deformities with good success; however, the use of this product was not specifically US Food and Drug Administration (FDA) approved for the nose, was associated with several complications, and its use was therefore controversial.⁶ Safe new injectable biomaterials

have fueled the current surge in use, but none of them are FDA approved for the nose. Despite this fact, nonsurgical primary, revision, and reconstructive injectable rhinoplasty has gained popularity. This article discusses the use of injectable fillers in the nose. In addition, it examines the use of autologous fat injections as well as the use of dermabrasion in nasal reconstruction.

THE NEW RECONSTRUCTIVE LADDER

The goal of facial and nasal reconstruction is to allow patients to return to their pre-morbid condition with as little stigma from the deficit as possible. As with every reconstructive situation, strong consideration should be given to the least invasive but appropriate method first, and then clinicians may consider other options from

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elsewhere on the reconstructive ladder (**Fig. 1**). Surgery remains the gold standard for safe, long-term correction of nasal abnormalities, both functional and aesthetic. The role of fillers in the nose continues to be explored, and is not considered standard of care for the long-term management of nasal defects. This article presents controversies associated with the use of different types of injectables in the nose, different injection techniques, side effects, complications, and histologic findings.

OVERVIEW OF NASAL INJECTABLES

The term nasal injectable in this article is used to mean any substance injected into the nose to physically alter the appearance of the nose. This use differs from medications injected into the nose, such as corticosteroids or botulinum toxin, that alter the healing or functional properties. **Table 1** represents a background classification of the basic characteristics and functional properties of injectables, which is essential to understanding the ideal uses of the different injectables.

INJECTABLE FILLERS

Hyaluronic Acids: Restylane, Juvaderm, Belotero

Hyaluronic acid (HA) products (Restylane, Juvaderm, Belotero, and others) have been used

as adjuncts following rhinoplasty or nasal reconstruction to adjust minor deformities. In addition, they have been used as stand-alone tools for primary injectable rhinoplasty and nasal reconstruction. The most commonly reported applications of HA fillers include the correction of tip ptosis, dorsal irregularities, dorsal hump camouflage, and saddle deformity. These irregularities may occur as a result of prior trauma or genetic predisposition, or may be iatrogenic following nasal surgery.

To address a drooping, ptotic nasal tip, which is commonly seen in Asian women, Han and colleagues³ described multiple injections at the suprapariosteal, supraparichondrial, intramuscular, and subcutaneous layers. Layering the HA in multiple planes was thought to prevent the dorsal widening that can be seen with suprapariosteal injections alone. In addition, the investigators speculated that the use of both sharp needles and blunt cannulas may help minimize the risk of intravascular injection in higher-risk vascular regions. Han and colleagues³ used EME (Love II), a different HA than is used in the United States and that requires the use of larger gauge needles and cannulas as it is more viscous, has a higher N', and contains more HA per milliliter relative to Restylane and Juvaderm. In their series of 280 patients, there are no reports of skin necrosis or ocular complications.³

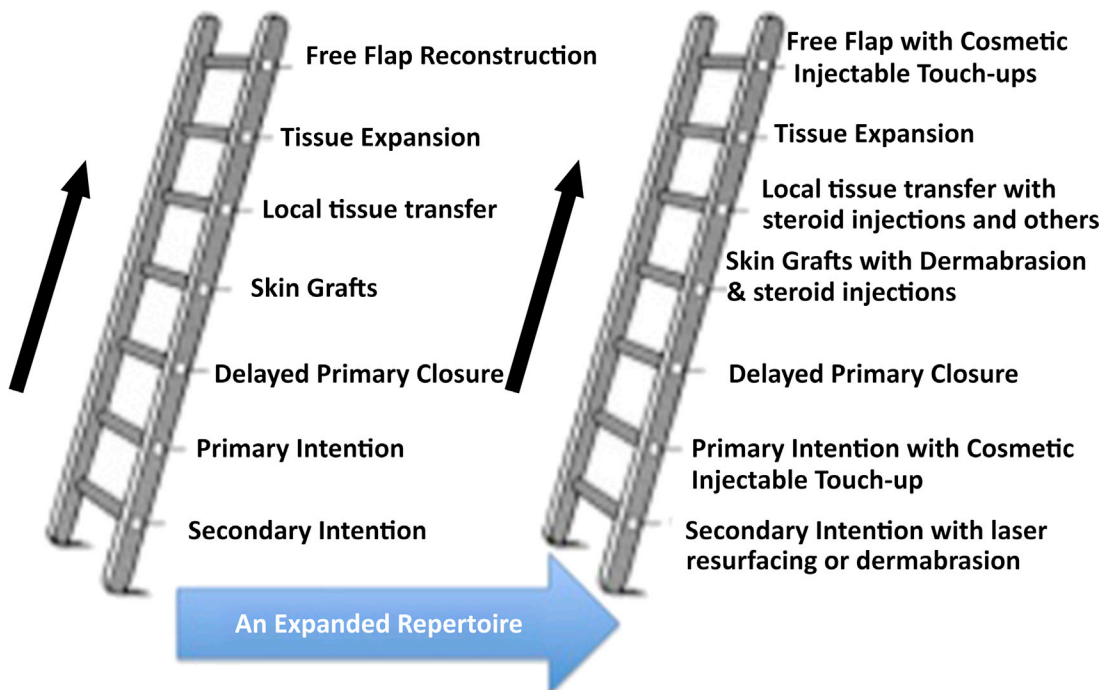


Fig. 1. The new reconstructive ladder.

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