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Filler rhinoplasty (non-surgical nose job)

Dolgu ile rinoplasti (cerrahi olmayan burun estetiği)

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1-What are the risks associated with surgical rhinoplasty?

Procedural complications, such as asymmetries, infection, numbness, extrusion of prosthetic implants, morbidity associated with autologous cartilage harvesting and adverse reactions to anaesthesia.

2-Is there a non-surgical alternative to surgical rhinoplasty?

Yes. Filler rhinoplasty is a quick, non-surgical procedure that can produce outcomes comparable to rhinoplasty surgery.

3-What are the advantages of hyaluronic acid filler rhinoplasty?

It is minimally invasive, which can be done conveniently in an office setting. It provides immediate visible results without the downtime associated with surgery. Importantly, reversibility of the treatment is achievable with the administration of hyaluronidase.

4-What are the components of standard whole nose augmentation?

Nasal dorsum augmentation, tip rotation, and nasal tip augmentation.

5-What is the most important risk of filler rhinoplasty?

Vascular complications, such as skin necrosis and visual loss.

Case report

A 33-year-old woman was referred for non-surgical filler rhinoplasty. Dermatological examination of the nose revealed under-projected tip and a slight dorsal depression in the radix (Figure 1).

We cleansed the face thoroughly of all makeup and applied a topical anesthetic cream containing lidocaine and prilocaine, 30 minutes before injections. We used octenidine dihydrochloride as an antiseptic to prepare the nose just before injections. As lifting/supporting effect was desired, a relatively high viscosity and G prime, cross-linked hyaluronic acid (HA) gel product was used. We used a 30 gauge sharp needle for injections. In order to reduce the risk of vascular complications, syringe aspiration was performed before injection to check possible puncture of the vessel. To avoid serious complications, slow, low-pressure injections were performed, depositing small amounts of filler. The injections were done deep into the supraperiosteal or supraperichondrial plane, which are not vascular, not in the soft tissue itself.

Tip rotation or correction of nasolabial angle is indicated for patients with droopy nasal tip. During the tip rotation, the filler is injected mainly into the columella and around the anterior nasal spine at the nasolabial junction. This increases the nasolabial angle and causes the cephalic rotation of the nasal tip[1,2]. In our patient, 0.15 cc HA filler was injected over the nasal spine to fill the columella-labial angle for tip rotation (Figure 2).

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Figure 1. Preoperative photograph of side view. Ill-defined nasal tip and low radix

Figure 2. About 0.15 cc filler was injected over the nasal spine to fill the columella-labial angle for tip rotation

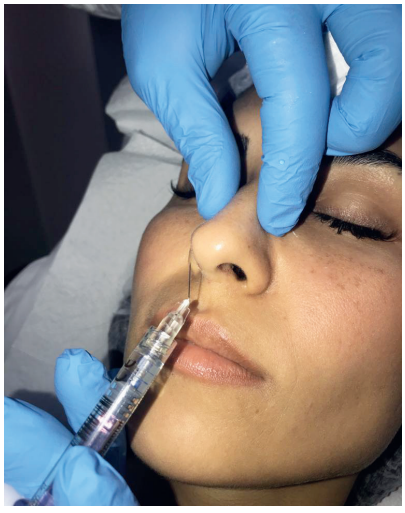

Figure 3. The needle bended about 75°

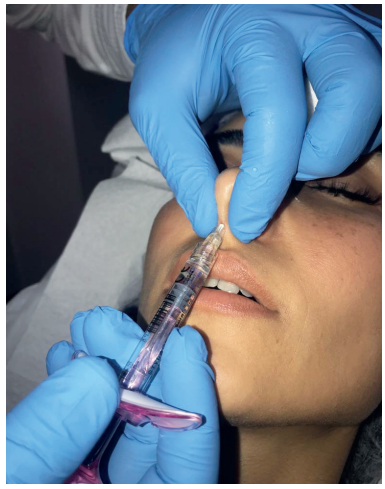

Figure 4. Injection of the infratip region

Figure 5. Second tip injection point was calculated according to the length of the needle

The single most common indication for filler rhinoplasty is increasing tip definition. Nasal tip augmentation is suitable for patients with bifid or weak tip. Injection of the infratip region is performed below the nose. The needle bended about 75° (Figure 3) and penetrated from columella to infratip side and 0.10 cc HA filler was injected centrally. The plane of injection is just overlying the medial crura cartilages of the lower portion of the nose for tip definition (Figure 4). Second tip injection point was calculated according to the length of the needle (Figure 5).

Centrally, 0.15 cc HA filler was injected, over the perichondrium of major alar cartilages for tip definition (Figure 6). As the nose is a tight skin region, minimizing the number of needle insertion sites is important to prevent extrusion of the filler through a prior needle entry site.

For the dorsum of the nose, the starting point of the radix was low in our patient and we would like the nose to start at a higher point. Since the dorsal nasal arteries run along the lateral aspect of the dorsum, midline injection was performed. Perpendicular direct percutaneous injection was performed and 0.2 cc HA filler was injected.

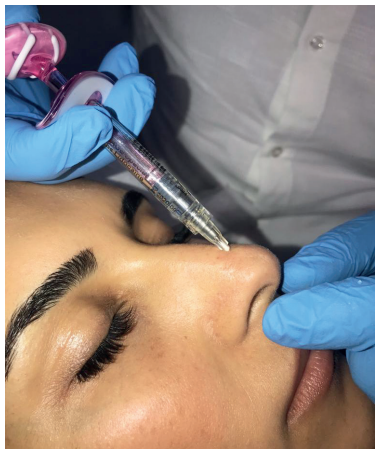

Figure 6. Centrally, 0.15 cc filer was injected, over the perichondrium of major alar cartilages for tip definition

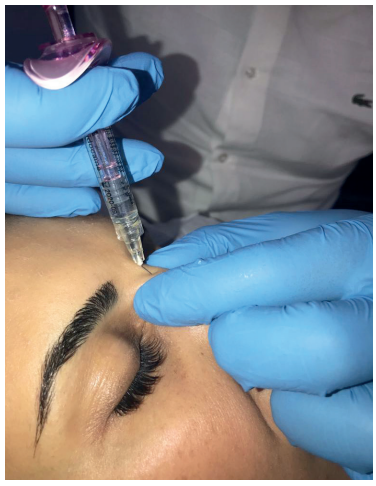

Figure 7. Perpendicular direct percutaneous injection to radix was performed and 0.2 cc filler was injected. The thumb and second finger of the other hand are used to apply digital pressure to prevent lateral migration of the filler and to collapse the dorsal nasal arteries while injecting

Figure 8. Immediate postoperative photograph of side view. The result is immediate. The procedure resulted in a well-elevated and augmented nasal tip. The low radix is flattened

The thumb and second finger of the other hand were used to apply digital pressure to prevent lateral migration of the filler and to collapse the dorsal nasal arteries while injecting (Figure 7). To inject the filler as deeply as possible, the needle was inserted bevel down once it touched the bone. Gentle massage was applied to distribute the filler evenly to avoid irregularities. The radix area was filled to the level of the slight hump.

In this patient, the total amount of filler injected for filler rhinoplasty was 0.6 cc. The instant result is more aesthetic appearance of the nose with higher nasal bridge and increased tip definition (Figure 8). The treatment was well tolerated, caused only minimal injection discomfort. The patient was asked to come back 2 weeks later for follow-up and possible touch-ups.

Discussion

Filler rhinoplasty has emerged as a good option for those who are afraid of undergoing surgery. Patients can expect duration of effect about 12 months[3].

A successful filler augmentation rhinoplasty can only be based on an accurate anatomical understanding of the nose, because filler augmentation is based on insertion of the needle into an invisible cavity under the skin to reshape the nose[4]. Extreme care must be taken when injecting HA into the nose and knowledge of the arterial supplies are mandatory. The internal carotid system supplies the upper external nose through the dorsal nasal artery, which originates from the ophthalmic artery; therefore, intra-arterial injection may lead to blindness. The external carotid system supplies the lower nose through the lateral nasal arteries and columellar arteries, and intra-arterial injection may lead mainly to skin necrosis. It is known that the main arteries of the dorsum of the nose are located at the level of the superficial or deep fatty layers. Filler injection into the deep supraperiosteal layer minimizes the risk of intra-arterial injection. Dorsal nasal artery is generally known to take a more lateral than central position; therefore, injections should be performed centrally. The measures to minimize vascular complications include using smaller syringes, injecting slowly, gently, and in small aliquots, and never injecting in a previously traumatized area, especially to a nose previously operated for surgical rhinoplasty. Withdrawing before injecting is advised, however, it will not always guarantee safety as the negative pressure may collapse a small vessel. About 1% of patients may develop any vascular complications, mostly skin necrosis. Immediate symptoms of intra-arterial injection are severe pain and blanching. In this case, the injection should be stopped and hyaluronidase and other treatments must be used[1-6].

As the HA fillers have hydrophilic nature, they tend to absorb water. This absorption may increase the augmentation in time. So, we usually prefer slight undercorrection in the first visit; if necessary, it can be corrected easily in the next visit. Overcorrection should be avoided since it will lead to a bulky appearance and even worse; it can compress blood vessels and lead to pressure necrosis. HA fillers can be a valuable tool in the dermatologist's armamentarium of techniques for nasal augmentation. Although fillers carry certain risks, they do have important advantages[3,4].

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