FEATURE

ONLINE
EXCLUSIVE

Runny nose after nonsurgical rhinoplasty – review of cases

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Figure 1: Septum necrosis with skin changes evolution from day 4 to day 7.

Hyaluronic acid filler injections have become a popular procedure worldwide; according to the American Society of Plastic Surgeons (ASPS) from 2019 to 2022 filler procedures have increased by 70% [1].

Non-surgical rhinoplasty is becoming a popular procedure because of the decreased downtime and high patient satisfaction. However, it is also one of the procedures with the highest risk of vascular occlusion and blindness [2]. Hyaluronic acid filler is usually preferred because of the possibility of reversing an adverse event with hyaluronidase. However, up to now, it has been a challenge to reverse adverse events such as blindness and cerebral ischaemia,

especially keeping in mind that filler injection in the nose is the number one cause of blindness and can be complicated by cerebral ischaemia, coma and even death [2]. We can also face other adverse events such as skin necrosis, infection and nodules.

Reports of rare complications

Most publications about nasal complications do not mention septum necrosis as a possibility, so it is important to raise awareness about this rare but devastating complication. Currently there are two case reports regarding filler septal necrosis. Bravo at al., presented a case of septal necrosis in a 29-year-old female which began the same day as the

procedure with associated rhinorrhoea and mild burning in the nose without cutaneous manifestations, and ended up presenting with nasal septal ulceration [5]. Desyatnikova at al. presented a case of septum necrosis with cutaneous manifestations and late treatment due to lack of suspicion and subsequent lack of management, that ended up in a referral for management under ultrasound [6]. It is also possible that many such adverse events are under-reported.

A little bit of anatomy

In the anterior septum a small vascular zone is found, susceptible to bleeding (anterior epistaxis), called Kiesselbach plexus. This plexus has tributaries from the septal branches from superior labial artery, anterior and posterior ethmoid, sphenopalatine and great palatine artery [3]. An ischaemic event from filler-related injection in this zone can lead to further extension to the other vascular areas and result in septal perforation leading to chronic crusting, bleeding, whistling pain, nasal obstruction and cosmetic deformities [4].

Why is this important to consider?

In both cases mentioned above [5,6] a lack of recognition resulted in delayed treatment and management, and in one of the cases [6] the physician could not resolve it, and ultrasound management was crucial for the resolution of the adverse event. Septum necrosis can present with rhinorrhoea and odontalgia with or without cutaneous manifestations.

Procedure

During non-surgical rhinoplasty, multiple injections with filler are made in different zones (radix, rhinon, supra tip, tip, columella, nasal spine) which may result in accidental injection into or around arteries affecting the nasal septum, with or without skin involvement. The vascular anatomy is unpredictable in the nose [7,8] and pre-mapping of vessels with ultrasound should be considered to lower the risk of intravascular injection. However, this is

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operator dependant and not all ultrasound equipment will detect all the vessels. In some circumstances the injector could perform an ultrasound-guided injection.

Advice on good practice

When treating high-risk zones there are some extra things to consider, for example the consent form for hyaluronic acid and hyaluronidase should be signed before the procedure. Having knowledge of the possible complications makes us better able to treat patients and perform better. It's not about making professionals afraid, but it's our responsibility to know what risk each of us are willing to take and handle. Always be prepared and always evaluate the patient face to face. If you perform a procedure, you are responsible, and you need to be there if something goes wrong. This also lends better credence to our careers and as a group in striving for excellence.

Conclusion

Patient and practitioner education is always crucial, especially when high-risk areas are treated. It is very important to recognise, report and be able to refer all cases related to septal necrosis. Reporting to the regulatory bodies will provide further information regarding incidence and raise awareness of this rare complication.

Figure 2: Skin changes from day four to day seven.

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Declaration of competing interests:
None declared.