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Case Report

A mismanaged case of post herpetic nasal stenosis: a salvage story

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ABSTRACT

Acquired nasal stenosis is due to loss of vestibular lining because of scar contracture or direct injury to the lobule-ala-columella complex. We present a patient of Herpes zoster mismanagement with scarring of the right nasal cavity who was treated by placing a stent to achieve nasal patency. A 47-year-old male, previously diagnosed to have Herpes zoster, presented with complaints of right nasal obstruction, discolouration of skin and burning sensation over the right cheek and nose. He had applied an herbal paste given by quacks which led to scarring and hypopigmentation over the face. He tried peeling the scab off which resulted in a skin contracture and right nasal obstruction. Local examination revealed multiple erythematous hypopigmented plaques over the right maxillary region, scarring over the right lateral aspect of the dorsum, ala and tip and a skin contracture causing stenosis of the right anterior nares. The stenosed area was excised and diagnostic nasal endoscopy showed collapse of the ala and the vestibular region in the right nasal cavity. A red rubber catheter was used as a stent and sutured in place at the ala. Postoperatively, nasal cavity patency was maintained. Herpes zoster is usually self-limiting and treatment with analgesics suffices. Antiviral medication and corticosteroids may alleviate severe pain. However, mismanagement of the lesions by taking local herbal paste and medicines can lead to exacerbation of the lesions and complications like nasal stenosis.

Keywords: Post herpetic nasal stenosis, Herpes zoster mismanagement, Nasal stent, Nasal obstruction

INTRODUCTION

Nasal stenosis has various etiologies, like infection, burns, and iatrogenic. Acquired stenosis is a result of loss of vestibular lining because of scar contracture/direct injury to lobule-ala-columella complex.[1] Nasal stenosis results in decreased efficiency in breathing and loss of nasal symmetry. Many surgical techniques have been used to treat nasal stenosis including stents, flaps, and grafts.[1]

Herpes zoster also named as zona or shingles is a common viral disease caused by the reactivation of varicella zoster virus (VZV).[2] Treatment includes antiviral drugs like acyclovir, famciclovir, valacyclovir; corticosteroids like prednisolone, analgesics like NSAIDs, topical therapy like lidocaine and acyclovir ointment, and combination therapy.[3]

CASE REPORT

A 47-year-old male presented to the ENT OPD with complaints of right nasal obstruction for 15 days. Patient had developed vesicles over the right cheek and nose 3 months back and was diagnosed to have Herpes zoster. He had applied a herbal paste given by quacks at his locality, following which he developed discolouration of skin and burning sensation over the right cheek and nose. The patient tried peeling the scab off which led to a skin contracture, scarring and hypopigmentation over the right cheek and nose which resulted in right nasal obstruction.

Local examination revealed multiple erythematous hypopigmented plaques, largest measuring 4×3 cm, interspersed with normal skin, present over the right maxillary region extending up to the lateral canthus of the right eye. External examination of the nose revealed

scarring over the right lateral aspect of the dorsum, ala and tip. Skin contracture was present causing stenosis of the right anterior nares hence Thudicum's nasal speculum could not be passed and the cavity was not visualised (Figure 1-3). Left nasal cavity was normal.

Figure 1: Frontal view (preoperative).

Figure 2: Worm's eye view (preoperative).

Figure 3: Bird's eye view (preoperative).

Preliminary blood investigations were normal and the patient was taken up for surgery under aseptic precautions. 2% xylocaine and adrenaline were infiltrated at the stenosed areas (Figure 4). Stenosed area was excised with the help of no.15 blade, leaving behind the intact alar cartilage and vestibule (Figure 5). Diagnostic nasal endoscopy was performed to check for the patency of the nasal cavities. In the right nasal cavity, collapse of the ala and vestibular region and minimal edema of the lateral wall was present. A red rubber catheter was used as a stent, placed in the right nasal cavity and secured at the ala with 3-0 ethilon. Left nasal cavity was normal.

Postoperatively, patient was symptomatically better and 3 month follow up visits did not reveal any restenosis of the nasal cavity.

Figure 4: Before scar excision (intraoperative).

Figure 5: After scar excision (intraoperative).

DISCUSSION

Acquired nasal stenosis has an assortment of etiologies.[1] Infection from bacterial vestibulitis or herpes zoster virus has been documented to result in nasal stenosis because the anterior nasal mucosa becomes scarred and then contracts. Iatrogenic causes include nasogastric tube

placement, nasotracheal intubation, poor surgical technique, and cauterization of nasal mucosa, all of which can result in narrowing of the nasal aperture. Systemic diseases such as Behçet disease have been documented to cause nasal stenosis. Burns are another common etiology. Stenosis can also result from direct injury to the lobule-ala-columella complex or loss of healthy vestibular lining.[1]

Nasal stenosis results in decreased efficiency in nasal breathing as well as a loss of symmetric nostrils, affecting the quality of life. The deformity can affect any combination of the lobule-columella-ala complex. It may alter the nasolabial relations, especially if the lip is also affected by the scarring process. Ultimately it affects the facial symmetry and facial profile.[4]

The damaged vestibule has a tendency to contract in-spite of well-designed surgical techniques to excise the offending cicatrix and create a new vestibular lining.[5] In this patient, the scarring, hypopigmentation and subsequent nasal stenosis could have been caused by the probable presence of an acidic component in the herbal paste, possessing an erosive property on the skin. Nostril stents are very important and should be kept *in situ* at least 3 months postoperatively.

In a study done by Daya et al nasal stenosis was corrected by release and serial stenting using the following methods: The scar was cored out and the passage either lined with skin graft or allowed to re-epithelialize. The nostril opening was increased in size by z-plasty technique. The nostril was created by a local flap.[6]

Local flap rearrangement, however, is not useful in patients with thick skin with severe nasal stenosis.[6]

The release and serial stenting resulted in a three-dimensional increase in the size of the lobule and most cases demonstrated a significant improvement in the nasolabial relationship and proportions.[7]Authors have disagreed conservative management of nasal stenosis with serial stenting.

Stenting creates a longer columella, improves nasal tip projection, and increases the 3-dimensional size of the lobule. Drawbacks to stenting include ulcers, skin abrasion from adhesive tape, prolonged use of nasal stenting, and low compliance.

In a study done by Ziada, custom made alar stents were used to treat nasal stenosis and all patients reported improvements in nostril dimension, breathing, comfort and appearance. The stents expanded nostril tissues and successfully maintained the nostril diameter for both acquired and congenital stenosis.[4]

In our study, we chose to excise the stenosed area and a red rubber catheter was used as a nasal stent which is cost effective, readily available, easy to maintain and non-corrosive nature.

CONCLUSION

Mismanagement of Herpes zoster lesions by taking herbal pastes and medicines which are not routinely prescribed, can lead to further exacerbation of the lesions and complications like nasal stenosis. This can be managed effectively by excision of the stenosed area under local anaesthesia and stenting with a red rubber catheter for three months.

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