Objective: To present a current review of literature regarding the management of bifid nose deformities. We compared and contrasted the surgical technique and aesthetic outcomes of our patient using an open septorhinoplasty approach with the previously described techniques that involved a dorsal skin incision.

Design: A systematic literature review on bifid nose deformity was performed. We present our case of a 19-year-old male patient with a moderate to severe bifid nose deformity using detailed facial and radiographic analysis of the deformity, as well as the description of the surgical technique and outcomes.

Results: To our surprise, most of the literature found in peer-reviewed journals regarding the management of the bifid nose patient describe techniques that involve an incision on the nasal dorsum. Our case shows that we had good results using only a standard open septorhinoplasty approach with cartilage repositioning and grafting.

Conclusions: Bifid nose deformity is a very rare condition that inevitably requires surgical management for cosmesis. Most of the limited literature published to date describes an approach involving a dorsal nasal incision. Although all patients must be individualized, we had great results via open septorhinoplasty without the morbidity of a dorsal nasal scar.

ABSTRACT

Objective: To present a current review of literature regarding the management of bifid nose deformities. We compared and contrasted the surgical technique and aesthetic outcomes of our patient using an open septorhinoplasty approach with the previously described techniques that involved a dorsal skin incision.

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INTRODUCTION

Bifid nose deformity, also known as frontonasal dysplasia, double nose, cleft nose or "doggnose" nose, is a rare congenital abnormality that occurs during the first trimester of pregnancy. It is characterized by the paired medial nasal prominences to meet at midline between the 3rd-8th week of gestation.13-15 It is estimated that cases of bifid nose deformity occur in 1 out of 50,000 live births. This condition is often associated with a cleft lip and/or palate, which makes cases such as ours with an isolated bifid nose even more unusual. The deformity can vary from mild to severe, ranging from a minimally noticeable cleft of the nasal tip to a complete lack of fusion and the appearance of two separate nasal cartilages.

After a systematic literature review on bifid nose deformity from 1950 to 2011, we found that there are few published cases describing the surgical management of these patients, most of which describe an approach that involves an external incision on the nasal dorsum. Our study objective was primarily to present the case of a 10-year-old male patient who presented to our clinic with a bifid nose deformity. We compared and contrasted the surgical technique and aesthetic outcomes of our patient using an open septorhinoplasty approach with the previously described techniques that involved a dorsal skin incision.

RESULTS

Literature Review: Approximately 200 articles from peer-reviewed journals were found using search words such as bifid nose deformity, frontonasal dysplasia, facial clefts, double nose, cleft nose, workup, management, rhinoplasty and septorhinoplasty amongst others. Of these, roughly 20 articles were pertinent to the subject matter. Articles dating from 1950 to 2010 were found to include details on surgical management of patients with moderate to severe bifid nose deformities such as the one that we are presenting. To our surprise, all surgical approaches involved an incision on the nasal dorsum, resulting in a visible scar.1-7,10

Preoperative findings: On frontal view (figure 4), we see that there is a lack of overall nasal length, short nasal bones, slighty increased intercartilaginous distance and a concave nasal dorsum caused by an open nasal deformity. Nasal structures are notably deviated to the left with collapse of the left lateral nasal valve and malpositioning, joining the cartilaginous septum 1.5 cm below the highest point on the dorsum.

On lateral view (figure 5) we again note the shortness of the nose. The nasal tip is severely over-projected and there is no columellar show. When we look at the lateral views, we can see that the tip is clearly underprojected. On the oblique view (figure 6) we can again see the tip side of the nose has greater projection when compared to the left side. We can also see that the dorsum is convex in the shape of an arc. On the base view (figure 7) the interdomal distance was corrected as was dome asymmetry. The nostrils are now on an oblique axis and the nostril tip ratio has been improved.

CONCLUSIONS

Amongst those described surgical techniques published in peer-reviewed journals for the treatment of patients with bifid nose deformity, it is notable to point out that all involve an incision and visible scarring on the nasal dorsum. It is hard to imagine that in today’s era of minimally invasive surgery, deformities such as these would be addressed via the nasal dorsum. Nonetheless, after a thorough literature search we found that amongst peer-reviewed publications, this is the data available. It is also important to state that in some cases a skin incision is necessary, either because skin is defective, or excessive.

Bifid nose deformity is a very rare condition that inevitably requires surgical management for cosmesis. Although all patients must be individualized, we had good cosmetic results with minimal scarring. We believe this is the first time that a case of bifid nose deformity has been reported without the need of a visible dorsal nasal scar.

REFERENCES