Bifid nose

Vishal Mago[1], Neetu Kochhar[2]

[1] Associate Professor and HOD, Department of Plastic Surgery, Bhagat Phool Singh Government Medical College for Women,Khanpur kalan,sonepat, [2] Associate Professor, Department of Obstetrics and gynecology, Kalpana chawla govt medical college karnal.

ABSTRACT

The term bifid nose an extremely rare entity is an indicator of Tessier number 0 cleft. We present a rare combination of midline bifid nose with loss of dorsal nasal height in a 2-year-old male child .

Key words: bifid nose, Tessier no 0 cleft

Corresponding author address: Vishal Mago,B-10,medical campus,bps govt medical college for women, khanpur kalan, sonepat, Haryana, India **M:** 9812342588
E-Mail: vipmoosa@rediffmail.com

Conflict of interest: No

Case report is Original: YES

Whether case report publishes any where? NO

INTRODUCTION

Bifid nose is due to failure of fusion of the paired nasal processes in embryonic life . Bifid nose is seen as a manifestation of frontonasal dysplasia. Hypertelorbitism and midline clefts of the lip may also be found.

Tessier's No. 0 or No. 14 cleft often presents with bifid nose, median cleft lip and hypertelorism.Bifid nose, presents with broad and flattened dorsum and root of nose . The alar and lateral cartilages are displaced laterally, and the nasal bone and septum are separated or thick. Excision of the redundant skin or V-Y plasty is performed to correct the deformity.Forked flaps are designed to narrow the columella and heighten the nasal tip in mild deformity.Severe bifid noses are planned for reconstruction of the osteocartilaginous framework with nasal tissues or grafts, remaining nasal soft tissue, and local flaps can be used to cover the soft tissue.

CASE REPORT

A 2 year-old boy presented with deformity of the nose. He had no anomalies of other organs, and his delivery was normal. His close relatives had no congenital anomaly. Osseous and cartilaginous framework was split in midline resulting in 2 complete half noses(Fig-1). Midline columella was absent. Ultrasound of abdomen and KUB region was normal.X-ray revealed absent and obliterated right nostril osseous component(Fig-2).NCCT scan revealed depressed nasal bridge and reduced angulation of nasal bones; with left nostril extending into left nasal cavity showing grossly normal turbinates. Right nostril appeared to communicate

with right agger nasi cell with mucosal thickening in right nasal cavity and poorly visualized turbinates. Lateral wall of the right ethmoid sinuses showed mild lateral convexity, bulging into the right orbit. There was mild deviated nasal septum towards right with narrowing of right nasal cavity in the posterior part along with poor visualization of posterior ethmoid air cells(Fig-3).Biochemical parameters are normal. The patient was planned for surgical reconstruction but was lost in followup.

Fig-1:Showing bifid nose or two nose deformity

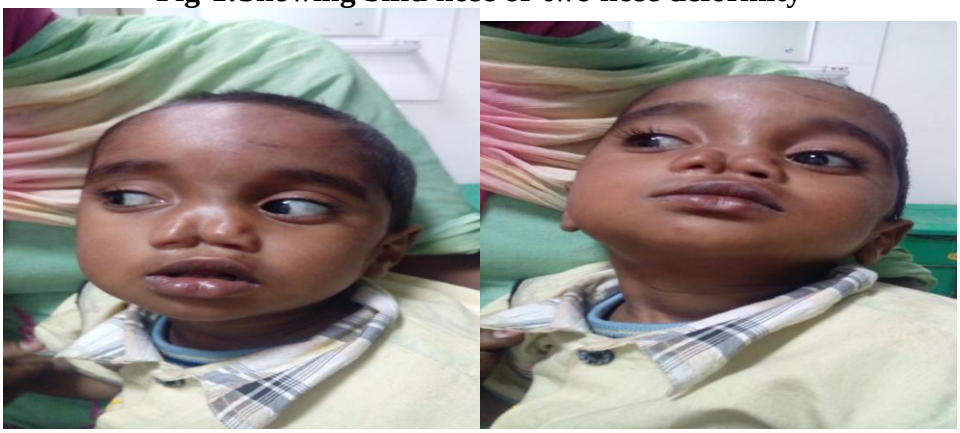


Fig-2-CT scan showing bifid nose with obliteration of right nasal cavity

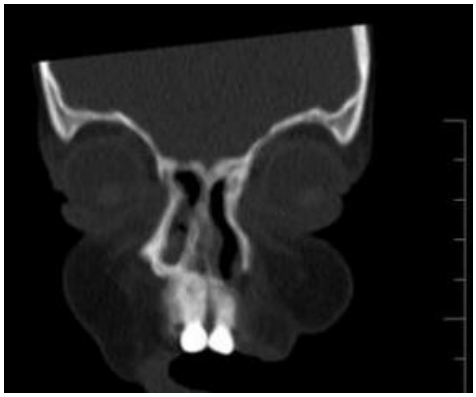
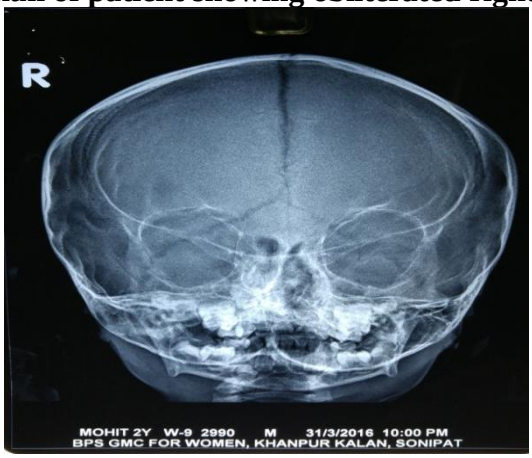


Fig-3:X-ray skull of patient showing obliterated right nostril cavity



DISCUSSION

Bifid nose has been described by Trendelenburg as "Doggennase"in 1889 as the first case reported in the world.

Bifid nose results from failure of fusion of the medial and lateral nasal processes during the first eight weeks of fetal life. Neural crest abnormalities, external pressure, oligohydramnios, amniotic bands, and hematoma are proposed common etiological factors for this congenital anomaly. Tessier's Number 0 or Number 14 cleft often presents with bifid nose, median cleft lip and hypertelorism.

Al Ghazali and others reported 4 cases of bifid nose associated with renal and anorectal malformations who had median nose clefts, wide bulbous nasal tip, short philtrum, without hypertelorism[1].

Alazami and others reported 5 cases of bifid nose in Afghan and Pakistani patients, with a similar phenotype but more variable renal involvement[2].Ortiz performed osteotomy in 59 cases with bony clefts[3].

Shibayama H and others surgical replacement of the alar cartilages and used a fork flap to bind the columella and increase height of the nasal tip[4].

Kolker performed surgical excision of excess skin and soft tissue, repair of orbicularis oris , and craniofacial osteotomy and reduction as a single-stage correction of midline cleft lip and bifid nasal deformity in 4 cases[5].

Nunez T and others reported congenital bifid nose and a duplicated frenulum in a 9 month patient.[6] Kopp reported two cases of bull dog nose in his study[7].

Saied and Sherbiny have proposed cases with no or minimal tissue deficiency to be corrected by bringing the lower lateral cartilages together by sutures (interdomal and transdomal sutures) . When more tissues are deficient, additional height can be achieved by adding layers of onlay conchal cartilage tip graft[8].

Osseocartilagenous rib graft is the best material to be used for dorsum and tip reconstruction in cases with bifid nose where local tissues are deficient for reconstruction.

Careful preoperative planning and precise surgical technique helps in formulating an operative plan for successful management of bifid nose.

CONCLUSION

A thorough understanding of the bifid nasal anatomy, proper patient evaluation, careful preoperative planning, and meticulous surgical technique is needed to treat this deformity.

REFERENCES

1. Al-Gazali, L. I., Bakir, M., Hamud, O. A., Gerami, S. An autosomal recessive syndrome of nasal anomalies associated with renal and anorectal malformations. Clin. Dysmorph. 11: 33-38, 2002.
2. Alazami, A. M., Shaheen, R., Alzahrani, F., Snape, K., Saggar, A., Brinkmann, B., Bavi, P., Al-Gazali, L. I., Alkuraya, F. S. FREM1 mutations cause bifid nose, renal agenesis, and anorectal malformations syndrome. Am. J. Hum. Genet. 85: 414-418, 2009.
3. M. F. Ortiz, C. A. Fuente del, et al., "Nasal Clefts," Annals of Plastic Surgery, Vol. 18, No. 5, 1987, pp. 377-397.
4. Shibayama H.Surgical Correction of Bifid Nose due to Tessier's No. 0 Cleft Modern Plastic Surgery 2014, 4, 1-4.
5. Kolker AR,SailonAM,Meara,HolmesAD Midline Cleft Lip and Bifid Nose Deformity: Description, Classification, and Treatment. **J** Craniofac Surg 2015 Nov;26(8):2304-2308.
6. Nunez Villaverian T et al.Bifid nose - a mild degree of frontonasal dysplasia. A case report.Int J Pead Otorhinol 2013 Aug;77(8):1374-1377.
7. Kopp MA.Two congenital nasal deformities: Bifid nose and bulldog nose laryngoscope 1939;49(11):1128-1133.
8. Saied S,SherbinyA .Algorithm for Aesthetic Reconstruction of the Bifid Nose in Tessier Number 0 Cleft 2011 Egypt J Plast Reconstr Surg; 35(2): 187-190.