ACTA SCIENTIFIC OTOLARYNGOLOGY

Volume 1 Issue 1 September 2019

Case Report

Shingle in Snout with Multiple Warps: Dearth of Ignorance or Dread of Intervention???

Sphoorthi Basavannaiah*

Assistant Professor, Department of ENT, Subbaiah Institute of Medical Sciences, Karnataka, India

***Corresponding Author:** Sphoorthi Basavannaiah, Assistant Professor, Department of ENT, Subbaiah Institute of Medical Sciences, Karnataka, India.

Received: August 17, 2019; **Published:** September 03, 2019

Abstract

Nasal obstruction is one of the most common presentations encountered in ENT outpatient department by all surgeons. Its cause ranges from obstacle by stone to obstruction by septal deviation/ growth/ masses/ polyps. Both the scenario has its own ploys. It can lead to fetid nasal discharge to fierce epistaxis along with compromised osteomeatal complex to comprehensive anosmia. In both the situations, confiscation and correction has to be done at the earliest or else it can end up into alarming complications such as oroantral fistula to overt pansinusitis. Here is a case report wherein the adult presented with bilateral nasal obstruction with both common as well as rare cause for the obstruction along with multiple congenital defects making this case as one of its kind.

Keywords: Concretions; Mineralized; Nasal Obstruction; Stone; Foreign Body; Foul Smell

Introduction

Rhinoliths are defined as mineralised foreign bodies usually occupying one side of the nasal cavity and cause for nasal obstruction. They are rare to occur and most of the times are accidental finding on anterior rhinoscopy. These are calcareous concretions that are layered with salts of magnesium and calcium forming a hard substance which can cause both simple as well as severe complications over a period of time if not intervened. While shelf like projection or deviated septum is also one of the commonest causes for nasal obstruction which can either be developmental or traumatic in occurrence. In many instances, they are asymptomatic. But when problematic, septal correction is done to avoid upcoming troublesome situations.

30 year old male comes to ENT outpatient department with bilateral nasal obstruction since over 15 years. He gives h/o mouth breathing, snoring without apnoeic spells, hyposmia, dryness in the throat especially at nights, occasional headache with foul smelling nasal discharge, aural fullness. No epistaxis or history of any trauma. Patient also has trismus, facial asymmetry, difficulty in mastication, speech impairment, poor oral hygiene, halitosis.

Patient has congenital bilateral TMJ ankylosis with restricted mouth opening since birth and had undergone surgery for the same 6 years back (details of surgery unavailable as the surgery was done elsewhere). Following surgery, his mouth opening has improved to certain extent in his own words. He intends to undergo TMJ advancement shortly but is in double minds about it. Patient also has congenital (L) hip ankylosis as he limps while walking for which "no" surgical intervention has been done till date. Patient gives no history of any trauma/ TB.

There is no family history of congenital disorders and no history of consanguineous marriage. Patient has never taken any ENT consultation prior, until the present for nasal obstruction. As he already has multiple deformities but has only undergone surgery

for TMJ per se with no effective results (as per his views). Following which, patient is very apprehensive in taking any further treatment.

Clinically, patient was moderately built and nourished with limited range of motion in the left hip with normal neurovascular examination and no localised lymphadenopathy on general physical examination. Patient had normal vitals and no pallor, icterus, clubbing, cyanosis, generalised lymphadenopathy and edema. There was no abnormality detected on systemic examination. On facial examination, obvious facial deformity was seen with deviation of chin towards the left. Inability to open jaws with reduced condylar movements on both sides. There was a slight lower jaw shift. Fullness of the face more on left side. Cross bite and malocclusion of teeth present. Patient was having grade II trismus.

Deviation of nose to left was noted externally with no paranasal sinus tenderness on external nose examination. Columella, caudal septum and both vestibule were normal on tip raising test. An oval, irregular, blackish mass was noted in the floor of the right nasal cavity which on probing was hard in consistency, freely mobile with minimal bleeding on manipulation when viewed on nasal endoscopy (Figure 1). While a shelf like projection impinging on the inferior turbinate was seen in the left nasal cavity (Figure 3). Both nasal cavities showed hypertrophied inferior turbinate with normal inferior meatus, middle turbinates, middle meatus.

Mass was removed in toto (Figure 2) under local anaesthesia in the OPD following which anterior nasal pack was placed for a day. It was a "RHINOLITH" and sent for HPE and the same was confirmed. CT PNS (Coronal view) (Figure 4) was done later after removal of the mass to look for detailed anatomy of the sinuses, septum proper and any other associated disease process. Septoplasty with B/L partial inferior turbinectomy under general anaesthesia was done. Drainage of the osteomeatal complex was improved and the reason for nasal obstruction both were dealt together by gouging out the spur and correcting the septum proper along with medial fracture of the inferior turbinate bone and excising the mucosal part of it partially on both the sides. Intra and postoperative period were uneventful and patient recouped well. Patient had symptomatic relief with the combination of the procedures done to him. Patient doing well on follow up after 1 week, 15 days, 1 month and 2 months respectively.

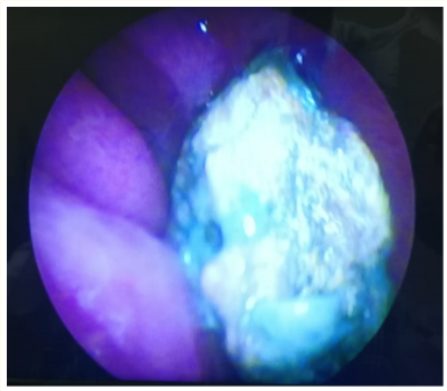

Figure 1

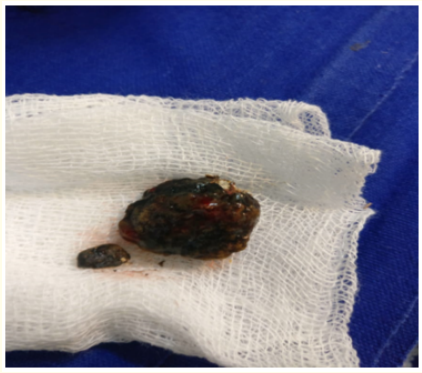

Figure 2

Figure 3

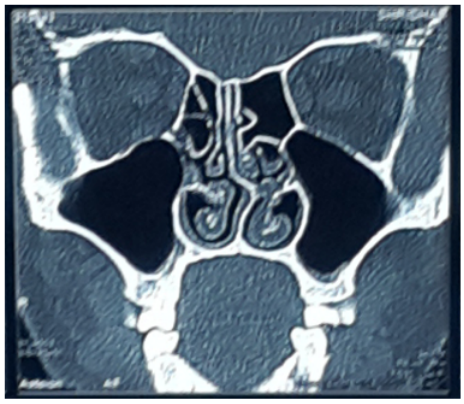

Figure 4

Discussion

Rhinoliths are stones, defined as mineralized, retained foreign bodies in the nasal cavity. Their occurrence is very rare and usually an accidental finding. Rhinoliths can have an incidence of 1: 10,000 otolaryngology patients in clinical practice [1,4].

Rhinoliths are very common in children and sometimes adults (mentally retarded). They can be either endogenous or exogenous in origin. Retained blood clots, impacted teeth, bone fragments following surgery, inspissated mucous are all causes for endogenous origin while presence of any foreign body be it cotton, rubber and paper piece, seeds, grain are all examples for exogenous causes. Exogenous rhinoliths usually occur after trauma, surgery, dental procedure, left over nasal pack or remained plugs of ointment. [2,9].

Chronic sinusitis over a period of time leads to accumulation of secretions with mineral deposition. With due course of time, any inhaled particles compromising the mucociliary action due to stasis and accumulation of secretions. In case of damaged nasal mucosa, retained secretions get adhered and increase in size with deposition of mineral salts and crusts [3,5].

The pathogenesis of formation of rhinolith is unclear and formed by mineralization around exogenous and endogenous nidus. The usual presentation is nasal obstruction, unilateral foul smelling nasal discharge, epistaxis, anosmia, headache and in worse situations can cause palatal and septal perforation. According to study by Brehmer, formation of rhinolith due to (i) Any foreign body in nose gives rise to acute or chronic inflammation of the nasal mucosa with suppuration. (ii) Rancid nasal discharge due to raised amounts of calcium or magnesium.(iii) Powered obstruction blocks outlet of pus and mucus. (iv) These secretions when exposed to air ponders pus and mucus permitting mineral salts to precipitate, forming crusts [4,7].

Bartholini in 1654 was the first to officially publish a report on nasal foreign body. CT scan, due to its sensitivity serves an accurate investigation for diagnosis of rhinolith in identifying any small amount of calcification and also to define size, shape, extent and location of the mass in relation to the surrounding tissues. Based on the nature of the nidus, they present as homo or heterogenous radiopacity of different size and shape on radiography. The differential diagnosis for rhinolith includes nasal polyps, haemangioma, impacted tooth, angiofibroma, inverted papilloma, tubercular calcification [6,8].

Rigid endoscopy, not only has provided both diagnostic and therapeutic aid has played a major role in establishing diagnosis and elimination of rhinolith due to its cost-effectiveness. With the advent of endoscopic nasal surgery, it has not just provided an easy mode for both handling and exclusion of the mass under direct vision and at the same time is helps in dealing any complications of rhinolith. Small rhinoliths are removed in toto or in piecemeal. Large rhinoliths when are unable to take away by non-invasive modes, Lithotripsy comes in use to break it down into pieces prior to removal. Rhinolith can slip off into nasopharynx or oropharynx when tried to remove them through the nasal cavity are then usually taken out through the oral cavity under GA with a laryngeal pack as protection. Caldwell-Luc surgery and even sometimes Lateral Rhinotomy approach may be required when huge rhinoliths are seen with gross extension into maxillary sinus [1,3,5].

While deviated nasal septum are of various types- C-shaped, S- shaped, anterior dislocation, spur and thickened nasal septum. The deviations can be either cartilagenous, bony or both. Along with the deviation, turbinate hypertrophy is another contributing factor for nasal obstruction. The etiology is mainly developmental and traumatic while allergic conditions for hypertrophied inferior turbinate. It has to be intervened when the patient is symptomatic with complaints such as nasal obstruction, rhinorrhoea, headache,

epistaxis, hemifacial pain, sneezing. Initially conservative treatment is given to provide symptomatic relief [2,4,6].

Following which, CT PNS (plain) preferably coronal cuts is done to look for status and anatomy of paranasal sinus along with septum after confirmation on nasal endoscopy. Sometimes, along with septal deviation and turbinate hypertrophy, there can be blocked and compromised osteomeatal complex which also can be additive factor for nasal obstruction which if not corrected patient would not have symptomatic relief. For any associated sinusitis or polyps, Endoscopic sinus surgery is planned with septal correction. It is done to evacuate disease plus provide ventilation to the sinuses by widening sinus ostium along with enhancing drainage of the sinus and clearing its pathway [7-9].

The cause of Rhinolith in this patient was due to inspissated mucus retention over a long period of time due to compromised osteomeatal complex the reasons for which are mentioned in the clinical findings above. Secondly, as the patient was already overburdened with numerous defects, this could also be another reason for neglecting the cause of nasal obstruction.

Conclusion

Rhinoliths can be involuntarily missed, later found as an incidental finding when presented with typical presentation of unilateral nasal obstruction and foul smelling discharge. Though one of the possible rare occurrence, it should be definitely considered as one of the differentials in such a scenario. A thorough history, clinical examination, CT scan and Nasal endoscopy often play an essential role in the diagnosis and treatment of the condition. Adult with nasal obstruction, the usual mindset goes to untoward concerns such as Nasopharyngeal carcinoma, Inverted papilloma, Carcinoma maxilla etc but it is not often mandatory to think of intricate things always when simple things itself can get complex and cause unfortunate detrimental effects throughout life.

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