

## Nasal Foreign Body Removal by Open Rhinoplasty Approach - An Unusual Case Report

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Nasal foreign bodies are very common in children but very rare in adults unless self inflicted. Following a road traffic accident foreign bodies like tiny stone particles and dust even small metallic foreign bodies can enter the wound site and cause inflammatory reaction. Identification and removal of any foreign body is always necessary. Loose foreign bodies are always dangerous because it may travel to posterior nasal space and there is high chance of aspiration. This is a case where a tooth impacted inside nose since 3 months following a road traffic accident. Foreign body was successfully removed by an open rhinoplasty approach. Open rhinoplasty approach is a safe and very effective way of foreign body removal in cases where a conventional endoscopic approach is not feasible.

**Keywords:** Nasal Foreign Bodies; Inflammatory Reaction; Open Rhinoplasty Approach**Introduction**

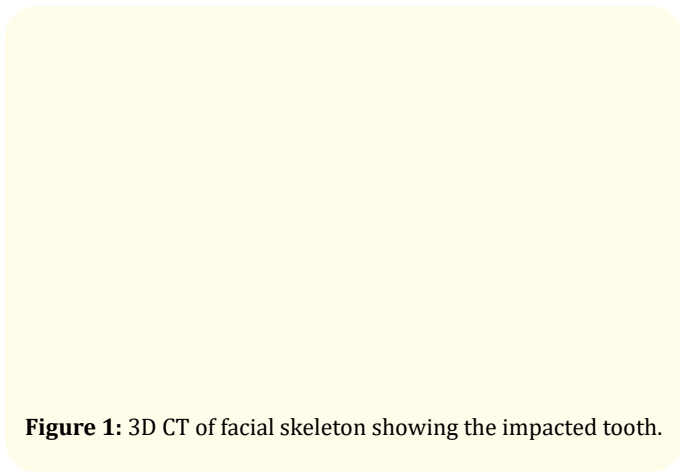
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**Case Report**

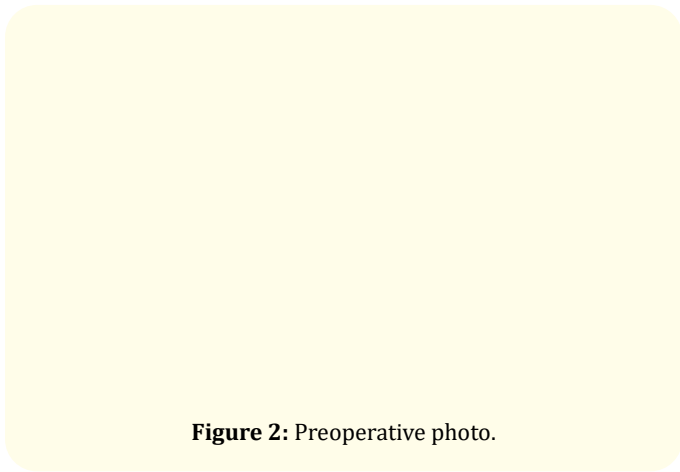
A 17 year old boy presented to department of ENT and head and neck surgery, tata steel medica hospital with difficulty in breathing through nostrils both side. On careful examination it has been found that his both nostrils are stenosed and dorsum of nose completely depressed. On proper observation of events it has been discovered that patient had faced a road traffic accident and severe injury to face mainly nose causing depressed comminuted fracture of nasal bone, septum, a lacerated wound of left ala and dorsum of nose 3 months back. He was treated at a government hospital where a CT scan has been advised. As per CT scan report he has fracture of nasal bone, septum, right infraorbital bone, fracture maxilla with missing 2 maxillary incisor tooth. As it was a 3

months old CT scan, we have decided to repeat CT scan for further study before proceeding for surgery. Repeat CT scan findings surprised us as there was a broken tooth impacted deep inside nose adjacent to right medial maxillary wall. Whole nose anatomy was distorted and nasal cavities stenosed and cicatrised bilaterally. We have initially tried putting endoscope but it was totally hope less because of completely distorted anatomical landmarks. localising the exact position of the tooth in 3D CT scan we have planned to proceed with an open rhinoplasty approach.

The patient was prepared for surgery under general anesthesia. part preparation done by 2% cetavlon. Nasal packing done with 4% lignocaine for 15 minutes. local infiltration done over columella and septum with 2% lignocaine with 1:200000 adrenaline. Bilateral infra orbital and infra trochlear nerve block done with 2% lignocaine with 1:200000 adrenaline. An open rhinoplasty approach with a transcolumellar extension was used. A marginal incision along the caudal border of the lateral crura of the lower lateral cartilages was made and carried medially and inferiorly along the cephalic border of the medial crus upto its lower part and then extended with a

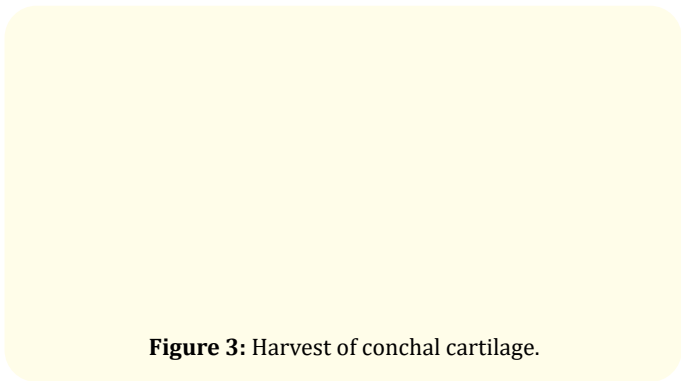


**Figure 1:** 3D CT of facial skeleton showing the impacted tooth.

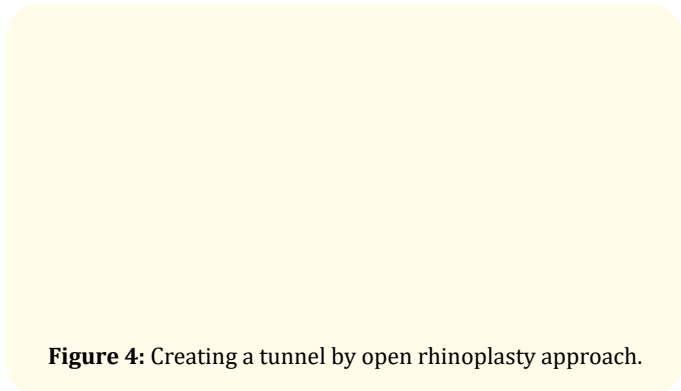


**Figure 2:** Preoperative photo.

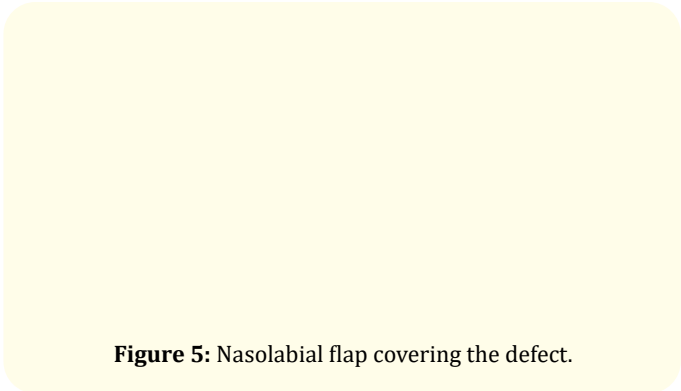
right angle turn to the caudal margin of the medial crus. A combination of sharp and blunt dissection was used to expose the entire nasal skeleton. We created one tunnel between right perichondrium and septal cartilage and went deeply forward and upward upto the level of middle turbinate making a breach posteriorly to identify the object impacted lateral to the medial wall of right maxillary sinus deeply adhered to the underlying tissue delivered out successfully. Bilateral conchal cartilage harvested and used for nasal tip and ala reconstruction. Left nasolabial flap used to cover the left alar defect. Bilateral nostril opening created and silicon sheet wrapped to merocele placed both side. Hemostasis were not required throughout the procedure. suturing was done with PGA 910 for nasal mucosa and nasal cartilages. Skin closure done with 5-0 prolene. No post-operative complications observed and patient was discharged on post-operative day 3<sup>rd</sup>.



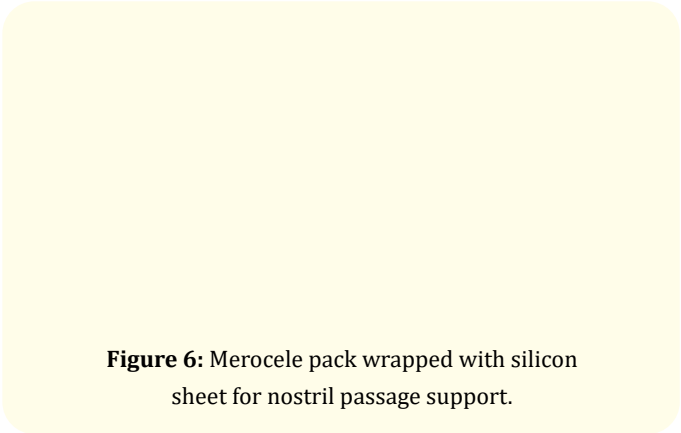
**Figure 3:** Harvest of conchal cartilage.



**Figure 4:** Creating a tunnel by open rhinoplasty approach.



**Figure 5:** Nasolabial flap covering the defect.



**Figure 6:** Merocele pack wrapped with silicon sheet for nostril passage support.

## Discussion and Conclusion

Nasal foreign bodies are most commonly inanimate objects and very less likely animates. Most commonly nasal FBs found on the floor of nose or in the space between middle and inferior turbinates, very less likely foreign body will lodge in posterior most part of nostrils or nasopharynx. Any foreign object inside nose has to be taken out in emergency basis because of persistent infection, granulation and sometimes aspiration.

The advantage of open rhinoplasty approach is that it has one very wide exposure of all hidden areas and whole framework from the top. The only thing to concern is the final cosmetically acceptable result. When A FB impacted in a submucosal plane and nostril openings are stenosed this approach will help best as is this case [1-9].

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