

Study of Nasal Foreign Bodies at a Tertiary Care Hospital in Chhattisgarh

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ABSTRACT

Background: Encounter of foreign bodies is common especially in children. Such bodies can be associated with complications if immediate action is not sought. The aim of our study was to analyse the foreign bodies in nose based upon age, gender, type, distribution, clinical presentation and encounter.

Materials & Methods: The study was conducted in the Department of ENT, Chandulal Chandrakar Memorial Medical College. Altogether 120 patients were included from all the age groups.

Results: In our study we found that, foreign bodies were more frequently encountered in children of age <3(49.2%). Of the total patients 57.5% were male and 42.05% were female with male to female ratio of 1.35:1. The common foreign body encountered in nose was cereals (46.7%). 67.5% of cases had unilateral nasal foreign bodies on the right side whereas 29.2% had on the left side while bilateral presence was seen in 3.3% of cases. The duration of presence of foreign bodies in nasal cavity was less than a day in 38.4% of cases but it was present for 1-5 days and more than 5 days in 50.8% and 10.8% of the patients respectively. The common clinical presentation shown by the patients were foul nasal discharge (47.5%) while 12.5% of the cases were asymptomatic.

Conclusion: Foreign bodies are common in children; however adults can also suffer due to accidental encounter or due to some mental abnormalities. These foreign bodies should be carefully removed with the help of skilled physicians to prevent the complications.

Key words: Foreign Bodies, Nose, Pediatric Group.

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INTRODUCTION

Foreign bodies, as the name imply, are the objects present in the region of the body where it is not supposed to be thereby causing harm if immediate care is not provided. They may be present in ear, nose and throat.¹

Otolaryngeal foreign bodies account for 11% of the cases observed in ENT section and being more common in children^{2,3} less than 5 years of age⁴ though can be present in some adults too. It may be due to ease of availability of objects or lack of care from care givers. To some extent other contributing factors may be imitation, insanity, fun making, boredom or mental retardation.⁵ Nasal foreign bodies may be living or non-living (further categorized as organic or inorganic)⁶ and hygroscopic or non-hygroscopic.¹ Foreign bodies may cause congestion, ulceration of nasal mucosa, swelling epistaxis, pain and breathlessness. They may also cause speech resonance; headache and nasal discharges.⁷

Nasal foreign bodies as such may not be harmful to life but can cause morbidity. Associated complications could be due to the

attempt of removal and the technique which depends upon the type of foreign objects.⁸ Removal is done in operating room by keeping the patient under sedation if required.⁹

For the removal of foreign bodies one should have sound anatomical knowledge as well as good skill depending upon the location where such bodies are present. In this study we aimed to analyse various foreign bodies encountered, in terms of the site, type, age and gender and presentation.

MATERIALS AND METHODS

This study was conducted in the Department of ENT, Chandulal Chandrakar Memorial Medical College. In total 120 cases were included in the study. The data was collected using predesigned questionnaire which included patient history and clinical examination. Information related to the patients like age, gender, site, type of foreign body, duration of presence of foreign body, symptoms/presentations were recorded. The collected data were analysed using Microsoft excel.

Table 1: Distribution of patients according to age

Age	Number (%)
<3	59(49.2%)
3-6	38(31.7%)
6-9	15(12.5%)
9-12	3(2.5%)
>12	5(4.1%)

Table 2: Distribution of patients according to gender

Gender	Number (%)
Male	69(57.5%)
Female	51(42.5%)
Male: Female	1.35:1

Table 3: Distribution of patients according to type of foreign body

Type of foreign body	Number (%)
Bird feather	2(1.7%)
Cereals	56(46.7%)
Cotton balls	10(8.3%)
Eraser	15(12.6%)
Marble	7(5.8%)
Pencil tip	19(15.8%)
Stone	7(5.8%)
Insect	4(3.3%)

Table 4: Distribution according to presence of foreign bodies in nose

Site	Number (%)
Unilateral right	81(67.5%)
Unilateral left	35(29.2%)
Bilateral	4(3.3%)
Ratio (right:left)	2.31:1

Table 5: Distribution according to duration of presence of foreign bodies in nose

Duration	Number (%)
<1day	46(38.4%)
1-5 days	61(50.8%)
>5 days	13(10.8%)

Table 6: Distribution according to clinical presentation

Presentation	Number (%)
Foul nasal discharge	57(47.5%)
Pain	28(23.3%)
Nasal bleeding	20(16.7%)
Asymptomatic	15(12.5%)

Table 7: Distribution according to encounter of foreign body

Encounter	Number (%)
During playing	48(40%)
Imitation	20(16.7%)
Fun making	9(7.5%)
Incidental encounter	17(14.2%)
Witnessed	26(21.6%)

RESULTS

The number of cases was higher in the age group of <3 years (49.2%), followed by those in 3-6 years of age (31.7%).

Out of total patients 57.5% were males and 42.5% were females with male: female ratio 1.35:1.

The most common nasal foreign body encountered in the study group was cereals (46.1%), followed by pencil tips (15.8%), eraser (12.6%) and cotton balls (8.3%).

Foreign bodies were present in both the nasal orifices in 3.3% of patients whereas on the right nasal orifice in 67.5% and on left nasal orifice in 29.2% of cases.

In 38.4% of cases, foreign bodies remained in nose for less than a day whereas in 50.8% of cases it was present for 1-5 days and 10.8% of patients had them for more than 5 days.

The clinical symptoms shown by the patients were foul odour nasal discharge (47.5%), pain (23.3%) and bleeding (16.7%) whereas 12.5% of cases were asymptomatic.

40% of patients encountered foreign bodies during playing while 16.7% encountered during imitation. Among the cases, 14.2% were incidental encounter whereas 21.6% were witnessed by the care givers or the family members.

DISCUSSION

Nasal foreign bodies are commonly encountered in pediatric age group; however adult individuals may also suffer due to accidental insertion or some mental abnormalities. In our study, 49.2% of patients were of age less than 3 years. Geogri et al showed 43% of cases of foreign body in nose were within the age group of 0-3 years¹⁰ whereas Kadish HA et al showed it to be 50%.¹¹ Alberto C et al¹² and Tong MC et al¹³ presented the same to be 55% and 85.7% respectively. Similarly Parajuli R et al¹⁴ demonstrated that 96.42% of patients were under the age of 10 whereas Shahet RK et al¹⁵ showed 55% of patients to be under 2 years.

We found 57.4% of patients to be male and 42.5% to be female with male:female ratio 1.35:1. The male:female ratio was shown to be 1:1.05 by Geogri et al¹⁰ whereas it was 1:1.26 in the study of Ogunleye AO et al.¹⁶ The frequently encountered foreign body in the study group was cereals (46.7%) followed by the pencil tips (15.8%).

When analysed the side of presence of nasal foreign bodies we found that in 67.5% of cases it was on right nasal cavity and in 29.2% cases it was on left nasal cavity whereas in 3.3% of cases bilateral presence was seen. In the study of Rehman AM et al, 58.41% of cases had unilateral presence of foreign bodies on right side whereas 40.71% had on left side only and 0.88% showed bilateral presence.⁸ The ratio of right to left was found to be 2.31:1. Alberto C et al showed this ratio to be 1.23:1¹² and it was found to be 1.46:1 in the study of Ogunleye AO et al.¹⁶

38.4% of patients in our study presented nasal foreign bodies for less than a day whereas in 50.8% of cases these bodies were present for 1-5 days while 10.8% of them had for more than 5 days. Study of Okoye BC et al demonstrated that 88.8% of patients presented foreign bodies within a day while 11.19% presented late.¹⁷ As per Ogunleye et al¹² the common presentation of the patients with nasal foreign bodies was purulent nasal discharge with foul odour followed by epistaxis with obstruction of nasal bleeding which was similar to our study.¹⁶

As majority of the patients in our study were children, most of cases were found to encounter foreign bodies in nose during

playing (40%) whereas accidental encounter was seen in 14.2% of cases.

Nasal foreign bodies can be removed by several techniques such as use of orally applied pressure (from parent or ambu bag) or nasally applied pressure (using catheter or oxygen source). Direct mechanical extraction can also be done using forceps, hooks or balloon tipped catheters. Success of removal depends on the duration of encounter, size and shape of the foreign body, cooperation of the patient, location and visibility. Most importantly it depends on the availability of the equipments and the skill of the physician.

CONCLUSION

Nasal foreign bodies are most commonly encountered in children. These bodies can produce discomfort like pain, foul discharge, difficulties in breathing and health issues like ulceration of nasal mucosa, epistaxis, headache, congestion etc. Therefore they should be removed in time through skilled physician using reliable equipments or means depending upon the nature of foreign bodies. Moreover, in order to prevent the encounter of such objects, especially in pediatric group, proper care and watch must be provided by care givers or the family members.

REFERENCES

1. Carney AS, Patel N, Clarke R. Foreign bodies in the ear and the aerodigestive tract in children. In: Scott-Brown's Otorhinolaryngology, Head and Neck Surgery, 7th ed. London, UK: Edward Arnold; 2008:1184-93.
2. Figueiredo RR, Azevedo AA, Kós AO, Tomita S. Complications of ENT foreign bodies: a retrospective study. *Braz J Otorhinolaryngol.*, 2008; 74(1):7-15.
3. Silva BSR, Souza LO, Camera MG, Tamiso GB, Castanheira LVR. Foreign bodies in otorhinolaryngology: a study of 128 cases. *Int Arch Otorhinolaryngol.*, 2009; 13(4):394-9.
4. Mukherjee A, Haldar D, Dutta S, Dutta M, Saha J, Sinha R. Ear, nose and throat foreign bodies in children: A search for socio-demographic correlates. *International Journal of Pediatric Otorhinolaryngology*, 2011; 75(4):510-2.
5. Perera H, Fernando S, Yasawardena A, Karunaratne I. Prevalence of attention deficit hyperactivity disorder (ADHD) in children presenting with self-inserted nasal and aural foreign bodies. *Int J Paediatr Otorhinolaryngol.*, 2009;73(10):1362-4.
6. Shrestha I, Shrestha BL, Amatya RCM. Analysis of Ear, Nose and Throat Foreign Bodies in Dhulikhel Hospital. *Kathmandu University Medical Journal*, 2012; 11(38): 4-8.
7. Sabari Nath HS. Visual Hook for the removal of nasal foreign body—Case Report. *Romanian Journal Rhinology*, 2016;6(24): 233-4.

8. Rahman AM, Ahmed MU, Harun MAA, Harun M, Rashid, Prodhan MAK. Experience of management of nasal foreign bodies in Outpatient department of a Tertiary Hospital. *Bangladesh J Otorhinolaryngol*, 2015; 21(2): 102-9.
9. Gomes MJ, Andrade JSC, Matos RC, Kosugi EM, Penido NO. ENT foreign bodies: profile of the cases seen at a tertiary hospital emergency care unit. *Braz J Otorhinolaryngol.*, 2013; 79(6):699-703.
10. Gregori D, Salerni L, Scarinzi C. Foreign bodies in the nose causing complications and requiring hospitalization in children 0-14 age: Results from the European survey of foreign bodies injuries study. *Rhinology*, 2008; 46: 28-33.
11. Kadish HA, Corneli HM. Removal of nasal foreign bodies in paediatric population. *Am J Emerg Med*, 1997; 15:54-6.
12. Chinskie A, Foltran F, Gregori D, Bellussi DPL. Nasal foreign bodies: the experience of the Buenos Aires pediatric otolaryngology clinic. *Pediatrics International*, 2011; 53:90-93.
13. Tong MC, Ying SY, van Hasselt CA. Nasal foreign bodies in children. *Int. J. Pediatr. Otorhinolaryngol.*, 1996; 35:207-11.
14. Parajuli R. Foreign Bodies in the Ear, Nose and Throat: An Experience in a Tertiary Care Hospital in Central Nepal. *Int Arch Otorhinolaryngol*, 2015;19: 121-3.
15. Shah RK, Patel A, Lander L, Choi SS, Management of Foreign Bodies Obstructing the Airway in Children. *Arch Otolaryngol Head Neck Surg.*, 2010; 136(4):373-9.
16. Ogunleye AO, Sogebi OA. Nasal foreign bodies in the African children. *Afr. J. Med. Med. Sci.*, 2004; 33: 225-8.
17. Okoye BC, Onotai LO. Foreign bodies in the nose. *Nigerian Journal of Medicine: Journal of the National Association of Resident Doctors of Nigeria*, 2006; 15(3):301-4.

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