

## Nasal Foreign Bodies In Jos:- A 5-Year Review.

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### Abstract:

**Introduction:-**Nasal Foreign Bodies are common presentations in the paediatric age group in the ENT clinic and the emergency unit. This is due to the hyperactivity and curiosity of this age group, thus the tendency to explore their natural orifices. Nasal Foreign Bodies are hardly found in normal adult patients except accidentally. Most Nasal Foreign Bodies presenting with symptoms report early in the hospital. Diagnosis is usually clinical except in few cases where endoscopic and radiological assistance may be required. Nasal Foreign Bodies are found commonly in the 1-4 year age group, mostly unilateral, more in the right nasal cavity as recorded in many studies. Treatment is by removal as a clinic procedure in cooperative patients using instruments with very few cases in theatre for uncooperative and difficult patients under general anaesthesia and adequate airway protection with minimal complications. **Method:-**A retrospective study involving 178 patients over a 5 year period Jan.-2014-Dec.-2018. Records of patients retrieved and reviewed for age, sex, presentation, nature(type)of foreign body, nasal laterality, removal site(clinic or theatre) were analyzed and discussed. **Results:-**Most patients presented early in hospital; age range in this study is 1-10 years. Males are more than females, with a male to female ratio of 1.2:1. 127(71.35%)are within the ages 1-4 years; Beads 92(51.69%) are the most common foreign bodies noted in this study. Inorganic foreign bodies 132(74.16%) are the most common. The right nasal cavity 104(58.43%) was the most common site of lodgment. Removal was commonly done as a clinic procedure 168(94.38%) using instruments. There were minimal complications after removal in some cases.

**Keywords:-** Nasal, Foreign body, removal, minimal complications.

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### I. Introduction:

Nasal Foreign Bodies are a common presentation in the emergency unit and Otorhinolaryngology clinic especially in the paediatric age group. This is because this age group is hyperactive, curious and usually in the habit of exploring their natural orifices e.g. ears, nose, etc by inserting various things into them. Nasal Foreign Bodies are hardly found in normal adults but can however occur in abnormal adults and may be accidental in normal adults.

Most nasal Foreign Bodies are reported early in hospital by parents/caregivers as soon as they are discovered from symptoms like nasal obstruction, discharge or epistaxis caused by the Foreign Body or attempts at removal by the patient or his/her peers to avoid knowledge by the parents/care giver so as to avert punitive measures. Sometimes nasal Foreign Bodies are presented late or discovered incidentally by the physicians especially when there are no obvious symptoms.

Diagnosis of Foreign Body in the nose can be made easily with clinical examination in the clinic with simple anterior rhinoscopy, however with deeply placed Foreign Bodies towards the posterior choanae, endoscopic or radiological evaluation would aid the diagnosis.

Foreign Bodies in the nasal cavity can be removed easily in the clinic by trained ENT Nurses, resident Doctors or ENT specialists in cooperative patients as a clinic procedure, but in uncooperative patients, removal could be done under sedation or General Anaesthesia in a theatre set-up. In all cases, the lower airway should be protected adequately to prevent complications that could be fatal (i.e. -aspiration, airway compromise and maybe death).

Most literature reviewed showed that nasal Foreign Bodies are commonly seen in the paediatric age 1 to 4 years and turns to reduce thereafter<sup>1,2 3,4,5,7,8</sup>. It is also found to be more in the males as compared to females, more in the right nasal cavity as compared to the left<sup>1,3,4,9,10,12</sup> and very few in both nasal cavities. This is postulated to be due to the fact that most people are right handed<sup>8,9,11</sup>, Foreign Bodies in the nasal cavities are noted to present differently in terms of duration – early presentation when symptoms are dramatic like epistaxis, and pains from attempted removal by the patient or peers and parents. However Foreign Bodies can present months or even years when there seems to be mild or no symptoms and usually when unilateral e.g.

a piece of foam in the nasal cavity can present after many years. In our practice, we have seen and managed patients with a piece of foam in the nasal cavity after 3years; the patient would usually have been managed for unilateral foul smelling nasal discharge recurrently with antibiotics before referral to our facility, treatment at this point is via adequate nasal examination and removal of the Foreign Body in a clinical set-up. Unilateral foul smelling nasal discharge is known or believed to be due to a nasal foreign body until proven other wise.

## II. Method:

This is a Retrospective study of patients seen and managed with Nasal Foreign Bodies in the emergency service and the Ear, Nose, and Throat clinic of the Jos University Teaching Hospital (JUTH) over a 5year period, January 2014 to December 2018. Case notes of the patients were retrieved and reviewed for age, sex, nature of Foreign Body, presentation, side of nasal cavity affected (laterality), site where the Foreign Body was removed (clinic or theatre) and outcome were noted and analyzed for discussion.

The study involved 178 patients who met the inclusion criteria (i.e. patients seen and managed successfully in our facility).

## III. Results:

**Table 1.**  
**Age and Sex distribution**

Age	MALE	FEMALE	TOTAL%
1-2	22	21	43(24.16%)
3-4	46	38	84(47.19%)
5-6	18	16	34(19.10%)
7-8	8	6	14(7.86%)
9-10	2	1	3(1.69%)
TOTAL - %	96(53.93%)	82(46.07%)	178(100%)

**Table 2**  
**FOREIGN BODY TYPE (NATURE) PER SEX DISTRIBUTION**

FOREIGN BODY TYPE	MALE	FEMALE	TOTAL - %
Beads	50	42	92(51.69%)
Seeds	24	22	46(25.84%)
Stone	10	8	18(10.11%)
Rubber piece	5	4	9(5.06%)
Foam	4	3	7(3.93%)
Glass piece	2	3	5(2.81%)
Button Battery	1	0	1(0.56%)
Total - %	96(53.93%)	82(46.07%)	178(100%)

**Table 3**  
**SIDE (LATERALITY) OF LODGEMENT/SEX DISTRIBUTION**

NASAL CAVITY SIDE	MALE	FEMALE	TOTAL - %
RIGHT	56	48	104(58.43%)
LEFT	40	34	74(41.57%)
BILATERAL	0	0	0(0.00%)
TOTAL - %	96(53.93%)	82(46.07%)	178(100%)

**Table 4**  
**REMOVAL AREA(SITE)**

REMOVAL SITE	MALE	FEMALE	TOTAL - %
CLINIC	92	76	168(94.38%)
THEATRE	4	6	10(5.62%)
TOTAL - %	96(53.93%)	82(46.07%)	178(100%)

A total of 178 patients were recruited into this study from the 5year period under consideration and analysed as follows:-

Most of the patients presented early – symptoms of pain, epistaxis from either the impact of the foreign body or attempts at removal by the patient or peers or the caregiver after foreign body insertion; some presented with foul smelling nasal discharge when the foreign body had stayed in the nasal cavity for days, months or even years.

Age range of the patients is from 1 – 10years. There were 96 males and 82 females giving a male to female ratio of 1.2:1. 127(71.35%) of the 178 patients are within the ages 1 – 4 years of age (Table 1). Beads 92(51.69%) and seeds 46(25.84%) were the most common foreign bodies inserted into the nasal cavities. (Table 2) inorganic

foreign bodies 132 (74.16%) were the commonest followed by organic foreign bodies 46(25.84%).The right nasal cavity 104(58.43%) was the most common site of lodgment followed by the left nasal cavity 74(41.57%) and there was no bilateral nasal cavity foreign body lodgment noted in this study (Table 3).

Foreign bodies were mostly removed in the clinic as clinic procedures - 168(94.38%) using instruments only about 10(5.62%) of the foreign bodies were removed in theatre under anaesthesia and proper airway protection due to the uncooperative posture of the patients and the nature of the foreign bodies involved Table 4.

There were only minimal complications in form of epistaxis / pain following removal of some of the foreign bodies.

#### **IV. Discussions:**

Generally children are most susceptible in exploring their natural orifices – due mostly to their hyperactivity and curiosity as they grow-up. The nasal cavity is the orifice under consideration in this study and the number of patients recruited for the study is 178 with the age range between 1-10 years. The most susceptible age group with nasal foreign body in the nasal cavity is between the ages 1 -4 years Table1 (i.e. the under 5 age group), which corresponds with findings of other studies already in circulation. In this study, there are more males 96(53.93%) than females 82(46.07%) with foreign bodies in the nasal cavity, with male to female ratio of 1.2:1; this is in agreement with similar studies .The age group with the least number of nasal foreign bodies in this study is in the age group 9 – 10 years 3(1.69, Table1, which shows that the older the child grows, the less hyperactive, curious and less likely to be involved in exploring his/her natural orifice.

The types of foreign bodies seen in this study are mostly inorganic in nature - 132(74.16%) as compared to the organic foreign bodies - 46(25.84%) Table2. Generally however, beads make up the most common foreign body in this study, 92(51.69%) followed by seeds 46(25.84%) Table 2. The most uncommon foreign body in this study is the button battery1 (0.56%) Table2 .Beads are materials commonly used for decorations on things like bags, necklace, earrings, on plated hairs etc, they are also used religiously as prayer beads , thus it is commonly available for children to play with and therefore used for exploring their natural orifices . Seeds on the other hand are equally available for children to play with, thus can be inserted easily into the nasal cavity. Most of the seeds removed from patients in this study were raw, which means they were not being eaten at the time of insertion but during play.

Foreign bodies could be found in either the right or left nasal cavity or could be bilaterally placed. In this study however foreign bodies were predominantly found in the right nasal cavity 104(58.43%) while the left nasal cavity had 74(41.57%) and there was non – found bilaterally -Table3. In various studies right sided foreign bodies were predominant and only very few had left sided predominance<sup>13</sup>with very few bilaterally.

Presentation symptoms as seen in this study include – pains, epistaxis, unilateral nasal discharge which could be foul smelling depending on the duration. Epistaxis is one symptom that makes patients to present early in the hospital and most times it is due to attempts at removal of the foreign body by the patient or the playmates/parents/caregivers. This could be as a result of being afraid of punishment by the caregiver or financial constraints for settling hospital bills if removed in hospital (usually no health insurance coverage in our environment). Unilateral foul smelling nasal discharge are recurrent – due to foreign bodies that do not cause pains or epistaxis e.g. –foam, and when left in the nasal cavity by the patient without reporting to either caregiver or the parents and being treated as recurrent rhinosinusitis with antibiotics by non-Otorhinolaryngologist. In this study, two cases of unilateral foul smelling nasal discharge presented in clinic after 3years and pieces of foam, were removed during clinical examination. It is therefore known that any unilateral foul smelling nasal discharge is due to a foreign body until proven otherwise.

The treatment given, patients with nasal cavity foreign bodies in this study is removal as a clinic procedure with instruments e.g. probes, forceps by ENT trained nurses, junior and senior residents and a handful of some by consultants 168(94.38%).About 10(5.62%) were removed in the theatre under general anaesthesia with adequate airway protection in uncooperative patients and deeply placed foreign bodies-Table4, which is similar to other studies.

The only patient who present with button battery was one of those cases removed in theatre under general anaesthesia as a precautionary measure knowing what could result with a leak from the battery and was done uneventfully, though it presented early.

Minor complications like pains and epistaxis were recorded following removal in this study, this might be due to the fact that removal was done by trained ENT personnel of various degrees of technical competence working together and can thus assist each other to achieve greater success thus the minimal complications.

#### **V. Conclusion:**

Paediatric age group is most susceptible to nasal foreign body insertion and it is most commonly found in the under 5 year age group. Inorganic foreign bodies are more common than organic foreign bodies in this study. Majority of the foreign bodies were safely removed as clinic procedures with minimal complications.

Attempt at removal by patients or caregiver usually delay early hospital presentation and increased incidence of complications. Common foreign bodies should be protected from the paediatric age group to reduce the incidence of nasal foreign bodies and thus prevent any form of morbidity and mortality that may result from nasal foreign body insertion.

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