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UNRAVELLING THE CAUSE OF NASAL OBSTRUCTION IN A 5 YEAR OLD BOY – CORPUS ALIENUM IN NASOPHARYNX.

Otolaryngology

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ABSTRACT

Upper aero-digestive tract is a harbour for variety of foreign bodies. Accidental foreign body insertion is quite common in children. Foreign body in aero-digestive tract is one of the emergency which need to be addressed at a right time. But at times, nasopharyngeal foreign bodies are unnoticed as it is a hidden area acting like an attic or human vault of pharynx. Such foreign bodies may lead to serious complications if left unattended for a long duration without proper management. There are few case reports on nasopharyngeal foreign bodies like metallic bolt, rubber tube, ring and iron rod. Here we report an incidental finding of long standing nasopharyngeal corpus alienum (foreign body) during endoscopic adenoidectomy using a microdebrider in a 5 year old boy who presented with symptoms of nasal obstruction since 5 months.

KEYWORDS

Rhinolith ; Foreign body ; Nasopharynx ; Corpus alienum

Introduction:

Corpus alienum, is a Latin word for Foreign body[1]. Foreign body insertion can be accidental or deliberate, it can be organic or an inorganic object[2]. Foreign body insertion is very common in children. Upper aero-digestive tract harbours a variety of foreign bodies. Nasopharynx is one of the hidden sites to harbour a foreign body. It is the least common site for the presence of foreign body accounting for late presentation in most of the cases[3]. So far, there are case reports on variety of foreign bodies lodged in nasopharynx like rubber tube[2], metallic ring[3], rubber cup[4], metallic bolt[5], iron rod[6], metallic truncated cone[7] However, in all these cases there was either a history of foreign body insertion or radiographs showed presence of some opacities which would give us a clue of foreign body. Here we report a case of 5-year-old boy who presented with nasal obstruction and mouth breathing since 5 months with radiographs showing features of adenoid hypertrophy for which endoscopic adenoidectomy was planned and surprisingly a foreign body with granulation tissue was found obstructing the nasopharynx.

Case report:

A 5-year-old boy, presented to our outpatient department with complaint of nasal obstruction since 5 months. Patient attenders gave history that the child is a mouth breather and snores at night since 5 months. Patient was otherwise healthy, playful, no developmental delay in milestones with no significant past history.

On examination, deviated nasal septum to left along with a hypertrophied inferior turbinate on right side was noted. The child also had Grade 2 bilateral tonsillar hypertrophy. Rest of the examination was normal. Blood investigations turned out to be within normal limits. Based on his symptoms, X-ray nasopharynx was done to rule out adenoid hypertrophy. X-ray revealed soft tissue shadow in nasopharynx arising from posterior pharyngeal wall – suggestive of Grade 2 adenoid hypertrophy (Fig a). Diagnostic nasal endoscopy could not be performed as the child was not cooperative.

Fig a – X-ray showing grade 2 adenoid hypertrophy without any features suggestive of foreign body in nasopharynx.

An informed consent was obtained and patient was taken up for endoscopic adenoidectomy under general anaesthesia. On table diagnostic nasal endoscopy was done, which revealed presence of a hard mass covered with slough and surrounded with granulation tissue in the nasopharynx (fig b). On probing a stony hard mass was felt. Suspecting it to be a rhinolith, the mass was removed using a foreign body hook and Blakesley Weil forceps. On detailed inspection of the mass, we asserted it to be a foreign body which had turned into a rhinolith due to long duration of presence in the nasopharynx which was left unnoticed (fig c). Rhinolith along with granulation tissue was removed totally. Garde 2 adenoid hypertrophy noted and removed using microdebrider. Surgery was uneventful, post operatively child was put on antibiotics and isotonic saline nasal drops.

Fig b – Intra operative picture of corpus alienum in nasopharynx.

Fig c – Figure showing cleaved pieces of rhinolith

Discussion:

Foreign body insertion is quite common among children[1,2,3,4]. A Foreign body in nasal cavity generally presents with history of symptoms like foul smelling unilateral nasal discharge as a part of body's inherent defence mechanism to reject anything which is not of its own[1]. There are some instances where there is no such clinical presentation or it was

overlooked by parents or misdiagnosed as some other pathological condition[1]. Nasopharyngeal foreign bodies are rare as it acts as attic or human vault of pharynx with a propensity to be passed on into hypopharynx or larynx[4]. Most of the reported nasopharyngeal foreign bodies are accidental findings on radiographs and some go unnoticed even on radiology as in our case.

In a case report by Waleed M *et al*., A 4-year-old girl was admitted for adenotonsillectomy whose pre-operative radiograph of nasopharynx revealed a faint soft tissue shadow other than the adenoid tissue shadow which after removal came out to be a rubber swimming plug[2]. A similar lack of awareness and failure to seek prompt medical attention was noted.

Arijit Jotdar *et al*., presented a case report of a 2 year child with an ingested foreign body which was recovered from nasopharynx. There was history of multiple manual extraction of the foreign body. X-ray revealed presence of radiolucent impression of some unknown object abutting the soft palate. Combined endoscopic and transoral approach was used to extract the foreign body, a soft rubber cap of 2 cm x 2 cm[4]. In contrast we report a radiolucent foreign body that was dwelled in the nasopharynx owing to a hypertrophied adenoid, which prevented the foreign body to be passed into oropharynx or hypopharynx.

Diagnosis of radiolucent nasopharyngeal foreign bodies without any noticeable symptoms become challenging as in our case. Although the foreign body was an incidental finding during nasal endoscopy, yet it turned out to be the main cause of nasal obstruction in the patient in presence of minimal adenoid hypertrophy, not uncommon in that age group. The symptom of nasal obstruction since 5 months can be attributed to the deviated nasal septum to left and a foreign body with granulations obstructing the nasopharynx on the right. The presence of granulation and formation of rhinolith indicated it be a long standing foreign body. On repeated probing, patient's attenders gave history of unilateral nasal discharge 3 months back which seemed to be inconsequential and insignificant for them. Hence much attention was not paid and immediate medical attention was not sought.

Conclusion:

Educating the parents and caretakers of children regarding the potential risks caused by foreign bodies, their symptomatology is of utmost importance as it is not unusual for children to insert objects in their mouth or nose due to their normal developmental curiosity or innocence. Eliciting proper history from the parents regarding any previous history of choking, unilateral nasal obstruction, rhinorrhea, attempted removal of foreign body plays a key role in management of the patient[5]. Due to lack of awareness of parents, the diagnosis and treatment was initially misguided yet ample and requisite resolution was attained in our case.

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