

Original Article

FOREIGN BODIES AT CRICOPHARYNX IN PAEDIATRIC AGE GROUP : OUR EXPERIENCE

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ABSTRACT

INTRODUCTION

Foreign body ingestion is a common occurrence and carries significant morbidity and mortality. Failure to treat foreign bodies immediately can lead to various serious complications. This study was done to identify the age, sex, duration, nature of foreign body ingested and its complication in Paediatric age group.

MATERIAL AND METHOD

This is a retrospective study of 48 cases of suspected foreign body ingestion in patients admitted in Department of ENT and Head and Neck Surgery of Muzaffarnagar Medical College were done in between 2010 to 2014. Age less than 10 years was included. In all cases x-ray soft tissue neck lateral and x-ray chest with neck anterior - posterior views were done along with other preoperative investigations. Rigid Upper end oesophagoscopy or hypopharyngoscopy were done under general anesthesia to remove foreign bodies.

RESULTS

There were 31(64.58%) male and 17(35.41%) female children. Foreign bodies were common in 0-4 year age group. Most common foreign body were coin 35 (72.91%) followed by meat bone 6(12.5%). No foreign bodies were found in 1 (2.08%) patients as they were passed in stomach. No complications were noted during the entire period of this study.

CONCLUSION

Most common foreign bodies in children are coin. Though complications with these foreign bodies are rare, these do occur due to delay in presentation and removal. No complications were noted in our series. Even though children who swallow foreign bodies are asymptomatic, we must maintain a high index of suspicion and undergo diagnostic procedure, if there is a positive history.

KEY WORDS

Foreign bodies, Cricopharynx, Hypopharyngoscopy

INTRODUCTION

Foreign body ingestion is a common occurrence and carries significant morbidity and mortality¹.

Foreign bodies in the cricopharyngeal region appear less dangerous than those in the respiratory passages. However,

failure to treat them immediately can cause complications such as retro-pharyngeal abscess, oesophago-respiratory fistula, recurrent pneumonitis, stricture formation and impaction.

The increased incidence of swallowing foreign bodies in children could be due to their natural propensity to gain knowledge by putting things in their mouth, inability to masticate well and inadequate control of deglutination

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as well as tendency to cry, cough, speak or play during eating. The habit of children putting things in the mouth makes them more susceptible to accidental ingestion.

The most frequently swallowed foreign body in children includes coin, metallic foreign body (parts of playing objects) 2-5. The peak age in children is between six months to three years⁶. Classically foreign bodies swallowed into Cricopharynx present with dysphagia. Failure to treat foreign bodies immediately can cause complications such as retropharyngeal abscess, retropharyngeal perforation, ulcerative oesophagitis, oesophago-respiratory fistula, recurrent pneumonitis, stricture formation and impaction⁵.

This study was done to identify identify the age, sex, duration, nature of foreign body ingested and its complication in Paediatric age group. Early detection by meticulous history, imaging modality and prompt management remains basis for favourable outcome and prevents future complications.

MATERIAL AND METHODS

A retrospective study of 48 cases of suspected foreign body ingestion in patients admitted in Department of ENT and Head and Neck Surgery of Muzaffarnagar Medical Collage were done in between 2010 to 2014. Children less than 10 years of age were included. After the institutional approval data were collected. In order to confirm the presence of FB, its nature and site, in all cases x-ray soft tissue neck lateral and x-ray chest with neck anterior - posterior views were done along with other preoperative investigations. Rigid Upper end oesophagoscopy or hypopharyngoscopy were done under general anesthesia to remove foreign bodies. Patients were observed for 24 hours post operatively for any complications. Statistical analysis was done by simple manual analysis using frequency and percentage.

RESULT

There were 31(64.58%) male and 17(35.41%) female children. Foreign bodies were common in 0-4 year age group. Most common foreign body were coin 35 (72.91%) followed by meat bone 6(12.5%). The success rate for cricopharyngeal region foreign bodies removal was

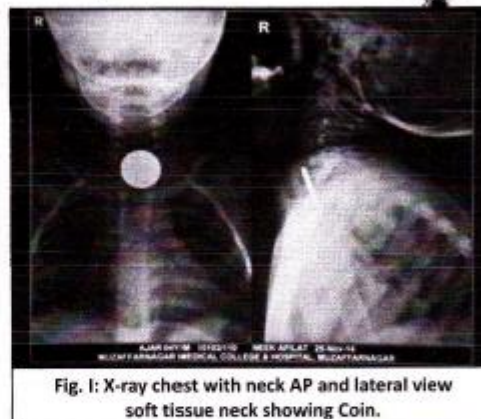
97.91% (47/48). No foreign bodies were found in 1 (2.08%) patients as they were passed in stomach. No complications were noted during the entire period of this study.

Age group	Male Number (Percentage)	Female Number (Percentage)	Total Number (Percentage)
0-4 years	22 (70.96%)	11 (64.7%)	33 (68.75%)
5-8 years	7 (22.58%)	4 (23.52%)	11 (22.91%)
9 & 10 years	2 (6.45%)	2 (11.76%)	4 (8.33%)
Total	31 (100.0%)	17 (100.0%)	48 (100.0%)

Table I: Age and Sex distribution of foreign bodies in Paediatric age group.

Types of foreign body	Number (Percentage)
Coin	35 (72.91%)
Meat bone	6 (12.5%)
Metallic foreign body	4 (8.33%)
Vegetative foreign body	1 (2.08%)
Battery	1 (2.08%)
No foreign body found	1 (2.08%)
Total	48 (100.0%)

Table II: Types of foreign bodies in Paediatric age group.



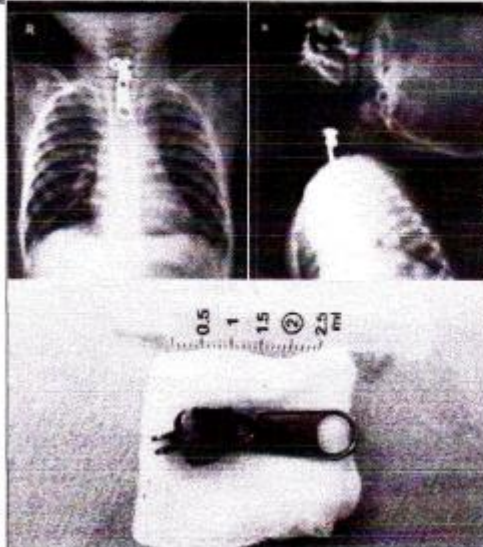


Fig 11: X-ray chest with neck AP and lateral view soft tissue neck showing Metallic foreign body.

DISCUSSION

Swallowed foreign bodies are a common problem. Most frequently it is small children who ingest small items accidentally but other groups for example are mentally ill patients, prisoners and individuals who are attempting to conceal items such as drugs, may also occasionally be present¹.

Foreign bodies are more common in children less than four years of age. But the peak age is between six months to three years⁶. Our study showed that foreign bodies were common in 0-4 years of age in 33 (68.75%) children's. Small objects left within a child's reach may often be swallowed. Poor children who are left to feed themselves at an early age are more likely to swallow a foreign body¹².

Most of the foreign bodies were arrested at a distance of an inch below the cricopharyngeal sphincter. An explanation forwarded by Nandi and Ong for this phenomenon is that the strong propulsive pharyngeal muscles force an object this far while the less active oesophageal musculature cannot carry it further². The

mobile redundant mucosa of this region, perhaps, adds to the hazard. At times, a large foreign body may directly compress the trachea and produce airway obstruction.

It is important to try to determine how long a FB has been present because those lodged for longer than 24 hr represent greater risk of erosion or other damage to the cricopharyngeal mucosa¹³.

In our study foreign bodies were more common in male children compared to female, 31(64.58%) male and 17(35.41%) female children. However this study does not explain the high incidence of foreign bodies in male children. A possible explanation provided by Gupta et al is that male children are by nature more curious than female children⁷.

Most common foreign bodies in paediatric age group are coins, but meat bone, marbles, safety pins, hair clips, batteries and screws are also reported^{2-5 8-10}. This study also showed coins to be the most common foreign body in children 35 (72.91%) followed by meat bone 6 (12.5%) and metallic foreign bodies 4 (8.33%) which was in accordance with the study done by Adhikari et al¹.

Removal of a foreign body is not an easy task¹. The usual symptoms of a FB in cricopharynx are nausea, vomiting, dysphagia, respiratory difficulty, neck pain and hematemesis. The symptoms usually depend upon the type, size and nature of the FB¹¹.

The majority of ingested foreign bodies pass spontaneously but serious complications such as bowel perforation and obstruction can also occur. Foreign body in cricopharynx blunt or sharp may be considered as an emergency as for fear of serious complications. These include intramural perforation, sub acute mediastinitis, aortooesophageal fistula, tracheoesophageal fistula, and long term residual injury to the oesophagus¹⁴. In all of our patients, Rigid Upper end oesophagoscopy or hypopharyngoscopy was done to remove foreign bodies. No foreign bodies were found in 1(2.08%) patients as they were passed in stomach. Muscle relaxation due to anesthesia may cause bodies to move distally. There were no complications noted in our series.

CONCLUSION

Most common foreign bodies in children are coins. Children who have a tendency of putting coins in the mouth which may be inadvertently swallowed. In the lower socio-economic strata, a common tendency is to pacify children by giving them coins which contributes to the high incidence in this age group. Though complications with these foreign bodies are rare, these do occur due to delay in presentation and removal. Symptoms of failure to swallow saliva and dysphagia were carefully looked for in all patients. No complications were noted in our series.

Tenderness over the trachea was a common sign in cases of cricopharyngeal foreign bodies. In cases of cricopharyngeal foreign body, the clinical presentation is usually with acute dysphagia, choking, gagging, drooling and regurgitation. There was no clinical evidence of the foreign body in a fairly large number of cases. A detailed examination including intra-oral examination and indirect

laryngoscopy helps to detect many foreign bodies and spares the patient further interference. Negative radiological findings do not rule out the possibility of a foreign body in the cricopharynx as foreign bodies may be radiolucent. Persistence of symptoms even in the absence of positive clinical or radiological signs warrants a diagnostic endoscopic examination.

Cricopharyngeal foreign bodies are potentially hazardous and may pose problems regarding their diagnoses (more so in radiolucent foreign bodies) and management. If foreign bodies are diagnosed early, removal is easy. Coins can be diagnosed by X-ray and safely removed while the patient is sedated by using direct vision and forceps.

Even though children who swallow foreign bodies are asymptomatic, we must maintain a high index of suspicion and undergo diagnostic procedure, if there is a positive history.

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