Original Article

Foreign Body Esophagus

Age and Sex Distribution and Types of Foreign Body Esophagus - Mode of Presentation, risk Factors involved, Management and Complications

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ABSTRACT

Objective: To find out the age and sex distribution, type of foreign bodies, their mode of presentation, site of impaction, risk factors involved.

Study Design: Experimental study.

Place and Duration of Study: This study was carried out in the ENT Department, Nishtar Hospital, Multan from January 2012 to December 2012.

Materials and Methods: A total of 100 cases presented with history of FB ingestion were included.

Results: Male patients with FB ingestion were 67% and female were 33%. Male to female ratio was 2:1. Patient's age ranges from 6 months to 70 years. Most of the patients were below the age of 10 years. Majority of the patients belonged to lower socio-economic group and also from the rural areas. In total review of nature of foreign body, regardless of age, coin was the commonest F.B (76%). In the present study rigid oesophagoscopy was done for removal of all F.B.

Conclusion: When diagnosis is delayed, or presentation is late, complication rate increases. Do not let foreign body to pass down spontaneously after 24 hour, after that it should be urgently removed under GA without further delay.

Key Words: Rigid endoscopy, Impaction, Eesophagoscopy.

INTRODUCTION

Foreign bodies of the digestive tract make a common but serious problem dealt by the oto-laryngologist[1]. FB in the oesophagus are clinically important entities because of potential risk of oesophagial perforation either spontaneously or iatrogenic during removal. Most of the FBs pass on uneventfully in to the lower gastrointestinal tract, excreted with feces and do not require any intervention. About 10-20% of the FB get impacted in upper gastrointestinal tract and require removal[2].

Common sufferers are children, peak incidence 6 months to 6 years, [3] followed by edentulous adults[4], prisoners and psychiatric patients. Most frequent encountered FBs are coins, meat bolus, fish bones, safety pins and dentures[4]. Impaction occurs either because of the size and nature of the ingested material or due to oesophogeal narrowing and most of the FB get stuck at the level of cricopharyngeus[5].

The time honoured method for removal of oesophageal FB is rigid endoscopy under general anaesthesia[6]. Alternative method of extraction of smooth FB includes flexible oesphagoscopy, FB advancement with bouginage and balloon extraction under fluoroscopy[2,7,8]. Jackson says that poor children who are not given individual attention and who are left to feed themselves at an early age are more liable to swallow a foreign body [9] and this is very vital point in our society where people tend to have many kids. Kids remain neglected and unsupervised due to poor family planning.

Wearing of dentures is commonly associated with FB ingestion in adults because a person is unable to detect fish or meat bone in the mouth as early as a person with normal pallate. Tough meat if improperly chewed may become impacted. Dentures themselves are dislodged and get stuck in the esophagus while the patient is drunk or asleep. This dental prosthesis with wires is one of the most difficult FB encountered and has a high incidence of complications[10] (JCPS).

Local conditions (Angulations or narrowings) of the oesophagus may determine the impaction of FB [11]. Meat bolus impaction may be because of benign strictures as primary cause. In present series 4 cases are reported to have benign strictures along with FB.

Rigid endoscopy has been the standard practice for removing FB from the esophagus. Flexible endoscopy as an alternative method is favoured by some endoscopists but we do not have any such experience. The success rate of FB removal by rigid endoscopy is 99%[1]. In our series it is 98%. No oesophagostomy was done in present study. It is said to be 0.5% according to Stewart [12]. Oesophageal perforation is a horrible experience for any ENT surgeon. Incidence of perforation during oesophagoscopy is 0.25% according

to Palmar [13]. But fortunately we did not encounter such complication.

The factor that consistently correlated with major complication is the presence of FB in the oesophagus for more than 24 hours [14] and its sharp edge nature, sharp FB dentures, safety pins can pose serious problems for the surgeons. That is why FB sould be removed as early as possible and with great care.

The purpose of this study was to find out the age and sex distribution, type of foreign bodies, their mode of presentation, site of impaction, risk factors involved. The role of rigid endoscopic removal of FB and the problem associated with it are also discussed. Risk factors involved in the impaction of FB are also addressed.

MATERIALS AND METHODS

This study was carried out in the ENT Department, Nishtar Hospital, Multan from Jan 2011 to Dec 2012. A total of 100 cases presented with history of FB ingestion were included.

RESULTS

Male patients with FB ingestion were 67% and female were 33%. Male to female ratio was 2:1. Majority of the patients belonged to lower socio-economic group and also from the rural areas.

Patient's age ranges from 6 months to 70 years. Most of the patients were below the age of 10 years. (Table-1)

In total review of nature of foreign body regardless of age, coin was commonest FB (76%) as show in Table-2.

Types of foreign body in age groups are shown in table-3.

In present study diagnostic oesophagoscopy was done for removal of FB (Table-4).

Table-5 shows the types of foreign body in male and female patients.

Table No.1: Age distribution (n=100)

Age group	No. of cases	Percentage
I	78	78.0
II	16	16.-
III	06	06.0

TableNo.2: Types of foreign body (n=100)

Type	No. of cases	Percentage
Coin	76	76.0
Meat bolus	07	07.0
Bone chip	05	05.0
Seed	04	04.0
Denture	03	03.0
Bunta	02	02.0
Magnet	01	01.0
Metallic washer	01	01.0
Fish bone	01	O1.0

Table No.3: Types of FB (n=100)

Type	Group-I (n=78)	Group-II (n=16)	Group-III (n-6)
Coins	74 (94.8%)	02 (12.5%)	-
Bunta	02 (02.5%)	-	-
Magnet	01 (01.2%)	-	-
Steel washer	01 (01.2%)	-	-
Bone chip	-	05 (31.2%)	-
Meat bolus	-	05 (31.2%)	02 (33.3%)
Seed	-	03 (18.7%)	01 (16.7%)
Fish bone	-	01 (06.3%)	-
Denture	-	-	03 (16.7%)

Table No.4: Types of FB in male and female patients

Type of FB	Male (n=67)	Female (n=33)
Coin	55 (82.0%)	21 963.6%)
Bunta	02 (02.9%)	-
Bone chip	03 (04.8%)	02 (06.1%)
Denture	02 902.9%)	01 (03.0%)
Meat bolus	02 (02.9%)	05 (15.2%)
Seed	02 (02.9%)	02 (06.1%)
Fish bone	01 (01.5%)	-
Metallic washer	-	01 (03.0%)

Table No.5: Results of x- rays (n=100)

Result	No. of cases	%age
FB visible	89	89.0
FB not visible	11	11.0

DISCUSSION

From the last 60 years there have been many accounts in the literature concerning the swallowed foreign bodies. This reflects fairly high incidence of the cases world wide.

Most of the FBs in the oesophagus are seen in children. In the study carried out by Maroof1 ,and Zeba Ahmad[15] the incidence of the FB in children below 10 years was 62% which is comparable with the results in present study. Other researches like Erbes and Babbitt[16] reported an incidence of 80% and according to Khan MA[1] report it was 66%. This high incidence is because of social status where people in the society are illiterate having many children, so kids are not properly looked after.

A second peak incidence of FB in oesophagus is seen older age group. Which is shown in table 1 of study by Hussain [17]. Whereas this study shows an incidence of 18%. This high incidence in old age group due to endentulous persons or people with ill fitted dentures. Old people are less propreoceptive to presence of bone and other inedible in there food.

In present study male to female ratio is 2:1, which is consistent with other studies reported by Hussain G, et al.[18]

Commonly encountered oesophageal FB are coins, meat bolus, bone chip, fish bones and dentures,. But a number of unusual FB included wire pieces, ear rings, safety pins, lockets are also cited in the literature. The cardinal symptoms are persistent FB sensation and dysphagia due to size of FB or inflammatory reaction and spasm caused by its presence.As compared to adults,children aremore vague and some times present with no symptoms.[19]

This study comparable with the others reports cited in the literature concerning to clinical presentation. Dysphagia was the commonest presenting symptom. If proximal 1/3rd of oesophageal is obstructed then increased salivation and regurgitation my occur [2-6].

In children respiratory symptoms like cough, chocking may be the presenting complaints due to overflow of oesophageal contents. Polling of saliva on indirect laryngoscopy has been reported to be an accurate sign of retained objects. But this sign is difficult to ellicit in most of the children. Tenderness on pressing the cricoid region is reliable sign in majority of the cases of impacted FB.

X – ray is the main stay to confirm presence of radio-opaque FB. If no FB is seen on X-ray like plastic, wood pieces, seads and patient is symptomatic, endoscopy is still performed. Air trapment in upper end of oesophagus on X-ray soft tissue neck lateral view indicated presence of non-opaque FB. Morbidity rate of 0.34 to 2% has been reported with rigid oesophgoscopy and mortality rate of 0.05%.[20].

CONCLUSION

Late presentation and delay in diagnosis are main causes of complications and mortality. Early diagnosis and safe retrieval is key to avoid complications.

Keep toys, coins and edibles away from reach of children. Endoscopy remains mainstay of diagnostic as well as therapeutic tool and safe and effective method of removal.

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