Use of fiber optic endoscopy for removal of upper gastrointestinal foreign bodies

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Abstract

Impacted foreign bodies (FB) in the upper gastrointestinal tract is a commonly encountered clinical presentation in ENT practice. They include fish bones, coins and food bolus. Currently the commonest way to remove the foreign bodies is with rigid oesophagoscope under general anesthesia. Less expensive, safer fiber-optic endoscope has been used to remove the foreign objects from the upper gastrointestinal tract during last few decades. Whether to use either rigid or fiber optic endoscopy for foreign body removal is still a controversial topic. We were able to demonstrate with evidence that fibro-optic endoscopy could be used as a first line approach in majority of the carefully selected patients, with a high success rate.

Key words – upper GI foreign bodies, fibro-optic/ rigid endoscopy

Introduction

Rigid endoscopic removal of ingested and impacted foreign bodies in the pharynx and oesophagus is one of the commonest emergency procedures done. This is very common in the extremes of life. In children coins, plastic objects and fish or meat bones are commonly impacted, while in older adults fish bone, dentures and meat bones are the commonly impacted foreign bodies (1, 5) .Removal of these FB are done by rigid endoscopic procedures. This procedure had resulted in morbidity and mortalities. (1) It involves general anesthesia with added anesthetic consequences and longer hospital stay. With the introduction of fiber optic endoscope some centers used fiber-optic technique to remove the foreign bodies. (2, 3) Rarely, open surgical procedures had to be performed to remove the impacted foreign bodies (4). In the ENT unit Matara, Sri Lanka, we routinely used fibro-optic technique to remove the foreign bodies in suspected cases and we analyzed the results of 48 months period started from 1st January 2011.

Objective

Objective of our study was to assess the success of the removal of foreign bodies using fibro-optic endoscope.

Method

All the patient who underwent fibro-optic endoscopy for removal or dislodgement of foreign bodies in upper gastrointestinal tract (from pharynx to lower end of the oesophagus) at district general hospital, Matara, Sri Lanka from 01/01/2011 to 30/06/2014 were included in the study. Data was received from the endoscopy registry. Patients who complained of foreign body impaction with a negative finding on either fiber optic or rigid oesophagoscopy were excluded from the study.

Prior to the procedure patients were required to fast for six hours and the procedure was explained and written informed consent was obtained. Ten percent lignocaine spray 5 ml was sprayed in the mouth and throat requesting the patient to retain the same in the throat for five minutes and then to swallow it. Patient in the right lateral position, the fibro-opticgastroscope was passed via the mouth visualizing the oropharynx and pyriform fossa. Subsequently while the patient swallows the endoscope was passed gently into oesophagus and advanced into the stomach. Foreign bodies noted are grasped with biopsy forceps or grasping forceps and removed with the endoscope. Harmless foreign bodies which

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were difficult to grasp were, pushed into the stomach, especially if in the lower oesophagus and the obstruction relieved. Failure to remove or dislodge, the foreign bodies by this method was dealt with rigid endoscopy.

Results

Total number of patients 124

Age distribution

Below 12 years - 2	(1.62%)
12- 60 years - 91	(73.38%)
Above 60 years - 31	(25%)

Gender distribution

Males - 54	(43.54%)
Females 70	(54.46%)

Hundred and twenty four (124) patients underwent the procedure for removal or dislodgement of a Foreign body. The mean age was 51.78 years. Total of 118 patients has had successfully removed or dislodged the foreign bodies with a success rate of 95.16 percentage. Remaining six patients (4.84%) underwent rigid oesophagoscopy and five patients (4.03%) had the foreign body removed successfully and one patient (0.8%) was referred for thoracic surgical input after a failed attempt.

Discussion

It is our practice to perform fiber-optic oesophagoscopy routinely for patients presenting with suspected foreign bodies in the upper gastro-intestinal tract. This practice is rapidly gaining popularity because the conventional technique carries a higher rate of morbidity, requires general anesthesia and overnight stay with added cost to the health system.

In some patients who complain of FB impaction may be a false sensation or the FB may have passed distally at the time of the procedure hence end up with normal endoscopy findings. There is another group of patients, who demonstrate all the clinical signs of foreign body impaction, without radiological evidence of an impacted foreign body. In this group of patients it is difficult to exclude a FB impaction because not all of them are radio opaque. Further there is no standard practice among the manufacturers of dentures to include radio opaque material, which has further compounded to the diagnostic dilemma. In this subset of patients, fibro-opticoesopahoscopy could be diagnostic and therapeutic. A missed a denturecould lead to catastrophic consequences to the patient and will have medico legal implications as well.

Conclusion

Fibro-optic endoscopic technique is a successful procedure to manage the foreign bodies in the upper gastrointestinal tract. This technique can be recommended as the first line approach for removal of foreign bodies in the upper oesophagus and rigid endoscopy can be reserved for the difficult and failed cases with fibro-optic endoscopic technique.

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