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RARE FOREIGN BODY, DENTURE IN OESOPHAGUS REMOVAL THROUGH CERVICAL OESOPHAGOTOMY

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Abstract: Back ground: Impacted esophageal foreign bodies are encountered occasionally, requiring its removal by surgery if rigid oesophagoscopy fails. Methods : This report consists of one case of denture plate foreign body found impacted in the cervical oesophagus, endoscopic attempts failed to remove the foreign body as it is impacted in the cervical oesophagus, we resorted to remove foreign body by cervical oesophagotomy. This patient was male with age 58 years came to ENT op with history of ingestion of foreign body. The duration of ingestion was four days. Result: Denture plate was removed successfully without any complications. Mortality and morbidity was 0%. Conclusion: Open surgical removal of impacted oesophageal foreign body is still the gold standard in spite of advancement in endoscopic techniques. (Ind J Thorac Cardiovasc Surg 2008; 24: 191-94)

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INTRODUCTION

Ingested foreign bodies (FB) are commonly seen in emergency. Most of the foreign bodies pass through GIT while 15 to 20% require endoscopic removal and very few require surgical intervention.

Foreign body ingestion is predominantly observed in children, though it is not uncommon in adolescents, adults, geriatric and patients with psychiatric illness. The diagnosis is usually made by patient's history. Foreign bodies that have passed through the esophagus generally do not cause any symptoms unless obstruction of food passage or perforation of gut occurs. Hence a careful examination should be performed to assess signs of perforation i.e. surgical emphysema subcutaneous region of neck or abdominal tenderness and rigidity. Radiographs of neck, chest and abdomen may reveal the type and site of foreign body. CT scan may be useful in case of small foreign bodies which are not visible on X-ray.

MATERIALS AND METHODS

Our experience is based on cervical esophagotomy for removal of ingested denture plate accidentally by a male patient aged 58 years came to our ENT OP with the history of difficulty and pain during swallowing since 4 days while he was taking Ganji (Slimy rice juice). History of loose denture plate (Fig. 1) was noticed since one month.



On examination	: Vital signs stable
Local examination	: Tenderness of neck on palpation. Laryngeal crepitus absent.
Indirect laryngoscope	: Pooling of saliva present in both pyriform fossa.
Chest AP views	: Normal.
Chest PA views	: Normal.
X-ray neck lateral view	: Normal.
CT Neck	: Radiolucent foreign body below the

Cricoid cartilage with emphysema neck

Diagnosis : Foreign body esophagus.

This patient undergone rigid esophagoscopy after correction of dehydration and electrolyte imbalance. As the denture was embedded deeply in the wall of esophagus due to its sharp margins, it was practically impossible to remove them endoscopically so referred to Department of CTVS for surgical removal. This patient underwent left cervical approach for exposure of esophagus.

Procedure:

Patient was put in supine position with a sand bag behind the shoulders and neck was turned to right. The preparations were also made for possible thoracotomy. Incision was taken parallel to the medial border of left sternocleidomastoid muscle. Sternocleidomastoid was retracted laterally and carotid sheath was identified and retracted laterally to expose esophagus posterior to trachea and attempts were made to feel impacted denture plate. The cervical esophagus was identified and isolated by encircling it with Ryle's tube. Oesophagotomy was done in the most prominent part between the slings and foreign body was removed with finger guided manipulation to disengage the sharp edges. No significant esophageal tear was noticed. A large bore Ryles tube was guided to the stomach, through esophagotomy and then taken out retrogradely through the nose, where it was fixed by suture ligature. Primary closure of the esophagotomy was done with 3/0 vicryl suture interruptedly. Corrugated drain was placed and then incision was closed in layers. (Fig .2 & Fig. 3)

FIG - 2



FIG - 3



Ryle's tube feeding was started on the 3rd post operative day and continued for three weeks. Patient was discharged from hospital after removal of drain with Ryle's tube in situ. The hospital stay was 10 days.

On the first follow up X-ray Chest and barium swallow esophagus done on 12th post op day to rule out any chest complication i.e. empyema. Liquids were started orally and solids allowed after 3 weeks with Ryle's tube in situ.



DISCUSSION

Impacted foreign bodies in esophagus are not an uncommon problem in adults is meat, bones and dentures. Impaction of foreign bodies occurs at physiological narrowings, angulations and strictures. In this case foreign body is a denture which was impacted at cervical esophagus just below the cricopharynx which is the narrowest part of GIT. Treatment of impacted denture plate not removable by endoscopy, needs hospitalization and surgical removal. As the duration of impaction of foreign body are longer the morbidity and mortality increases. In this case the morbidity and mortality is 0% with long duration of 4 days. This may be related to the technique of finger guided manoeuvring to disengage the denture avoiding a long length of esophgotomy and perforation of the esophageal wall.

Blunt foreign bodies can be removed from esophagus without any complication. There are various techniques described to remove blunt foreign bodies from esophagus like inserting a Foley's catheter distally in the esophagus, pushing the foreign body into the stomach with the help of bougie and use of swan gang catheter for removing a foreign body. These manoeuvres can become dangerous in the case of sharp and impacted foreign bodies. The sharp foreign body may become buried deep in mucosal or muscular layer of esophagus leading to mucosal edema resulting in ulceration, perforation or fistulous connection.

In this case the diagnosis is delayed, endoscopy is not safe as the denture plate was embedded deep in muscular layer of esophagus and if attempted, may cause tear or rupture of esophagus. Modern denture plates are radiolucent because vulcanite, the radio-opaque denture material is replaced by radiolucent acrylic and its radiolucent nature may delay the diagnosis and definitive treatment.

CONCLUSION:

Loose denture plates may become foreign bodies in elderly persons and due to the presence of hooks and pointed sharp edges; they may get embedded in esophageal wall, necessitating surgical removal. In this case the denture is sharp with irregular edges without hooks which is impacted in esophagus necessitating esophagotomy.

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