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Foreign Body Cricopharynx Causing Airway obstruction... Challenge for Ananaesthesiologist

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ABSTRACT

Background: Common Foreign Body at cricopharynx are coins, peanut, chicken bone, fish, bone, jewellery, metal parts and plastic parts. Foreign Body at cricopharynx appearsless dangerous than those in the respiratory passage but they are potential threat to the airway. Here we present a case of pointed, slender, sharp, shaped Foreign Body at cricopharynx of a toddler leading to airway obstruction during laryngoscopy and it successful management.

Case presentation: 3 years old male child of weight, 12kg brought by parents with chief complaints of ingestion of foreign body (sharp metallic foreign body) 8hrs before taken inside OT. Drooling of salivasince 7hrs, On asking mother also complains of change in voice, Difficulty in breathing on lying down position which relieves on propped up position and complaining of Gagging. In the pre-operative evaluation, vitals stable, chest was clear. We did this patient under general anaesthesia, during intubation CVCI condition ensued, so considering risk benefit ratio foreign body removal was done by anaesthesiologist. **Conclusions**: Senior anaesthesiologist should always be available for all Foreign Body removal. If Foreign Body is seen at the time of laryngoscopy it should be removed first after considering risk benefit ratio … Anaesthesiologists Foreign Body. Call for help at right time is very important.

Key Words: *Foreign Body, Cricopharynx, Sharp Metallic Foreign Body*

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CASE PRESENTATION:

3 years old male child of weight, 12kg brought by parents with chief complaints of ingestion of foreign body(sharp mettalic foreign body) 8hrs before taken inside OT. Drooling of saliva since 7 hrs, On asking mother also complains of change in voice of baby, Difficulty in breathing on lying down position which relieves on propped up position and complaining of Gagging.

On examination-General condition was fair, a febrile, P = 110/min, RR=26/min, BP=90/60, On auscultation–Air entry bilaterally equal no adventitious sounds heard, CVS – Heart sounds normal, no murmur heard As it was emergency case only X-ray neck was available. [Image 1]

IMAGE: 1

In operation theatre, a multi parameter monitor was attached to baby, measuring Spo2, NIBP, ECG. Our plan of anaesthesia was General Anaesthesia,

Pre oxygenation was done with 100% oxygen then Inj.Ondensetron–1mg, Inj. Midazolam–0.4mg, Inj. Fentanyl–24µg,Inj. Propofol – 12 mg IV was given we were able to ventilate so Inj. Succinylcholine – 24 mg was given. First attempt of intubation was taken by Junior Resident 3(Cords not visualized to him) then Second attempt was taken by Lecturer–Foreign Body was seen at cricopharynx but as lower part of Foreign Body was sharps decided to first intubate the patient (Cords not seen to him also).

Third attempt of intubation was taken by Senior anaesthesiologist –Cords were seen and tried to Intubate patient with 4.5 no. uncuffed Endotracheal tube. But were unable to intubate.

Till this time Patient started **desaturating(SPO2–88%)and bradycardia - 60/min** was seen. So **call for help** was given andventilation attempted. Normal heart rate was restored and saturation was98%. This time **ventilation was not possible** so another attempt to intubate the patient was done with lesser number4 uncuffed Endotracheal tube…intubation was not possible this time also in spite of cords visualisation…but this time it was noticed that broader part of foreign body was compressing the right arytenoid so it had lead to mechanical obstruction due to adduction of vocal cords.

Till this time another senior Anaesthesiologist arrived and did the laryngoscopy as patient was de saturating, **decision to remove foreign body with Magills forceps** was taken. After removal of Foreign Body patient was intubated with 3.5 no uncuffed Endotracheal tube. ENT surgeon was asked to check for any injury, minimal mucosal injury was noted, which didn't require any treatment.

Patient was ventilated for another 30 min, vitals were stable. Patient was extubated uneventfully and was shifted to Post Anaesthesia Care Unit (PACU) for further observation and was shifted toward next day morning.

DISCUSSION:

The vast majority of foreign bodies(80–90%) will pass spontaneously through the gastrointestinal tract in 7–10 days without causing complications, leaving approximately 10–20% that will be removed endoscopically and about 1% will require surgery [1,2,3]. Patients with esophageal foreign bodies (EFBs) typically fall into one of three categories: pediatric patients who account for approximately 75–80%, with the preponderance of children aged 18–48 months, psychiatric patients, prisoners, and edentulous adults [4,5]. The diagnosis of a swallowed EFB can be difficult as the physical examination is generally not rewarding for patients with EFBs. The main diagnostic technique is the use of radiographs to localize the foreign body and radiographic examination should be considered and offered in every patient even asymptomatic unless there is sufficient evidence that the precipitating episodes were self-limited and no evidence of residual disease is present[1,6]. Such an X-ray should also be obtained immediately before the operation to eliminate any possible evacuation of the foreign body into the stomach where extraction is seldom, if ever, necessary[7]. Barium swallow studies are important to evaluate then on radio-opaque material that may be lodged within the esophagus, the presence of strictures, diverticulae, or congenital anomalies of the esophagus. In 1972, Morrissey[8]was the first to use the fiber endoscopy for EFB removal. We performed esophagoscopy under general anesthesia as soon as the impaction of an EFB was diagnosed and we believe that the safest method for the retrieval of an EFB is under general anesthesia with a protected airway. Preservation of the airway is regarded to be the most important consideration in foreign body management. It is best accomplished by general endotracheal anesthesia and foreign body removal under direct vision by esophagoscopy[9].

A myriad of ingested sharp pointed objects have been described. Chicken and fish bones, straightened paper clips, tooth picks, needles, bread bag clips, and dental bridge working estions have been associated with complications. Patients suspected of swallowing sharp-pointed objects must be evaluated to define the location of the object. Manysharp-pointed objects are not radiographically visible, so endoscopy should still follow a radiologic examination with negative findings. Sharp-pointed objects lodged in the esophagus are a medical emergency. Direct laryngoscopy is an option to remove objects lodge datorabove the cricopharyngeus. Otherwise, rigid or flexible endoscopy may be performed when laryngoscopy is unsuccessful or for treatment of objects lodged below this area. Although the majority of sharp-pointed objects in the stomach will pass without incident, the risk of a complication caused by a sharp-pointed object is as high as 35%. [10,11,12] Therefore, a sharp pointed object that has passed into the stomach or proximal duodenum should be retrieved endoscopically if this can be accomplished safely. [13,14,15] Otherwise, sharp-pointed objects may be followed with daily radiographs to document their passage, and surgical intervention should be considered for objects that fail to progress after 3 days. [13,15] Patients should be instructed to immediately report abdominal pain, vomiting, persistent temperature elevation, hematemesis or malena. Endoscopic retrival of sharp objects may be accomplished with retrieval forceps, a retrieval net, ora polypectomy snare.[16] The risk of mucosal injury during retrieval can be minimized by orienting the object with its point trailing during its extraction by using an over tube, or by fitting the endoscope with a protector hood.[15,17,18].

Clinical features like drooling, gagging, crying, irritability suggest upper esophageal impaction or abrasion. Change of voice while crying should alert for laryngeal involvement.

If similar foreign body is available should be looked and compared with x-ray images for orientation before induction. X-ray should be carefully observed for edges of the foreign body, orientation of pointed part of foreign body which will help during laryngoscopy and removal.

Since due to this mechanical obstruction of vocal cords the CVCI condition ensued, so considering risk benefit ratio foreign body removal was done. It was possible to ventilate patient after induction and prior to administration of muscle relaxant. But later on ventilation was not possible, this can be due to shift of upper broader part of Foreign Body during first attempt of laryngoscopy, so we as Anaesthesiologist should keep our mind open to changes which canhappen after induction of patient, so decision of removal of Foreign Body could have been taken earlier.

CONCLUSION

Senior anaesthesiologist should always be available for all Foreign Body removal. If Foreign Body is seen at the time of laryngoscopy it should be removed first after considering risk benefit ratio …**Anaesthesiologists Foreign Body**. Call for help at right time is veryimportant.

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