A Case Report of F.B (Cellular Battery) in 18 Days Old Child

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An 18 days old male child presented at Sur hospital ENT clinic with history of difficulty in breast feeding of 1 day duration. There was no history of choking, coughing, vomiting or difficulty in breathing. X-ray chest and neck done revealed a round radio opaque shadow in the neck, history revealed accidental swallowing of some foreign body (Possibly inserted by the elder child).

On arrival child was clinically stable active, comfortable and not in distress on examination there was no drooling, no stridor. Chest was clear, no mummings and no added sounds. Heart rate 13/min, Heart sound S1 S2 normal.

A repeat X-ray STN lat view and X-ray chest requested to note of any change of position. The repeat X-ray clearly gave the idea with what we were dealing. The double ring of the circumference of rounded radio-opaque shadow made us to think that. Probably the foreign body is a button battery. Immediately parents were briefed that child needs urgent endoscopy and is to be taken up at the earliest. As the foreign body (Button battery) has a potential of local corrosive effect as well as toxicity, a broad spectrum 1/v antibiotic started together with 1/v fluids. Child was kept NPO till further orders, routine investigations sent to lab and mean while the operation theatre being prepared, a request for Pre anesthetic check up made. Under GA with ortotracheal intubation oesphogoscopy was done using size 5 × 30 cm paediatric bronchoscope (since sphincter could not be negotiated using size 5 paediatric oesophagoscope). The foreign body was visualised just beyond the cricopharyngeal sphincter the proximal part of the foreign body presenting at 8 cm level from upper incisor level, partly hidden by swollen oesophageal mucosa it was grasped with

an alligator forceps and gradually removed with the scope. The button cell was found to be covered with black materials possibly from leakage. A 3.5 size paediatric bronchoscope was then passed to inspect the site of impaction of the foreign body the mucosa at the site was markedly swollen and occluding the lumen, hence the scope was not passed any further. No attempt at insertion of a nasogastric tube was made in view of the difficulty in identifying the lumen and due to the possibility of corrosion and potential false passage. The scope was withdrawn. The baby was extubated. The baby was transferred to ICU for close monitor. He was stable and free of stridor (Figs. 1, 2).

Findings

1. A small button cell about 1 cm in diameter was found impacted just beyond the cricopharyngeal sphincter the proximal part of the foreign body presenting at 8 cm level from upper incisor level, partly hidden by swollen oesophageal mucosa. The mucosa at the site was found to be markedly swollen and occluding the lumen on re inspection after removal of the foreign body.
2. The button cell was found to be covered with black material possibly from leakage.

Discussion

Almost with out exception, the treatment of choice for foreign bodies of upper aero digestive tract is endoscopic retrieval in operation theatre under general anaesthesia. What promoted us to report this particular case is

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Fig. 1 X-Ray AP view showing the round radio opaque shadow foreign body, the double ring can be clearly seen

Fig. 2 X-Ray lateral view showing the round radio opaque shadow foreign body

1. To stress the urgency of endoscopy in cases of Button Battery F.B
2. The unusual smaller age of the child that is 18 days only. A review of available English literature showed cases reported of FB ingestion in the upper aerodigestive tract are of ages between 3 months to 6 years none of that small age of 18 days.
3. There is an urgent need for dissemination of information regarding the preventive measures to avoid such happenings.

The ingestion of FB objects is a regrettably more common event especially in children but usually age group is in between 6 months to 12 years. Certain anatomical and cognitive constraints predispose the children for FB ingestion. Children explore their environment with their mouth. They have the tendency to take everything into

their mouth to determine the texture and taste even of non food objects this is more during the teething period when they have the habit to try to chew any thing everything that they come across and thus they are at risk for ingestion and aspiration of non food items.

In this particular case it is likely that the other elder child might have put this FB object into the Childs mouth as the child is only 18 days old not capable of even properly grasping any object. The elder child out of curiosity of seeing how the young one would eat or at times the elder children out of love try to behave motherly and try to feed the crying baby sometimes they even put objects bigger enough for the small child in the mouth of baby and thus creating problems A point note worthy not to leave small children un attended at all.

Ingestion of button batteries with esophageal lodging in children are being reported now more commonly and this is alarming.

1. Maves and associates have shown mucosal damage after only one hour in the oesophagus progressing to perforation in 8 to 12 h.
2. A review of available English literature showed cases reported FB ingestion in upper digestive tract aged in between 3 months to years and almost
3. none of them as small age as 18 days

The ingestion of foreign bodies is a common problem in the pediatric age group [1], but fortunately the majority of ingested foreign bodies pass through the gastrointestinal tract without any adverse effects [2]. The most common site of impaction is at the level of the cricopharyngeus followed by the other areas of anatomical narrowing [3, 4]. The esophagus is the narrowest part of the pediatric gastrointestinal tract and is the site where a significant number of ingested foreign bodies lodge with the danger of impaction, ulceration and perforation. An important and increasingly swallowed foreign body is the disc or button battery. There are different types of disc batteries, but mercury ones are the most common and the most dangerous.

As stated earlier, batteries lodged in the esophagus should be removed promptly, preferably by endoscopy. The main hazard is a foreign body becoming stuck in the esophagus, which may result in esophageal ulceration and perforation. So the presence of an esophageal foreign body requires immediate attention [5]. There is a general consensus for endoscopic retrieval of esophageal foreign bodies [6]. Either rigid or flexible endoscopes are employed for this purpose. Foreign body ingestions in the pediatric population are a common occurrence. The different types of ingested foreign bodies are wide and varied, with coins being the most common type. The problem of swallowed foreign bodies has long been recognized. The peak age for such ingestion is between 6 months and

3 years as it is the natural tendency for infants and small children to put things in their mouth, frequently resulting in swallowing of foreign body.

Age Range

Pediatric patients have been shown in various studies to comprise 14–83% of all patients ingesting foreign bodies. This wide range depends upon the population being studied. Most ingestion cases occur in the age range of 3 months to 12 years, with a median age of 38 months. The child's normal developmental milestones of using the peak age for such ingestion is between 6 months and 3 years as it is the natural tendency for infants and small children to put things in their mouth, frequently resulting in swallowing of foreign objects. Older children usually swallow foreign bodies accidentally.

Button battery ingestion is a common occurrence in the pediatric population. One study examined 2,382 cases of battery ingestions reported to a national registry during a seven-year period. [7]

Conclusion

There is an urgent need for dissemination of information regarding the preventive measures to avoid such

happenings to such a small child by way of educating the parents through the health workers not to leave the child un-attended. Parents should also be educated to keep all battery operated toys, mobiles etc. out of reach of small children and to keep discarded button battery away from small children as they are prone to such happenings. Mass media can be utilized in this respect hence it is important to keep children away from such lethal foreign bodies.

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