

# Removal of a bead by Fogarty balloon catheter from the trachea: a case report

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**Key words** Foreign body, trachea, Fogarty balloon catheter

## Introduction

Aspirated foreign bodies in children are very serious and sometimes a fatal problem. New instruments and techniques have refined the art of extracting foreign bodies from children.

In the current era, rigid bronchoscopy is the procedure of choice for aspirated foreign bodies. Removal of the foreign body may be accomplished by a variety of techniques. If grasping is not suitable (eg, on a round object), or if perhaps one cannot get the endoscope close enough for extraction with the forceps, extraction using a Fogarty balloon catheter can be employed.

Ullyot and Norman first used a balloon catheter as an adjunct for the removal of bronchial foreign bodies (1).

In the following case report, the successful removal of a spheric foreign body is described using a Fogarty passed through the rigid bronchoscope.

## Case report

A one year-old boy was referred to our clinic due to inhalation of a bead three hours before. He had developed respiratory distress after the aspiration of the foreign body. Chest x-ray did not show any radio-opaque foreign body. He was subjected to bronchoscopic examination.

Bronchoscopy (3.5 F size) was carried out in the operating room under general anesthesia. A bead was seen in the tracheal lumen, at the lower level (carina). The hole of the bead shod upwads, and it almost totally obstructed the lumen. It could not be grasped by usual bronchoscopic forceps (grasping forceps, wire basket). The bronchoscope was brought near the hole of the bead. A thin Fogarty (3 F) was passed through the bronchoscopy tube and also through the hole of the bead. The balloon was inflated and the foreign body was removed with the withdrawal of the

bronchoscope and Fogarty simultaneously (Figure).

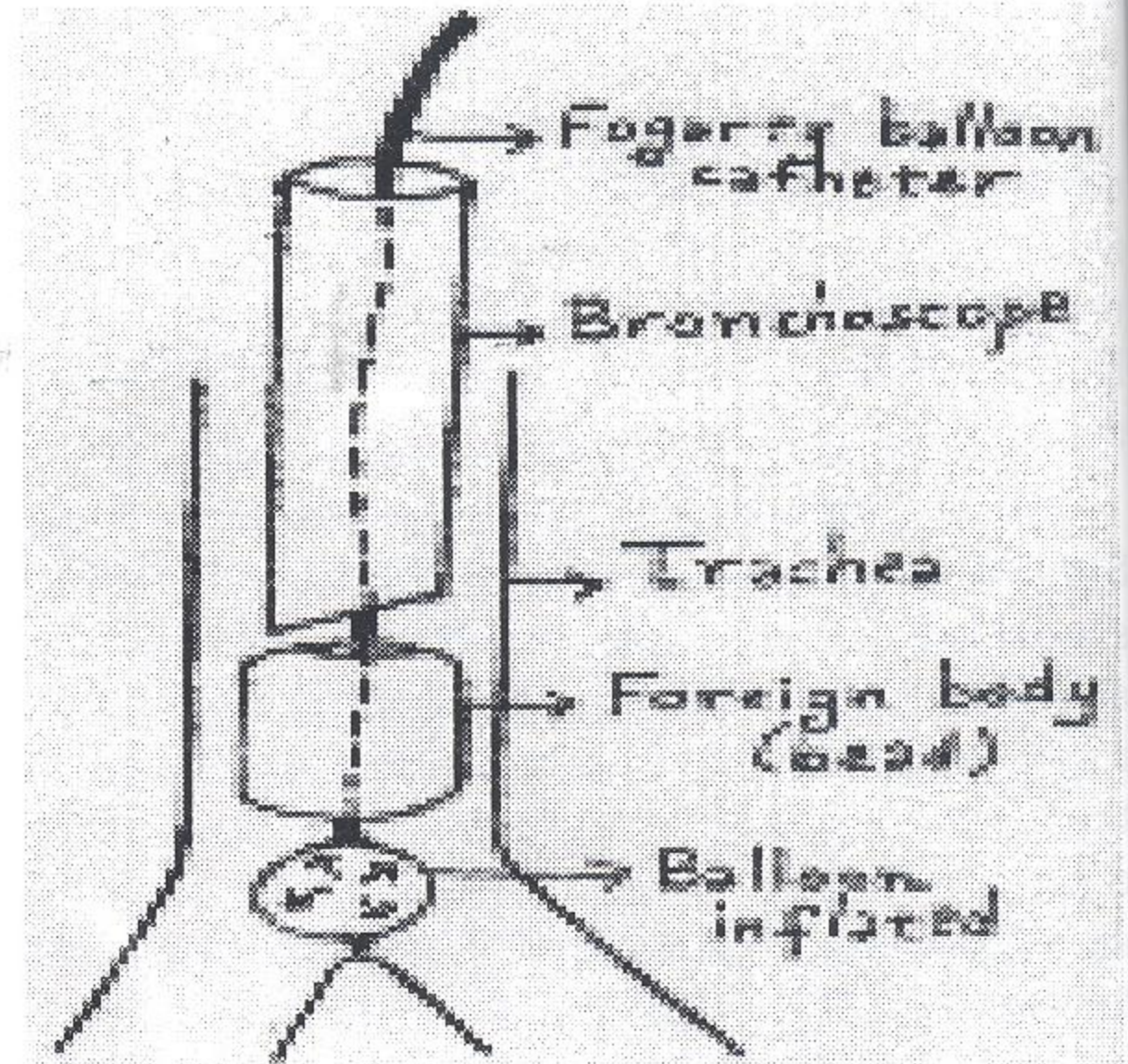


Figure. Removal of a bead by Fogarty balloon catheter

## Discussion

Some of the blunt spheric foreign bodies like beads in the tracheobronchial tree sometimes can not be grasped by usual bronchoscopic forceps and these patients are subjected to thoracotomy and bronchotomy for the extraction of these foreign bodies.

Balloon catheters (Foley and Fogarty catheter) have been used for the removal of tracheo-bronchial and esophageal blunt foreign bodies (2).

Fogarty balloon catheter, designed originally for the removal of intravascular blood clots in 1963 has also been used for the removal of stones in the biliary ductus, stones in the ureter and salivary calculus (3). Reports describing the use of the Fogarty with bronchoscopy in the removal of aspirated foreign bodies from the tracheobronchial tree are very rare (2-4).

Fogarty balloon catheter is more suitable than the Foley catheter in the extraction of tracheobronchial foreign bodies because of its hardness and thinness. It is safer for the extraction of foreign bodies having a hole



through their corpus like beads. The catheter can be passed through the hole of the bead and its balloon is inflated. No dislodgement of the foreign body occurs with this technique during withdrawal of the bronchoscope and the catheter as a unit. The hole in the corpus of the bead or in any other similar foreign body should be large enough to pass the Fogarty through it in order to apply this technique.

In conclusion, it should be kept in mind that Fogarty can be used in extracting blunt spheric foreign bodies localized in tracheobronchial tree which can not be held with other forceps.

## References

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