Use of a Fogarty Catheter for Bronchoscopic Removal of a Foreign Body

To the Editor:

There are certain foreign bodies in the tracheobronchial tree which defy the grasp of extraction forceps and tax the ingenuity of the endoscopist. Since the inhalation of foreign bodies represents a life-threatening situation, an immediate satisfactory solution is required. We describe the successful use of the Fogarty arterial embolotomy catheter by inserting it through the hole of the foreign body.

CASE REPORT

A two-year old child was brought to the emergency ward in acute respiratory distress after aspirating (some hours previously) a foreign body described as a plastic bead.

On examination, tachypnea and tachycardia were obvious with severe suprasternal and intercostal retractions; auscultation revealed decreased air entry in both lungs. Fluoroscopy showed hyperinflation of both lungs with paradoxical movement of the mediastinum.

Upon making the diagnosis of a foreign body in the trachea, bronchoscopy was immediately performed under general inhalation anesthesia. A 4 mm ventilating bronchoscope was inserted into the trachea visualizing a large white foreign body of about 7 mm diameter, above the carina, obstructing the tracheal lumen, with edema of the surrounding mucosa. A small hole in the middle of the foreign body could be seen. Attempts to grasp the foreign body with various forceps, or to insert one of the blades into the hole, was unsuccessful. The use of suction in the anti-Trendelenburg position also failed to move the object. Then a 3 Fr Fogarty catheter was passed through the hole so that the balloon could be inflated with 0.6 ml of air deep to the level of the bead (Fig 1). With moderate traction, because of the degree of impaction of the bead in the edematous trachea, the foreign body could be pulled out and engaged in the tip of the bronchoscope. The catheter and the bronchoscope were removed together, with the bead held between the Fogarty catheter balloon and the bronchoscope end. After removal of the foreign body, the bronchoscope was reinserted for inspection and aspiration of bronchial secretions. Immediately after the procedure, air entry to both lungs was significantly improved. Chest radiographs in the recovery room revealed only segmental right upper lobe atelectasis, which disappeared within 12 hours.

DISCUSSION

The inhalation of foreign bodies into the tracheobronchial tree in small children is frequently an emergency situation. Certain foreign bodies which are large, round and smooth may pose a challenge to the endoscopist.

REFERENCES

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