Two cases of airway foreign bodies involving the aspiration of component parts of commonly used respiratory therapy equipment are described. The first case demonstrated the accidental introduction of a washer from a closed catheter suction system into the airway of a patient. The second case involved the accidental introduction of a part of an intubating stylet into the lung. Improper use of this equipment can result in airway foreign bodies and potential respiratory compromise.

Case 1

A patient suffered a C-6 spinal cord injury after a motor vehicle accident and subsequently developed respiratory failure due to right upper lobe pneumonia and atelectasis of the left lung. The patient was treated with antibiotics, bronchodilators, and vigorous suctioning while on a ventilator. This treatment allowed reexpansion of the left lung, and the patient was weaned from the ventilator and the left lung remained expanded.

Four days later, the patient again developed atelectasis of the left lung and respiratory distress which required reinstitution of mechanical ventilation. Conservative measures were again utilized to improve bronchial hygiene; however, the atelectasis remained. Bronchoscopy was performed which demonstrated a small white rubber washer (Fig 1) in the left mainstem bronchus which was easily removed with the bronchoscope biopsy forceps. Removal of the washer allowed reexpansion of the lung, and the patient no longer required ventilator support.

An extensive search of all respiratory equipment resulted in the discovery that the washer was a component part of the Ballard closed system catheter which is commonly used in respiratory intensive care units (Fig 1). The catheter and sleeve are attached to a clear plastic "T" adaptor by a "luer-lock" type plastic hub. This plastic hub houses the washer which surrounds the catheter. The washer remains secure within the hub as long as the system remains closed. If the "T" adaptor is removed from the hub, the washer is then free to slide off the end of the suction catheter.

While suctioning the above described patient, the adapter was removed from the hub, and the patient was then manually suctioned through the tracheostomy, using the free end of the catheter. This allowed the unsecured washer to slide down the end of the catheter and directly enter the airway.

Case 2

A patient with a pulmonary embolus was undergoing intubation for respiratory failure. The respiratory therapist used an Armstrong

Figure 1. Aspirated washer.
Medical Industries 8801 (Fig 2) intubating stylet to assist in the intubation. The stylet itself is a brass rod about 42 cm long with a small ball soldered on one end and a larger ball soldered on the other end.

The intubation was difficult, and the patient constantly bit down on the endotracheal tube while the stylet was advanced inside the endotracheal tube. The stylet was subsequently withdrawn, apparently with force, and it was noted that the brass ball at the end of the stylet was absent. Subsequent chest roentgenogram confirmed the location of the metallic ball in the left lower lobe bronchus. Flexible bronchoscopy was unsuccessful at retrieval of the metallic ball, due to its small size and peripheral location. Further attempts at retrieval, including possible thoracotomy, were not performed due to the patient’s underlying condition. Although the patient had no acute respiratory compromise due to this event, subsequent long-term follow-up regarding her clinical condition is not available.

**Discussion**

These two cases demonstrate unusual episodes of aspiration of component parts from respiratory care equipment, which at least in one case, caused immediate compromise to the patient’s respiratory status. The Ballard closed system suction catheter 2205 is commonly used in respiratory intensive care units throughout the country. It is important to emphasize the potential hazard which exists when the unit is taken apart so as not to remove the catheter from the “T.” A strong argument can be made that the “luer-lock” fitting should be made solid, so a violation of its integrity will not occur. In addition, the washer should at least be radiopaque so that if it falls into the airway, it can be seen roentgenographically. We urge the instruction of nursing staff and respiratory personnel in this rare but potential complication which exists when this commonly employed suction catheter is used improperly.

Caution is also urged in the use of the Armstrong Medical Industries model 8801 intubating stylet. Although this isolated event likely occurred due to forceful removal of the stylet while the patient was biting, it nonetheless is a complication which should not have occurred. Clearly, this stylet has the potential to “shear off” the ball end, and it is not unreasonable to expect that under similar circumstances, this adverse event could occur again.

**References**

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**Giant Endocardial Blood Cyst in Left Ventricle Resected by Transaortic Valve Approach**

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A 57-year-old man had a histologically proven giant blood cyst in the left ventricle. An encapsulated mobile cystic tumor (3 x 3 x 4 cm), which was attached to the anterolateral papillary muscle by a stalk, was successfully resected by a transaortic valve approach for preserving cardiac function.

**Case Report**

An asymptomatic 57-year-old man was admitted to the Second Department of Internal Medicine, Sapporo Medical College, for further examination of an abnormal heart sound. Physical examination revealed no abnormal finding except a midystolic sound and a late crescendo-systolic murmur graded 3/6 at the apex. His pulse rate was 80 beats/min and blood pressure was 128/74 mm Hg. Laboratory examinations disclosed no abnormal findings of special note. The electrocardiogram and the chest roentgenogram did not demonstrate any sign of abnormality. Cardiac catheterization showed normal values in the intracavitral pressures, cardiac index (3.96 L/min/m²), and left ventricular ejection fraction (52 percent). Echocardiography (Fig 1, a) demonstrated a giant “snowman” shaped mass attached to the apical side of the anterolateral papillary muscle. The surface of the mass revealed a partially high-echoic density, although most of the tumor mass showed homogenous echolucent characteristics and was clearly differentiated from the myocardial tissue. On color Doppler images, a midventricular arising flow was detected around the tumor mass. Magnetic reso...