

## Case report

## When Christmas decoration goes hand in hand with bronchial aspiration ...



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## ABSTRACT

We report the case of a 14-month-old girl suffering from cough and wheeze around Christmas. She was treated with anti-asthmatic drugs with no success, and 3 weeks later a chest X-ray revealed a LED bulb in the left main bronchus. This LED bulb came from a Christmas light garland decorating the Christmas tree. We discuss the different Christmas objects that can be inhaled by young children, the challenge to diagnose bronchial inhalation during this winter period, and the emergence of new foreign bodies, such as LED bulbs, with a particularly aerodynamic shape.

« Oh, when I hear the Christmas tunes, I like to look back to my childhood joys ... ». We are not absolutely sure that this young, 14-month-old girl will be in the same spirit in the coming years ... Indeed, two days before Christmas she developed a cough and wheeze. There was no cyanosis nor suffocation syndrome. Her general practitioner found bilateral wheezing with no respiratory distress, and due to a past history of wheezing she was treated with inhaled salbutamol and oral prednisolone. Three weeks later her clinical status had not improved and a chest X-ray was performed. A U-shaped radiopaque foreign body was localized in the left main bronchus (Fig. 1). A light-emitting diode (LED) bulb was successfully removed by rigid bronchoscopy under general anesthesia (Fig. 2). To note, several attempts were necessary because the anode and/or cathode penetrated the bronchial mucosa during the removal procedure. The patient was symptom free after the LED removal. Finally, the parents reported a missing LED bulb on the Christmas light garland decorating the Christmas tree.

To diagnose a foreign body in the respiratory tract at the Christmas period in a young child may be a challenge. Nearly all children are sick during this period. Acute viral bronchiolitis and other winter upper and lower wheezy respiratory diseases are so frequent that a misdiagnosis may be easy, particularly when a suffocation episode is absent. For the little that there is a history of wheezing, as in our case report, an anti-asthmatic treatment is wrongly prescribed. Therefore the “Christmas bronchial aspiration” should be of particular knowledge, because the imagination of our children for inhaling objects, including Christmas decorations, is limitless. For instance, inhalation of plastic Christmas bow pins have resulted in several deaths in the past, obliging the 3M Company to modify the circular base of the bow pin into the form of a cross to decrease the risk of aspiration asphyxia with an object that does not completely obstruct the airway [1]. More recently, a flat plastic

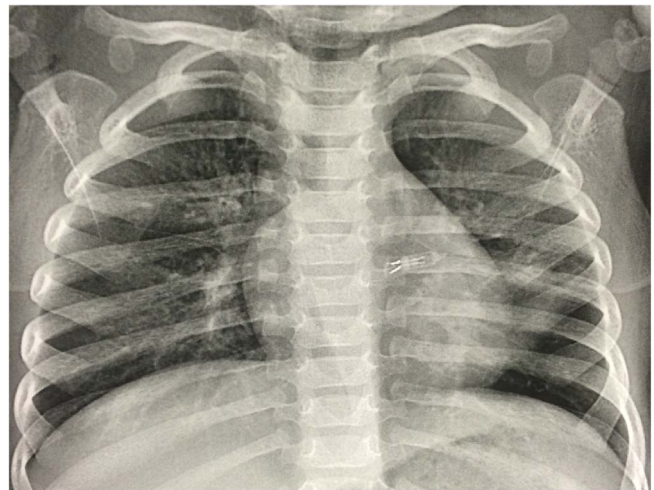


Fig. 1. Chest X-ray of a 14-month-old girl showing a U-shaped radiopaque foreign body into the left main bronchus.

Christmas tree embedded within granulomatous cords causing almost complete airway obstruction, and requiring tracheostomy before extraction, has been removed 2 years after the inhalation [2]. The occurrence of new technologies for Christmas decorations, such as LED bulbs, with an aerodynamic design facilitating the bronchial penetration despite its size, lead to new respiratory foreign bodies for whom extraction is not always easy. To our knowledge, only another Chinese case report [3] of a 15-month-old girl with a LED bulb in the right main

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**Fig. 2.** The LED bulb from the Christmas light garland decorating the Christmas tree removed from the left main bronchus.

bronchus has been reported, but monitoring such cases may be of interest to possibly reconsider the shape of some LED bulbs.

#### **Conflict of interest**

None.

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