

Foreign Body Aspiration: A Life-Threatening Situation

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Foreign body aspiration is a life-threatening event, especially in children. In Pakistan, foreign body aspiration in children with betel nuts is a common emergency in the perioperative area. Health awareness of parents, teachers, caretakers, and health care providers can play a significant role in reducing the risk of this life-threatening event. This article describes a case report of a 2½ year old boy who presented in the perioperative area with a betel nut aspiration.

Keywords: foreign body aspiration, case report, perioperative teaching, betel nut.

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FOREIGN BODY ASPIRATION (FBA) is a common incident in infants and young children and can be life threatening.¹ Young children, with their inquisitive nature, often want to take everything in their mouths without having premolars and molars to grind food effectively.² Moreover, with an immature cough reflex, morbidity, and mortality are higher in children.³ FBA data collected by the “Susy Safe” registry for 4 years yielded 10,564 cases. Food objects aspiration was present in 26% of the cases, whereas non-food objects aspiration was 74%. The most common food objects were bones, nuts, and seed; whereas non-food objects included pearls, balls, and marbles. Coins and toys were included in non-food aspirations. A detailed foreign body (FB) description is provided in Table 1. The most common complications reported were infections (6.7%), pneumonia (6.4%), asthma (3.1%), and perforation (2.9%). Hospitalization was required for complications in 7.1% of children younger than 1 year, whereas hos-

pitalization was less frequent in older children.⁴ This article presents a case report of a 2½ year old boy who presented in the perioperative area with betel nut aspiration.

Case Report

On a Wednesday evening, a 2½ year old boy appeared in the perioperative area with the complaint of dyspnea. He weighed around 12 kg. Oxygen saturation was 85%, respiratory rate was 40/min, and pulse was 120/min. He was categorized as an ASA IE by the pediatric anesthetist.⁵ The child was coughing a lot with apparent central and peripheral cyanosis. The emergency room nurse reported that the patient had aspirated betel nuts while playing with elder siblings (Figure 1). He had been short of breath ever since. The patient presented with significant stridor with poor air entry on the right side. He was given an inhaled bronchodilator with no improvement. Chest X-ray revealed a FBA in the right main bronchus and hyperinflation of the right lung. The wheezing was louder on the right side of his chest. The heart and mediastinum shifted toward the left side, resulting in left lower lobe collapse.

The parents were very apprehensive, and the child was in distress. He was immediately transferred to the emergency operating room for a flexible bronchoscopy under general anesthesia. The FB was removed from the right main bronchus and

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Conflict of interest: None to report.

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1089-9472/\$36.00

<http://dx.doi.org/10.1016/j.jopan.2014.02.004>

Table 1. Foreign Body Aspiration List

FB Description	Number	Percentage
Pearl, ball, and marble	1,698	16
Coin	1,534	15
Bone	885	8
Other non-food	639	6
Nut	613	6
Other food	563	5
Pin and needle	506	5
Toy	441	4
Seed and grain	430	4
Pebble	424	4
Stationery	422	4
Paper	365	3
Plastic	304	3
Jewelry	215	2
Metal	183	2
Battery	170	2
Cotton	162	2
Button	152	1
Stick	150	1
Bean and pea	142	1
Sponge	95	1
Sweet	91	1
Arthropod	80	1
Cap	70	1
Other stationery	56	1
Polystyrene	53	1
Tinfoil and cellophane	42	0
Accessorize	26	0
Fruit stone	20	0
Earplug	20	0
Medicine	13	0
Total	10,564	

FB, foreign body.

The Susy Safe Working Group (2012)

identified as a betel nut. Once the child was received and recovered in the postanesthesia care unit (PACU), the parents were called in to be with their son. The child was provided 100% supplemental oxygen via face mask and nebulized with ipratropium to relax air passages. After 6 hours of close monitoring and intense care, the patient's breathing settled and oxygen saturation improved to 98%. The child was closely monitored overnight in PACU and discharged home on the next day.

Discussion

FBA into the trachea is a life-threatening event; it can block respiration by airway obstruction,



Figure 1. Betel nuts picture. This figure is available in color online at www.jopan.org.

thereby impairing oxygenation and ventilation. Delayed diagnosis of FBA can lead to serious problems for children, ranging from fatal airway obstruction to chronic wheezing, recurrent pneumonia or failure to thrive.⁶ A recent Pakistani study revealed that children presenting with FBA ranged in age from 2 to 5 years and were 70% male and 30% female. Peanuts and whistles were the most common foreign bodies.⁷ The most common sites of FB lodgment included the right bronchial tree (55%), left bronchial tree (46%), and trachea (17%).² The right main bronchus is a more common site because it is larger, receives greater airflow, and has a straighter line of entry than the left bronchus.⁸ FBA signs and symptoms include sudden onset of choking, cough, and shortness of breath. Other signs and symptoms may include neck and/or throat pain, stridor, dyspnea, wheezing, hoarseness, perioral cyanosis, retractions, or rhonchi. Patients may present with some or none of these signs and symptoms.⁹

In our case report, the child had dyspnea and intense coughing, indicating partial airway obstruction. If the child was unable to cough, it would have indicated complete airway

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