

THE TRAGEDY OF PICA: STONE ASPIRATION!

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We report a case of a two-year-old girl with an unusual foreign body aspiration caused by pica. Foreign bodies were successfully removed using a rigid bronchoscope. Further investigation led to a diagnosis of iron-deficiency anemia and she was treated with an iron supplement.

Key Words: Stone aspiration, Pica, Iron-deficiency anemia, Child, Bronchoscopy.

PİKANIN TRAJEDİSİ: TAŞ ASPİRASYONU

İki yaşında kız çocuğunda pikanın neden olduğu nadir bir yabancı cisim aspirasyonu sunuldu. Yabancı cisimler rijid bronkoskoplara başarılı bir şekilde çıkarıldı. Yapılan ileri araştırmalarda, hastada demir eksikliği anemisi tespit edildi ve tedavisine başlandı.

Anahtar Kelimeler: Taş aspirasyonu, Pika, Demir eksikliği anemisi, Çocuk, Bronkoskopi.

Foreign body aspiration (FBA) is a very common pediatric emergency which may be associated with high morbidity and mortality (1). The most common foreign bodies are radiolucent and organic in origin, like dry nuts and beans, in childhood. We report a case of an unusual foreign body caused by pica. In a further investigation, she was diagnosed with iron-deficiency anemia (IDA).

CASE REPORT

A 2-year-old girl presented with a 3-day history of coughing, choking, and tachypnea. No definite history of witnessed FBA with sudden choking while holding or eating an object in the mouth was obtained from the family. It was realized on further questioning that the patient had a history of pica.

A physical examination revealed signs of respiratory distress such as tachypnea, nasal flaring, intercostals and suprasternal retractions, stridor and rales. Complete blood count (CBC) indicated a hemoglobin level of 8 g/dl, hematocrit level of 24%, white blood count of 24,000/mm³, platelet count of 650,000/mm³ and mean corpuscular volume (MCV) of 58 fl (normal 85-95 fl). The plain chest radiograph showed air trapping on the right with a shift of the mediastinum to the left and radio-opaque foreign bodies in both main bronchi (Fig. 1).

Bronchoscopy, which was performed using a pediatric ventilating rigid bronchoscope system of appropriate size without a telescope (Karl Storz, GmbH Co, Tutligen, Germany), showed foreign bodies in both main bronchi. The foreign bodies, 0.5 and 0.3 cm in diameter respectively, were successfully removed from the right and left main bronchi. They were stone particles.

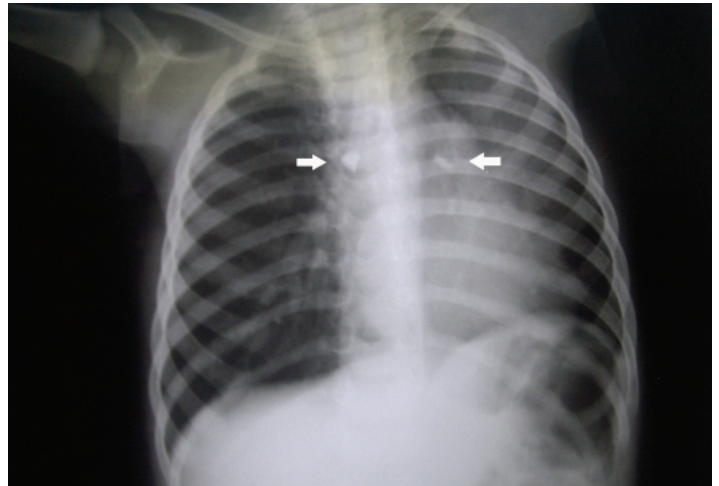


Figure 1: Plain chest radiograph showing air trapping on the right with a shift of the mediastinum to the left caused by stones lodged in both main bronchi (arrow).

The postoperative course was uneventful. CBC findings suggested that the child had IDA. Peripheral blood smears demonstrated severe hypochromic microcytic anemia. The diagnosis of IDA was confirmed by low serum ferritin level and high total iron binding capacity. Therapy including ferrous sulfate was started.

DISCUSSION

FBA is a life-threatening emergency and requires prompt removal. Although FBA is diagnosed based on a history of choking episodes, sometimes it may remain undetected due to an atypical history or misleading clinical and radiological findings (1,2). In our case the diagnosis was easily made due to the radio-opaque stones.

Although aspirated foreign bodies are most commonly found in the right main bronchus in adults, the distribution of aspirated foreign bodies in children may vary in location. Van Looij et al. reported that aspirated foreign bodies were equally distributed between the left and right main bronchi in children up to 3 years of age (3). In our case, there were foreign bodies in both main bronchi. This could be explained by recurrent aspirations.

Pica is the compulsive eating of nonnutritive substances and it may have serious medical complications. The main factors associated with pica include iron deficiency anemia, malnutrition, mental disorders, pregnancy, psychiatric conflict, and social and ethnic habituation. Low iron levels may be the possible cause of pica, contradicting the contention that low levels of plasma iron could be an effect of pica (4).

Microcytic anemia frequently occurs as a result of iron deficiency (5). In our case, MCV of 58 ft on routine CBC screening suggested IDA. Then a further hematological evaluation confirmed IDA.

Physicians should be aware of the behavioral alterations seen in children with iron deficiency (5). They may swallow and aspirate whatever they find in their environments. Sometimes this can result in a life-threatening emergency, as seen in our case.

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