CASE REPORT

Pneumopericardium after Foreign Body Aspiration: A Case Report

Abdelgalil Ragab1*, Tarek Al Salhani1, Sallam Taha1, Eyad Darraj1 and Kamal Moustafa1

1Department of ENT, Dubai Hospital, Dubai, UAE

Abstract:
A case of spontaneous pneumopericardium occurred in the patient after the aspiration of no sharp foreign body. The patient was sent to Operation Theater (OT), bronchoscopic extraction of the foreign body was performed, and the patient was stable postoperatively. Serial follow up X-rays were done and showed resolving of the pneumopericardium.

Keywords: Pneumopericardium, Foreign body aspiration, Bronchoscopy, Complications foreign body aspiration, Asymptomatic.

1. INTRODUCTION

Foreign body aspiration (FBA) is one of the serious conditions that most commonly occurs in children especially age group under 3 years old [1]. More than 300 deaths per year are reported in the United States due to FBA in patients less than 6 years old [2]. Children are more susceptible to FBA than adults [3]. The history of choking is the main cornerstone in suspecting FBA [4]. Coughing, wheeze and diminished air entry are the classic presentations of FBA but it is seen in less than 40% of the cases [5]. Asymptomatic FBA was reported in some cases [6]. Early diagnosis and removal of the foreign body are the aim in managing such cases [7]. Bronchoscopy is essential in the diagnosis and treatment of FBA [8]. The complications of FBA can be related to the foreign body itself or related to the procedure of removal using bronchoscopy [9]. The complications may include the following pneumomediastinum, pneumothorax, hydropneumothorax, bronchial stenosis, abscess, atelectasis, pneumonia, bronchiectasis, foreign body dislodgment and bronchospasm [10].

2. CASE REPORT

19-month-old, female patient, previously healthy, was presented to the emergency department with a history of choking episodes and cough while eating nuts. The mother did back slapping but the aspirated nut did not come out. The patient slept after that and did not have breathing difficulty at that time.

A few hours later, she woke up coughing excessively, followed by vomiting and the parents noticed breathing difficulty and she started to develop bilateral neck swelling, so they again presented her to the emergency department. No change in skin color or mental status was observed. In Emergency Department, she was under observation and Otolaryngology team arranged for bronchoscopy (her chest x-ray Fig. (1) showed hyperinflation on the left side, shifting of the mediastinum to the right side, subcutaneous emphysema, and Pneumopericardium).

Bronchoscopy was done under General Anesthesia (GA), and a piece of the nut was found completely obstructing the left main bronchus. This piece was removed without intraoperative complications. The nut removed has a smooth surface and about 1X 2 centimeters.

The cardiothoracic team advised for conservative management and no need for any intervention from their side. The patient was doing well and serial chest X-Rays were performed for comparison which showed improvements. The patient was clinically stable, afebrile, not distressed and tolerating orally well. Therefore, the patient was kept under observation for one day prior to discharge on room temperature. She did not develop breathing difficulty or distress. X-ray was performed before discharge and showed complete resolution of Pneumopericardium (Fig. 2).

3. DISCUSSION

One of the most frequently occurring situations in the pediatric population is foreign body aspiration; because foreign body aspiration has no specific clinical manifestation, therefore its diagnosis may be delayed [11]. Foreign bodies lodged in the right main bronchus more than the left one as it is more vertical and larger in diameter [12]. However, in this case report, the
foreign body was impacted in the left main bronchus. The complications of FBA can be related to the foreign body itself or related to the procedure of removal using bronchoscopy [9]. Sometimes, the foreign bodies are incidentally seen on radiographic imaging ordered for other medical conditions as asthma and unresolving recurrent pneumonia [13]. Unresolved pneumonia, lung abscess, bronchiectasis and formation of granulation tissue around the foreign body may occur if delayed diagnosis of foreign body aspiration [13]. In this case, the pneumopericardium was diagnosed before removal of the foreign body and so it is due to the foreign body itself and not related to the procedure.

Fig. (1). Plain chest x-ray: showing Pneumopericardium. Red arrow pointing to the air in the pericardium.

Fig. (2). Plain chest x-ray, showing resolved Pneumopericardium.
CONCLUSION

Early diagnosis and bronchoscopic removal of FBA are the gold standard management to provide safe and effective treatment to such patients and to avoid undesirable complications.

The complication can occur even after early diagnosis and early removal of FBA as discussed in this case.

ETHICS APPROVAL AND CONSENT TO PARTICI-
PATE

Not Applicable.

HUMAN AND ANIMAL RIGHTS

No animals/humans were used for studies that are the basis of this research.

CONSENT FOR PUBLICATION

Consent was obtained by patient's father.

STANDARD FOR REPORTING

Care guidelines have been followed in this case report.

FUNDING

None.

CONFLICTS OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

ACKNOWLEDGEMENTS

Declared none.

REFERENCES


