

## Hamman's Syndrome in a 2 Years Old Child: Case Report

### İki Yaşında Bir Çocukta Hamman Sendromu

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**ABSTRACT** Hamman's syndrome is defined as the presence of free air in the mediastinum in the absence of any obvious precipitating cause. Even it's a benign self-limiting condition it should be differentiated in order to prevent morbidity and mortality. Being a rare entity in childhood, we aimed to present a case with Hamman's syndrome that was diagnosed incidentally and treated conservatively.

**Keywords:** Pneumomediastinum, diagnostic; asthma

**ÖZET** Hamman sendromu mediasten içinde sebebi açıklanamayacak şekilde serbest hava bulunması olarak tanımlanmaktadır. Genellikle kendi kendini sınırlayan benin karakterde bir hastalık olmasına rağmen morbidite ve mortaliteyi azaltmak için ayırıcı tanı önemlidir. Çocukluk çağında nadir bir olgu olan Hamman sendromu ile başvuran ve takip edilen bir olguyu sunmayı amaçladık.

**Anahtar Kelimeler:** Pnömomediasten, tanısız; astım

Hamman's syndrome, in the name of Louis Hamman, was first reported in a case series at 1939.<sup>1</sup> It was Thaler et al. who reported the first case series in children at 1964.<sup>2</sup> It is defined as presence of mediastinal free air in the mediastinum in the absence of any surgical or medical intervention, chest trauma or mechanical ventilation.<sup>3</sup> It's very uncommon in children. Spontaneous pneumomediastinum is predominantly seen in male adolescents. Herein, we present a 2 years old case with Hamman's syndrome with atypical presentation.

### CASE REPORT

A 2 years-old boy was admitted to the emergency department with complaints of wheezing for the last two weeks. He had been admitted to different clinics and treated with inhaled bronchodilators for 5 days. He didn't have any kind of trauma or medical and surgical intervention. On physical examination, his blood pressure was 100/60 mmHg, respiratory rate was 32/min, fever was 36,7°C, oxygen saturation was 98%. Both hemithoraces were equally contributing the breathing and wheezing were symmetric at

auscultation. Subcutaneous emphysema was palpable on the neck region. He didn't seem to have pain but was a bit anxious. His laboratory examinations including blood gases and cardiac enzymes revealed nothing except a 5 times increase in CRP. At X-ray, there was free air in the mediastinum, in the axilla and neck region (Figure 1). A computerized tomography with intravenous contrast medium was performed and the same findings including pneumonic infiltration were observed. There wasn't any sign of pneumothorax. An esophagram was performed and no pathology was found (Figure 2). An echogram was performed and found to be in normal limits. Intravenous ceftriaxone and inhaled oxygen, bronchodilators and steroid were administered. Signs and symptoms of the patient resolved totally in days. He has been free of symptoms for one year.

## DISCUSSION

Pneumomediastinum is usually associated with a sudden formation of pressure gradient between the alveolus and the surrounding tissues, resulting from either an overinflation of the alveoli or a reduction of interstitial pressure.<sup>4</sup> It's most common in adults however our case is 2 years old. We thought that the reason of the pneumomediastinum can be a common cold of the child that was going on for the last two weeks. Although he had sought for medical treatment for common cold, there was no pre-



FIGURE 1: Free air in the mediastinum, neck and axilla.



FIGURE 2: Esophagram of the patient.

vious documentation of any signs or symptoms of pneumomediastinum. We performed computerized tomography to exclude any accompanying pneumothorax or disease and to see the degree of the pneumomediastinum. Because most of the pneumomediastinum cases can be result of an injury of the esophagus we also performed an esophagram. The air in the mediastinum could lead to pressure on the heart. To be sure, we performed echocardiography. All results were found in normal limits and no pathology was found. Because the patient in our case was hemodynamically stable, we did not perform drainage of the air which is also indicated in very limited indications.

Hamman's syndrome usually is a benign and self-limiting condition although in some cases can be lethal. Prognosis mostly is related with underlying disorder if there is one. The most important and serious differential diagnosis of Hamman's syndrome is Boerhaave's syndrome. Both of them can be presented identically.

The challenging situation in this syndrome is that, even it's known to be benign and self-limiting, all studies in the literature recommend computer-

ized tomography, esophagoscopy, barium swallows and bronchoscopy in the treatment algorithm. In our case we performed all except last two which we thought to be too much aggressive. To our opinion, all modalities should be kept in mind but preferred according to the patient's condition.

### **Conflict of Interest**

*Authors declared no conflict of interest or financial support.*

### **Authorship Contributions**

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## REFERENCES

1. Hamman L. Spontaneous mediastinal emphysema. Bull Johns Hopkins Hosp 1939; 64:1-21.
2. Thaler MM, Krieger E, McKee JA, Fearon B. Treatment of mediastinal and subcutaneous emphysema complicating asthma in children: report of a case. J Pediatr 1964;65(1): 75-80.
3. Takada K, Matsumoto S, Hiramatsu T, Kojima E, Watanabe H, Sizu M, et al. Management of spontaneous pneumomediastinum based on clinical experience of 25 cases. Respir Med 2008;102(9):1329-34.
4. Hauri-Hohl A, Baenziger O, Frey B. Pneumomediastinum in the neonatal and paediatric intensive care unit. Eur J Pediatr 2008; 167(4):415-8.