Case Report

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Foreign-Body Reactive Inflammation Masquerading as Lung Cancer: A Case Report

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ABSTRACT

Delayed diagnosis of foreign-body aspiration can lead to severe respiratory complications, including pneumonia and atelectasis, etc. We report a case of foreign-body reactive inflammation in the right lower lobe, indistinguishable from lung cancer, due to the aspiration of a chili peel one year prior. The patient presented with repeated cough and hemoptysis. A foreign body was incidentally discovered during a surgical resection of the lung lobe. This case highlights the importance of considering pulmonary foreign bodies in the differential diagnosis when faced with similar symptoms.

Keywords: Aspiration; Foreign Body; Lung Cancer

Introduction

Aspiration is an extremely dangerous medical event with acute manifestations such as sudden choking and violent coughing. Fewer patients may have delayed diagnosis due to unspecific symptoms or other reasons. The long-term retention of foreign bodies in the lungs can cause inflammatory damage to the lung tissue. Therefore, this condition requires early recognition and prompt intervention to improve respiratory symptoms and prevent serious complications [1,2].

Case Presentation

A 57-year-old woman presented with a one-year history of daily cough and occasional hemoptysis. She had no significant medical history and all examinations were unremarkable except for a chest computed tomography (CT). A chest CT scan ten days prior to admission revealed a soft tissue density nodule, measuring approximately 2.2 x 2.3 cm, in the posterior basal segment of the right lower lobe. The nodule encircled part of the bronchi, with surrounding cord-like shadows. Contrast-enhanced imaging showed heterogeneous enhancement, with no evidence of enlarged mediastinal lymph nodes. Given the radiological findings, a lung tumor could not be confidently excluded. Therefore, the patient underwent a VATS (video-assisted thoracoscopic surgery) right lower lobectomy under general anesthesia. During the operation, the right lower lobe was removed without evidence of visceral pleura shrinkage or parietal pleura invasion. Surprisingly, a piece of chili pepper was identified within the specimen post-resection (Figure 1). Postoperative pathological paraffin section results showed inflammation. Upon further review of her medical history, the patient carefully recalled that she had experienced severe coughing while eating a year ago.

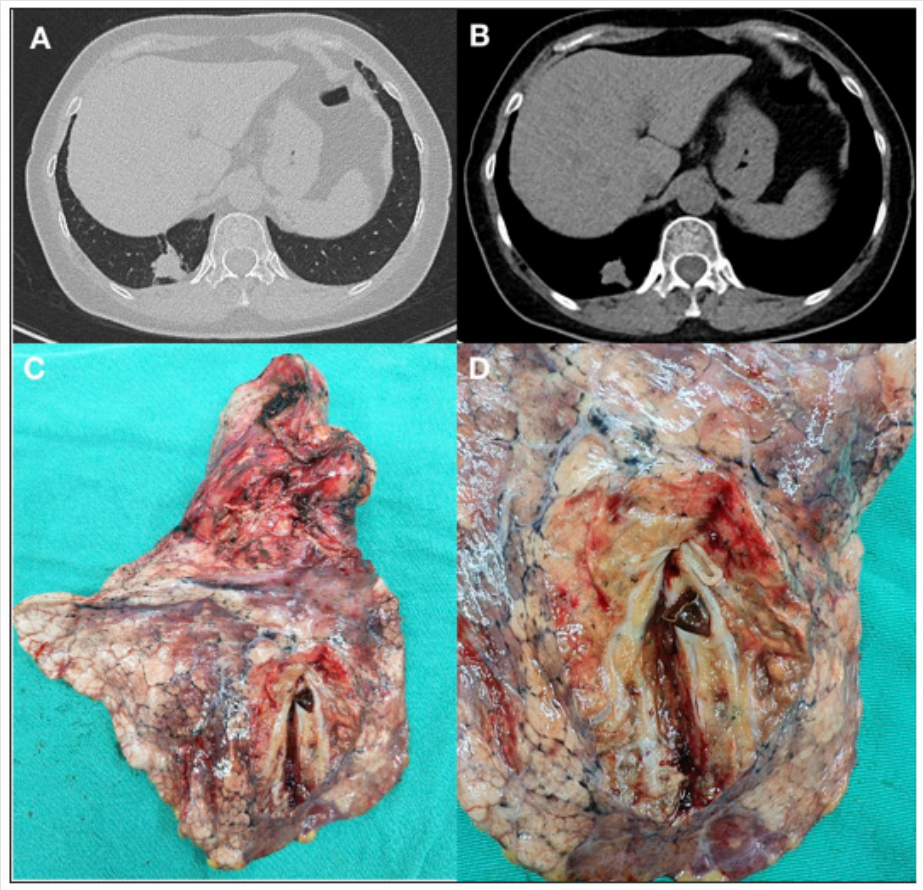

Figure 1: A and B are the preoperative CT images of the patient. A soft tissue density nodule with a size of about 2.2*2.3cm can be found in the posterior basal segment of the right lower lobe. C and D are the pictures of the dissected specimen during the operation. A piece of chili pepper about 1.0*0.8cm in size can be seen from the nodule.

Discussion

This case underscores the significance of thorough medical history taking, as the presence of a malignant tumor cannot be ruled out based on symptoms and CT findings alone. The reported risk of aspiration in adults is around 25% [3,4]. Although foreign body aspiration is rare in adults, it must not be overlooked. A review of PubMed data over the past decade revealed cases where pulmonary foreign bodies were indistinguishable from tumors, often presenting with recurrent or intractable respiratory symptoms (Supplementary Table S1). Long-term retention of foreign bodies can lead to challenging lung inflammation and atelectasis, potentially resulting in secondary malignancies. Symptoms may present immediately or be delayed by months or years. The right lung appears more susceptible to foreign body retention due to anatomical positioning. The types of foreign bodies are typically small, touchable objects, such as food or toys, emphasizing the critical nature of early identification and treatment of pulmonary foreign bodies. Bronchoscopy is recommended for difficult cases to assess tracheal conditions.

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Table S1: 25 cases of pulmonary foreign bodies suspected of being lung cancer.

No.	Year	Researcher	Age of patient	Symptoms	Foreign body location	Foreign body	Retention time	Treatment	Prognosis
1	2012	F Seif, et al. [5]	50	progressive morning cough	right middle lobe	mineral oil	NA	lobectomy	partial lung loss
2	2013	A Cimino Mathews, et al. [6]	84	hemoptysis	right main bronchus	an iron pill	NA	bronchoscopy	symptoms improved
3	2014	B J Alharthi, et al. [7]	41	chronic and recurrent cough	right main bronchus	a piece of plastic	21 years	bronchoscopy	symptoms improved
4	2014	L Ristić, et al. [8]	53	recurrent, non-resolving pneumonia, recurrent hemoptysis, dyspnea, chest pain	right middle lobe	chicken neck bone	2 years	bronchoscopy	symptoms improved
5	2014	M Mishra, et al. [9]	21	hemoptysis	carina going to left main bronchus	a single long hair	NA	bronchoscopy	symptoms improved
6	2015	X Hu, et al [10]	65	dyspnea, cough, and fever	right upper lobe	gastro-esophageal reflux	NA	lobectomy	partial lung loss
			53	dyspnea, low-grade fever, and cough productive of sputum	left lower lobe		NA	lobectomy	partial lung loss
			57	cough and fever	right upper lobe		NA	lobectomy	partial lung loss
7	2016	SS Hoskote, et al. [11]	59	nonproductive cough	right upper lobe	a kernel of corn	6 months	bronchoscopy	symptoms improved
8	2016	R Afghani, et al. [12]	45	fever, productive cough, and increasing dyspnea	left lower lobe	chicken bone	NA	lobectomy	partial lung loss
9	2017	N Denny, et al. [13]	47	cough productive of white-yellow sputum and malaise	right lower lobe	a plastic toy	40 Years	bronchoscopy	symptoms improved
10	2017	D Badenes, et al. [14]	55	No	previous surgical area	Surgicel®	1 Year	follow-up	no difference
11	2017	S Laguna, et al. [15]	76	hemoptysis	right lower lobe	fish bone	NA	lobectomy	partial lung loss
12	2018	S Biswas Roy, et al. [16]	64	insidious onset of worsening shortness of breath	left lower lobe	an almond	6 months	bronchoscopy	symptoms improved
13	2019	J Cheng, et al. [17]	32	chronic cough, blood-tinged sputum, and paroxysmal hemoptysis	right lower lobe	a pen cap	25 Years	pneumonectomy	partial lung loss
14	2019	YL Ge, et al. [18]	72	recurrent cough, yellow sputum, and fever	left main bronchus	a peanut shell	NA	bronchoscopy	symptoms improved
15	2020	Y Sun, et al. [19]	57	recurrent cough, yellow sputum, and occasional hemoptysis accompanied by fever	right upper lobe	a rotten vegetable leaf	NA	bronchoscopy	symptoms improved
16	2020	S Meng, et al. [20]	50	No	left upper lobe	medical suture	35 Years	lobectomy	partial lung loss
17	2020	EM Minerva, et al. [21]	56	No	right between fifth and sixth ribs	nonabsorbable suture	8 Years	exploratory surgery	symptoms improved
18	2020	AK Arida, et al. [22]	70	fever and cough productive of whitish sputum	right bronchus intermedius	food material	NA	bronchoscopy	symptoms improved

19	2020	F Carriço, et al. [23]	78	blood in sputum	right upper lobe	rice grains	NA	bronchoscopy	symptoms improved
20	2021	AS Qureshi, et al. [24]	72	acute respiratory failure	right upper lobe	green peas and pomegranate seeds	NA	bronchoscopy	symptoms improved
21	2021	A Miller, et al. [25]	56	chronic cough and hemoptysis	left lower lobe	a tire cap	2.5 Years	bronchoscopy	symptoms improved
22	2021	JH Ha, et al. [26]	77	pneumothorax and atelectasis	right upper lobe	a green pea vegetable	5 days	bronchoscopy	symptoms improved
23	2021	Y Tanaka, et al. [27]	72	NA	right middle lobe	watermelon seeds	NA	partial resection of right S4	partial lung loss
24	2022	L Li, et al. [28]	56	slight irritant dry cough	right lower lobe	a piece of watermelon seed	6 months	bronchoscopy	symptoms improved
25	2022	A Cara, et al. [29]	52	persistent cough and single-episode hemoptysis	left lower lobe	a plastic screw	NA	Bronchial-sleeve left lower lobectomy	partial lung loss

Conclusion

When patients have recurrent uncontrollable respiratory symptoms and imaging changes, doctors should be alert to the existence of factors (especially tumors or foreign bodies) that cause bronchial obstruction.

Conflict of Interest

None declared.

References

1. Hewlett JC, Rickman OB, Lentz RJJ, Udaya B Prakash, Fabien Maldonado, et al. (2017) Foreign body aspiration in adult airways: therapeutic approach. J Thorac Dism 9(9): 3398-3409.
2. Sersar SI, Rizk WH, Bilal MJ, Mohammed M El Diasty, Tarik Abudlla Eltantawy, et al. (2006) Inhaled foreign bodies: presentation, management and value of history and plain chest radiography in delayed presentation. Otolaryngol Head Neck Surg 134(1): 92-99.
3. Baharloo F, Veyckemans F, Francis CJ, M P Biettlot, D O Rodenstein, et al. (1999) Tracheobronchial foreign bodies: presentation and management in children and adults. Chest 115(5): 1357-1362.
4. Hsu W c, Sheen T, Lin C d, C t Tan, T h Yeh, et al. (2000) Clinical experiences of removing foreign bodies in the airway and esophagus with a rigid endoscope: a series of 3217 cases from 1970 to 1996. Otolaryngol Head Neck Surg 122(3): 450-454.
5. F Seif, S Hafez Khayyata, R Hejal (2012) A solitary pulmonary nodule mimicking lung cancer. Am J Respir Crit Care Med 186(3): e4.
6. A Cimino Mathews, PB Illei (2013) Cytologic and histologic findings of iron pill-induced injury of the lower respiratory tract. Diagn Cytopathol 41(10): 901-903.
7. BJ Alharthi, I Masoodi, MA Almourgi, S Alzahrani (2014) Occult foreign body in the lung mimicking bronchogenic carcinoma. BMJ Case Rep.
8. L Ristić, M Rančić, D Stanojević, M Radović, Z Ćirić, (2014) Challenges in the diagnosis and treatment of recurrent non-resolving pneumonia - the case of foreign body aspiration in adult mimicking lung neoplasm. Med Glas (Zenica) 11(1): 238-240.
9. M Mishra, VK Jain, A K Singh, N Jain, A Sharma, et al. (2014) Hair: an unusual foreign body in airways presenting with haemoptysis in an adult patient. Indian J Chest Dis Allied Sci 56(1): 53-54.
10. X Hu, E S Yi, J H Ryu (2015) Solitary lung masses due to occult aspiration. Am J Med 128(6): 655-658.
11. SS Hoskote, AI Saeed, ES Edell (2016) Endobronchial foreign body mimicking a positron emission tomography-positive lung malignancy. Arch Bronconeumol 52(9): 484-485.
12. R Afghani, M Khandashpour Ghomi, SR Khandoozi, B Yari (2016) Neglected foreign body aspiration mimicking bronchial carcinoma. Asian Cardiovasc Thorac Ann 24(6): 601-603.
13. N Denny, U Maqsood, S Fowler, M Munavvar (2017) An airway traffic jam: a plastic traffic cone masquerading as bronchial carcinoma. BMJ Case Rep.
14. D Badenes, L Pijuan, V Curull, A Sánchez Font (2017) A foreign body reaction to Surgicel® in a lymph node diagnosed by endobronchial ultrasound-guided transbronchial needle aspiration. Ann Thorac Med 12(1): 55-56.
15. S Laguna, I Lopez, J Zabaleta, B Aguinagalde (2017) Actinomycosis Associated with Foreign Body Simulating Lung Cancer. Arch Bronconeumol 53(5): 284-285.
16. S Biswas Roy, Mitchell D Ross, Nikhil Madan, Hesham Abdelrazek, Rebekah Edwards, et al. (2018) Aspirated Almond Masquerading as an Obstructing Endobronchial Mass Suspicious for Lung Cancer. Case Rep Pulmonol: 3742036.
17. J Cheng, Chuan Li, Erin M Corsini, Mara B Antonoff, Khosro Hekmat, et al. (2019) Left destroyed lung caused by a pen cap in the left lower lobe bronchus "swallowed" 25 years ago. Ann Transl Med 7(22): 711.
18. Y L Ge, Yi Chen, Meng H Wang, Qian Zhang, Wen Q Li, et al. (2019) Increased Serum Sedimentation and Positive Tuberculosis Antibody Combined Left Lung Consolidation in Chest CT Scan in an Adult Patient Firstly Misdiagnosed as Tuberculosis Proved as Foreign Body Aspiration in the Left Main Stem Bronchus by Bronchoscopy: A Case Report and Literature Review. Clin Lab 65(8).
19. Y Sun, Yan L Ge, Li Q Li, Yang Liu, Yang Lu, et al. (2021) Elevated carcinoembryonic antigen and bronchial obstruction caused by a rotten vegetable leaf mimic lung cancer: A case report. J Clin Lab Anal 35(1): e23579.

20. S Meng, G Liu, S Wang, F Yang (2020) Case report: inflammatory pseudotumor in the lung parenchyma caused by a medical suture originating from a cardiac surgery 35 years ago. J Cardiothorac Surg 15(1): 151.

21. EM Minerva, M Patella, S Di Lascio, R Inderbitzi, S Cafarotti, et al. (2020) Foreign Body Mimicking Lung Cancer Recurrence. JCO Oncol Pract 16: 703-704.

22. A K Arida, O Khaddam, S Al Naher, A Elghul (2020) A Rare Case of a Massive Food Bolus Mimicking Lung Cancer. Cureus 12: e11043.

23. F Carriço, RM Alves, F Luís (2020) Foreign Body Aspiration Simulating Lung Cancer. Arch Bronconeumol (Engl Ed) S0300-2896(19): 30624-30626.

24. AS Qureshi, SA Mohamed, A Mohamed (2021) Neglected Foreign Body Aspiration Mimicking Lung Cancer: A Case Report. Cureus 13: e14566.

25. A Miller, Janelle Wenstrup, Sanja Antic, Chirayu Shah, Robert J Lentz, et al. (2021) A 56-Year-Old Man with Chronic Cough, Hemoptysis, and a Left Lower Lobe Infiltrate. Chest 159(1): e53-e56.

26. JH Ha, BH Jeong (2021) Airway Foreign Body Mimicking an Endobronchial Tumor Presenting with Pneumothorax in an Adult: A Case Report. Medicina (Kaunas) 57(1): 50.

27. Y Tanaka, Y Tsunezuka, R Nangoya, K Moriwaki (2021) Pulmonary Partial Resection for a Lung Foreign Body (Watermelon Seed): Report of a Case. Kyobu Geka 74(12): 1043-1046.

28. L Li, MJ Li, L Sun, YL Jiang, J Zhu, et al. (2022) Neglected Foreign Body Aspiration Mimicking Lung Cancer Recurrence. Risk Manag Healthc Policy 15: 491-496.

29. A Cara, A Mazzella, L Spaggiari (2022) Exceptional Case of Endobronchial Foreign Body Mimicking Primitive Lung Cancer. Arch Bronconeumol 58(9): 662.

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