Hordeum Murinum Aspiration: A Very Rare Case Report

G. Arkan, B.Ş. Bülbül, C. Kaya, A. Kapısız, G. Güney, Ö.N. Yıldırım, R. Karabulut, Z. Türkyılmaz, K. Sönmez
Department of Pediatric Surgery, Gazi University Faculty of Medicine, Ankara, Turkey

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Introduction

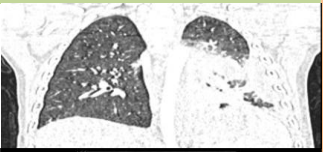
Foreign body aspiration is a significant emergency that can be fatal in young children Approximately 2.5% of foreign body aspirations result in mortality, and important comorbidities, especially neurological sequelae, may also occur . This makes foreign body aspiration an important public health issue.When foreign body aspiration is suspected, bronchoscopy is required, and fewer than 1-2.5% of cases require thoracotomy . Here, we present a rare case of *Hordeum murinum* aspiration encountered in our clinic. We would like to emphasize that due to the plant's structural properties and its high tissue penetration capacity, it can migrate into the thoracic cavity, resulting in failure to detect the foreign body during bronchoscopy.

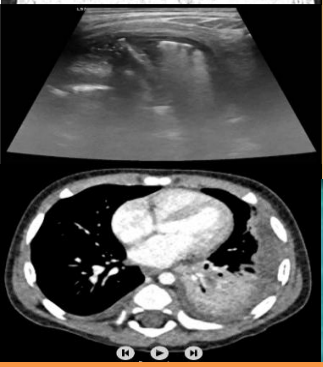
Case Presentation

A 10-month-old male infant with no known comorbidities presented to multiple external centers with complaints of cough and sputum. He was referred to our center after a history of foreign body aspiration was reported following previous antibiotic therapies and croup treatments. It was learned that, following the placement of a plant known among the public as "pisi pisi otu" (Hordeum murinum) into the patient's mouth by his sibling, the patient developed coughing and cyanosis. On physical examination, decreased breath sounds were noted in the left lung. The patient underwent rigid bronchoscopy with a preliminary diagnosis of foreign body aspiration; however, no foreign body was detected.

Postoperatively, due to the persistence of cough and examination findings, thoracic ultrasonography and computed tomography performed simultaneously revealed a finding in the left lower lobe consistent with a foreign body, and a thoracotomy was planned (Figures 1-3). Intraoperatively, a foreign body was observed in the thoracic cavity between the left lower lobe and the diaphragm. The foreign body was excised, and the 2x1 cm defect in the left lower lobe was repaired, completing the operation (Figures 4-5).

Postoperative follow-up was uneventful, and the patient was discharged after completion of antibiotic therapy. No pathology was detected during follow-up examinations.





Discussion

Foreign body aspiration is an important cause of morbidity and mortality in the pediatric population . Low respiratory reserve and the small diameter of the airway are significant factors in this context. Foreign body aspiration, or suspected aspiration, requires bronchoscopy, and foreign bodies that cannot be removed by bronchoscopy may necessitate thoracotomy .Aspiration of *Hordeum murinum* is very rare in the literature and is associated with significant atypical outcomes. To the best of our knowledge, the first published surgical case of aspiration of similar plants was reported in the United States in 1948 . In the literature, *Hordeum murinum* aspiration has been identified in patients followed with preliminary diagnoses such as empyema, pneumonia, chest wall tumor, or lung abscess, as well as in patients presenting with cough, hemoptysis, fever, sputum, swelling, or redness of the chest wall. Some of these patients experienced spontaneous expulsion of the foreign body via a bronchopleurocutaneous fistula, while others were treated with bronchoscopy, thoracotomy, segmentectomy, lobectomy, or VATS .Complications reported in the literature related to *Hordeum murinum* aspiration include tension pneumothorax in one case andbronchiectasis requiring pulmonary resection in two cases . In one case, a similar plant migrated from the thorax to the abdominal cavity, reaching the splenic parenchyma .Consistent with the literature, our case had a history of antibiotic therapy for a presumed respiratory infection prior to the diagnosis of foreign body infection. In our case, the structure of *Hordeum murinum* caused distal migration, forming a bronchopleural fistula and preventing detection of the foreign body on bronchoscopy.

Conclusion

Foreign body aspiration is an important cause of morbidity and mortality in children. Due to its structure, *Hordeum murinum* has a high tissue penetration capacity and may migrate from the bronchus to the pleura, skin, or abdominal cavity. Therefore, it may not be detected on bronchoscopy. In cases where aspiration of this plant is suspected, a negative bronchoscopy is not sufficient for diagnosis, and imaging methods should be utilized, with more invasive diagnostic and therapeutic approaches considered if necessary.