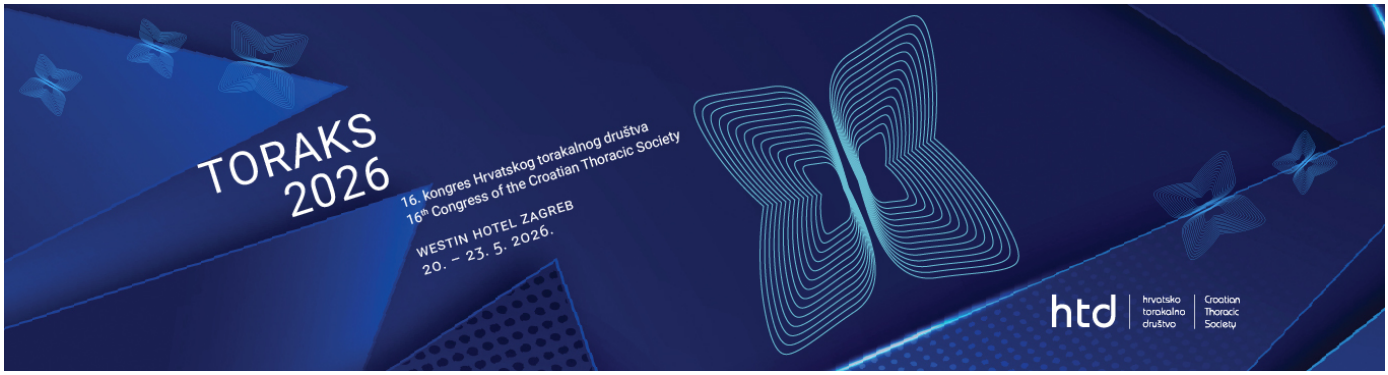



# HIDDEN IN PLAIN SIGHT: THE MASKED SEQUESTRATION

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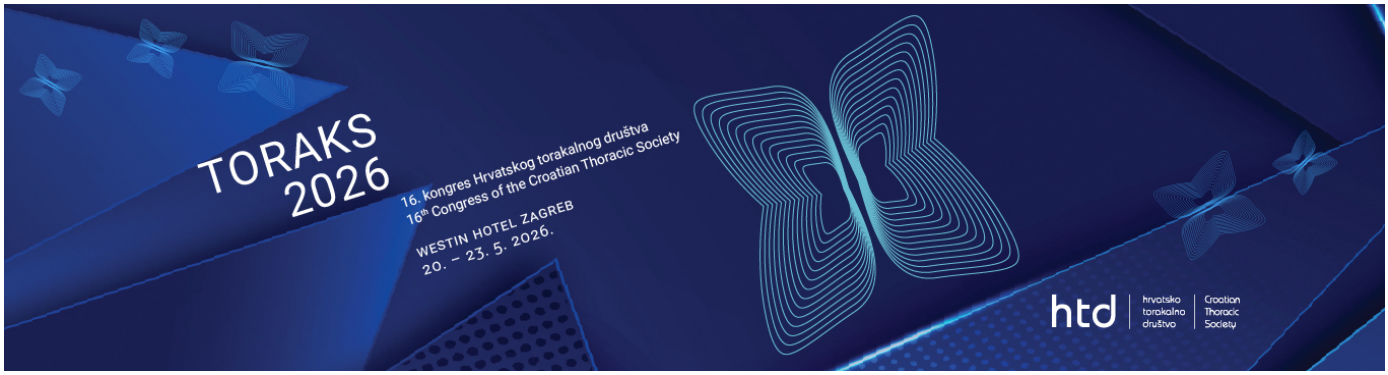
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**Background:**

Pulmonary sequestration is a rare congenital anomaly of the lower respiratory tract characterized by nonfunctional lung parenchyma that lacks communication with the tracheobronchial tree and receives an aberrant arterial blood supply from the systemic circulation. Intralobar sequestration accounts for 75–90% of cases, whereas extralobar sequestration is less common and is frequently associated with other congenital anomalies. Symptoms most frequently present in the neonatal period, while adult presentation is typically characterized by recurrent respiratory infections, including fever, cough, hemoptysis, chest pain, and exertional dyspnea. Definitive diagnosis relies on advanced imaging modalities, with mandatory identification of the vascular supply to the sequestrated segment.

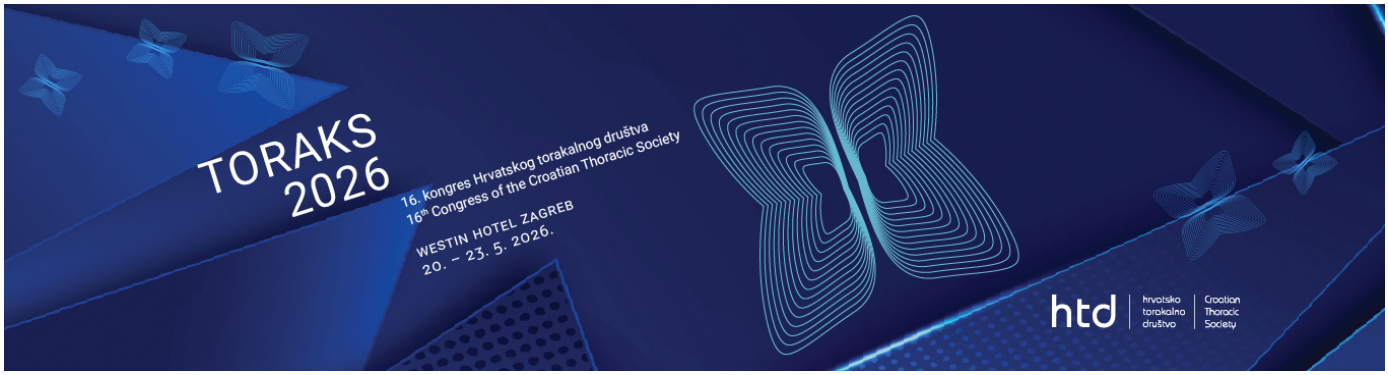



**Conclusion:**

This case illustrates intralobar pulmonary sequestration with late clinical presentation in adulthood, manifesting as recurrent lower respiratory tract infections. In symptomatic patients, surgical resection remains the treatment of choice and the only curative option, whereas in asymptomatic, incidentally detected cases, an individualized approach with careful follow-up may be considered.

**Case:**

A 32-year-old previously healthy woman was evaluated for a four-month history of intermittent fever accompanied by fatigue, productive cough, and pleuritic chest pain. The illness initially presented with high fever up to 40°C, without respiratory symptoms. Over time, she developed a persistent productive cough with greenish-yellow sputum, retrosternal pain, pronounced fatigue, exertional dyspnea, and recurrent febrile episodes up to 39°C. Laboratory findings revealed persistent leukocytosis, while extensive microbiological workup failed to identify a specific pathogen. Chest radiography initially showed right-sided pneumonia, with otherwise unremarkable findings. Despite multiple courses of antibiotic therapy (amoxicillin/clavulanic acid, azithromycin, cefpodoxime), no sustained clinical improvement was achieved. Transthoracic echocardiography was normal, and pulmonary function tests were within normal limits. Non-contrast chest CT demonstrated a well-defined paramediastinal area of hyperinflated lung parenchyma in the right lower lobe, containing mucus-filled bronchi without clear communication with the tracheobronchial tree, raising suspicion of pulmonary sequestration. CT angiography confirmed aberrant arterial supply arising from the descending thoracic aorta and venous drainage into the right inferior pulmonary vein. Following thoracic surgical consultation, operative management was indicated. A right-sided minithoracotomy with atypical resection of the lower lobe was performed. The perioperative and postoperative courses were uneventful. Histopathological analysis confirmed cystically altered lung parenchyma lined by bronchial epithelium without atypia, containing mucus, scattered pigment-laden macrophages, and a prominent central vessel, consistent with pulmonary sequestration.


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