

Iatrogenic Horner's Syndrome Due to Chest Tube Compression during Decortication

Adam Meiser, MD^{1*}, Ziad Abuhelwa, MD², Zaid Noori, MD², Alex Kloster, MD², Ragheb Assaly, MD³

¹Department of Neurology, The University of Toledo, Toledo, OH 43614

²Division of Internal Medicine, Department of Medicine, The University of Toledo, Toledo, OH 43614

³Division of Pulmonary and Critical Care Medicine, Department of Medicine, The University of Toledo, Toledo, OH 43614

*Corresponding author: adam.meisler@utoledo.edu

Published: 05 May 2023

Background: Horner's syndrome is a condition classically presenting with unilateral ptosis, miosis, and facial anhidrosis resulting from disruption of sympathetic innervation. This may occur due to insults to the sympathetic chain in the head, neck, and thoracic cavity. We present an iatrogenic cause of Horner's syndrome due to compressive injury to the sympathetic chain by chest tube placement during decortication surgery.

Case Presentation: A 24-year-old woman with alcohol use disorder presented to the emergency department with chest pain and cough with heavy sputum production. Chest CT revealed a large left-sided pleural based opacity later confirmed to be empyema positive for Strep Constellatus by fluid culture. Despite seven days of chest tube drainage, antibiotics, and a 4-day course of intrapleural tPA and deoxyribonuclease, her left-sided fibrous lung entrapment failed to resolve and she underwent left thoracotomy with complete decortication. On postoperative day one, the patient was found to have unequal pupils and drooping of the left eye lid. Further examination revealed both pupils were reactive to light, however left pupil was sluggish. She denied any associated symptoms such as lacrimation, conjunctivitis, double-vision, facial droop. She was diagnosed with iatrogenic Horner's syndrome. The chest tube was withdrawn by two centimeters. She was initiated on oral prednisone 60 mg daily for 5 days. Significant improvement in symptoms was noted on day 5 from treatment initiation.

Discussion: Peripheral Horner's syndrome is rare complication that can occur with intrathoracic surgeries and chest tube placement. It is critical to recognize its symptoms and primary cause early in the postoperative course to initiate the proper intervention and to best counsel patients on the disease course.