Atypical Aspiration - A Ball in the Right Mainstem Bronchus

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Introduction Bronchial carcinoid tumors are rare, indolent pulmonary neoplasms that account for 1-2% of lung malignancies. Most typical lung neuroendocrine tumors occur in proximal airways, causing obstruction and may mimic aspiration pneumonia. We present a case of presumed aspiration pneumonia that showed a round tumor obstructing the right mainstem bronchus, found to be carcinoid tumor on bronchoscopy with biopsy. Case Report A 65 year-old man with a history of recently treated aspiration pneumonia was brought to the ED after a report of suicidal ideation and alcohol consumption. Patient was found confused on the floor at home. On arrival, patient became agitated and vomited. Physical examination was notable for normal vital signs and decreased breath sounds over the right base. Work-up showed leukocytosis to 17, negative urine toxicology, and chest x-ray showing “a large mucus plug in the right mainstem bronchus.” Patient was admitted for aspiration pneumonia and received Amoxicillin/Clavulanic acid. On hospital day 3, patient reported intermittent dyspnea with wheeze and productive cough despite improved mental status. Chest CT showed a round soft tissue density, thought to “represent debris from aspiration or underlying endobronchial lesion.” Bronchoscopy showed a circumferential lesion that was obstructing the right mainstem bronchus. Endobronchial forceps biopsy was performed, confirming a typical carcinoid tumor. Patient was recommended for a bronchotomy with sleeve resection but declined surgical approach. Patient underwent rigid bronchoscopy with cryoprobes to remove a large right mainstem endobronchial tumor in small pieces and argon plasma coagulation for right lower lobe endobronchial tumor destruction. Follow-up imaging and bronchoscopy showed no residual stalk or mucosal irregularities in the right mainstem bronchus. Discussion Aspiration pneumonia is a common diagnosis among patients who present with altered mental status and respiratory distress. Solid particle obstruction in a mainstem bronchus can cause dyspnea with atelectasis and superinfection in distal airways. This case demonstrates a typical pulmonary neuroendocrine tumor that resembled aspiration pneumonia. This patient’s recent aspiration pneumonia, reduced consciousness and right lower lobe infiltrate on presentation led the medical providers to anchor on aspiration pneumonia; however, further review of chest imaging showed a spherical endobronchial lesion obstructing the right mainstem bronchus. Typical lung neuroendocrine tumors are well-differentiated, indolent neoplasms, and definitive surgical resection is the preferred treatment option for a localized tumor. Endobronchial approach is suboptimal, but cryotherapy, laser resection, and argon plasma coagulation can be utilized for tumor destruction for patients declining surgical approach or for non-surgical candidates.