PS 1241 Pulmonology

Massive Barium Sulfate Aspiration in Patient with Multiple Comorbidities : A Case Report

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Barium sulfate is a relatively insoluble salt of barium used as a radiographic contrast medium. A barium swallowing test is generally safe, but aspiration is well-reported complication during upper gastrointestinal contrast material studies. Especially massive aspiration of barium is potentially life-threatening because of mechanical interference with gas exchange. The overall mortality rate of massive barium aspiration is approximately 30% and exceeds 50% in patient with initial shock or apnea, secondary pneumonia, or adult respiratory distress syndrome. Predisposing factors for the occurrence of aspiration can include any conditions affecting the functional integrity of the oropharyngeal and esophageal segments such as old age, disordered swallowing, neuromuscular dysfunction, alcoholism, head and neck cancer and psychological illness. We hereby report a fatal case of large amount of barium aspiration in an elderly patient. 66-year-old man with a history of Grave's disease, alcoholic liver cirrhosis, congestive heart failure and mitral valve replacement was admitted to treat thyrotoxicosis. And he underwent a radiographic contrast study with barium sulfate because of dysphagia about semi-solid food. During upper gastrointestinal radiographic contrast study, he was abruptly aspirated with large amount of barium, resulting in hypoxemic respiratory failure. Chest X-ray showed endobronchial deposition of barium sulfate in whole lung. A bronchoscopy was carried out but failed to remove aspirated barium. Unfortunately, he progressed to the multiple organ dysfunction syndromes and died shortly thereafter despite of treatment with fluid resuscitation, vasoactive agents, antibiotics, ventilator and renal replacement support. Barium swallow study is a good diagnostic tool for oropharyngeal dysphagia. However its complication can be fatal for an elderly patient with multiple comorbidities. We suggest clinicians should consider other methods instead of upper gastrointestinal radio contrast study with barium sulfate in these patients.

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A Case of Hemophagocytic Lymphohistiocytosis after Lung Transplantation

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Introduction: Hemophagocytic lymphohistiocytosis (HLH) is a rare but life-threatening complication after solid organ transplantation. HLH has been reported as problem related with kidney and liver transplant, and there are limited reports of HLH after lung transplantation.
Case: A 60-year-old man with idiopathic pulmonary fibrosis underwent bilateral lung transplantation. After lung transplantation, acute rejection was suspected and high dose steroid therapy was done. Since postoperative day(POD) 25, thrombocytopenia(platelet 112*1000/uL) and leukopenia(2530/uL)) were presented. The patient complained of intermittent symptom of low-grade fever, chest discomfort and dyspnea. Echocardiography showed stress induced cardiomyopathy and results of peripheral blood smear was nonspecific. Pneumonia was developed and patient was treated with antibiotics. Hyperbilirubinemia(total bilirubin 2.1 mg/dL) started to present at POD 50. Results of abdomen sonography was nonspecific except for mild splenomegaly (11.4cm). By POD 80, bilirubin was getting higher(total bilirubin 33.3mg/dL, direct bilirubin 25.7mg/dL, gamma glutamyl transpeptidase 260IU/L) and leukopenia and thrombocytopenia was getting aggravated (white blood cell 2080/uL and platelet 57* 1000/uL). The fibrinogen was mildly elevated (421Om/dL), triglyceride was normal (127 mg/dL), the ferritin was elevated (4518 ng/mL) and soluble interleukin-2 receptor was elevated (8730U/ml). However, the finding of peripheral blood smear was still nonspecific. The cause of pancytopenia, low grade fever and hyperbilirubinemia was unclear, and we conducted bone marrow biopsy on POD 82. The finding showed that histiocytes were frequently seen with occasional hemophagocytes. Taken together, cytopenia, bone marrow hemophagocytes, elevated soluble interleukin-2 receptor and elevated ferritin were positive among laboratory tests listed in diagnostic criteria of HLH. We managed with etoposide and high dose steroid, but patient deteriorated and died on POD 87.
Summary: HLH is a significant diagnostic and therapeutic challenge in lung transplantation and is potentially lethal complication. Therefore, clinicians should consider HLH as possible diagnosis in clinical context.

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Progressive Pulmonary Fibrocystic Changes on Both Upper Lobes in a Patient with Ankylosing Spondylitis

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Ankylosing spondylitis (AS) is a chronic inflammatory multisystem disease that primarily affects the axial joints. Pleuropulmonary involvement is an uncommon extraarticular manifestation. There is a wide spectrum in pulmonary parenchyma changes in AS and these changes begin in early stages of the disease and increase with disease duration. These lesions are usually asymptomatic, and in their early stages they are not visible on chest radiographs. We recently experienced a case of advanced AS with progressive pulmonary bullous fibrocystic changes on both upper lobes. The 56-year-old man complained of dyspnea and back pain at the first visit to our hospital eight years ago. He had been diagnosed with AS since he was 27, and he was diagnosed clinically with pulmonary tuberculosis without bacteriological confirmation 2 years ago before the first visit. He had smoked half a pack of cigarettes daily for 15 years. He was taking nonsteroidal anti-inflammatory agents and he underwent internal fixation of thoracic and lumbar spine due to AS associated spine deformity twelve years ago at other hospital. The initial chest radiograph showed both apical linear fibrotic opacity with cystic changes similar to sequelae of pulmonary tuberculosis. However, over the last 8 years his serial chest radiography and high-resolution computed tomography showed bullous fibrocystic changes on both upper lobes and the findings of progressive increase of bullous cystic sizes correlated with disease duration. During follow-up period, he had suffered from frequent associated pneumonia, exacerbation episode of chronic obstructive airway disorder, and massive hemoptysis due to mycetoma on both upper lungs. Acid-fast staining and all subsequent mycobacterial cultures were negative. To our knowledge, this case is the first in Korea with progressive bullous fibrocystic changes on both upper lungs as AS associated pleuropulmonary involvement.

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Pulmonary Placental Transmogrification Presenting as a Small Lung Nodule

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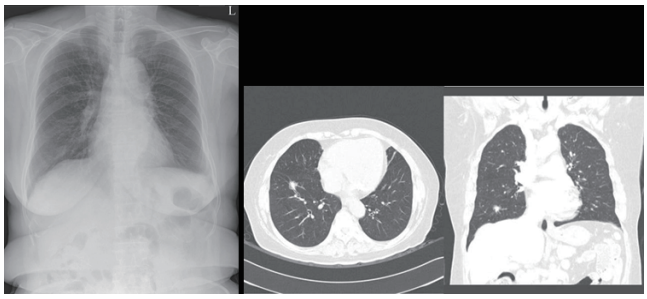
Background: Pulmonary placental transmogrification (PT) is a rare and benign lesion that was first described in 1979. Pathology of the disease is characterized by the formation of papillary structures similar to placental villi surrounding the pulmonary epithelium.
Case Report: We report a case of pulmonary placental transmogrification in a 66-year-old woman who presented with a single nodule. She had been controlled well for her diabetes mellitus and hypertension. She did not complain of any respiratory or systemic symptoms. Chest radiography showed focal ill-defined nodular opacity at right lower lobe. Chest computed tomography (CT) scan revealed about 17mm lobulated and focal irregular mass with fissural retraction in right lower lobe that suggested lung cancer. The pathology from percutaneous needle aspiration biopsy observed papillary structures, resembling placental villi, within the hyperinflated cystic spaces. It was negative for thyroid transcription factor-1 (TTF-1) and partly positive for Ki-67 in immuno-histochemical staining.
Discussion: Clinically, this disease is known commonly occurring between 20 to 50 year-old male and usually presented with dyspnea or pneumothorax. However, in this case, it is occurred in a female patient with no symptom. PT may not be a variant of giant bullous emphysema, but interstitial clear cell proliferation with secondary emphysema-like cystic change. In our case, interstitial clear cell proliferation findings were only observed without emphysema-like cyst. Based on previous cases, the patients who were left untreated upon diagnosis of PT have, in many cases, proceed in suffering severe complications such as bullous emphysema, recurrent pneumothorax or tension pneumothorax. Thus, early diagnosis as well as closed follow up is considered

critical as in our case. Unfortunately, The final diagnosis of PT is only possible from histologic and immunologic findings. Further studies may provide to clarify pathogenesis of PT.



PS 1245 Pulmonology

A Case of Kikuchi Disease Involving Intrapulmonary Lymph Node Mistaken for Lung Nodule

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Kikuchi-Fujimoto disease(KFD), also known as histiocytic necrotizing lymphadenitis, is an uncommon, idiopathic and generally self-limited disease, characterized by cervical lymphadenopathy. KFD can be presented with a wide variety of nonspecific symptoms including mild fever, night sweats, weight loss and nausea. Although KFD can involve all the lymph nodes of the body, intrathoracic lymph node involvement including mediastinal lymph nodes is relatively rare. Especially, isolated involvement in intrapulmonary lymph node is extremely unusual. We report a 45-year-old man who presented with symptoms of myalgia, fatigue, and fever whose CT scan showed slowly growing nodule in upper lobe of Left lung during follow-up. On laboratory findings, there was no evidence of infection and autoimmune disease including systemic lupus erythematosus. The result of excisional biopsy by video-assisted thoracoscopic surgery revealed that he had a Kikuchi disease in intrapulmonary lymph node. His symptoms were lessened after the trial of non-steroidal anti-inflammatory drugs.

PS 1246 Pulmonology

The Relationship Between Serum Carcinoembryonic Antigen and Acute Exacerbation of Idiopathic Pulmonary Fibrosis

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Background: Although pulmonary function test is often used to monitor the clinical course of patients with idiopathic pulmonary fibrosis (IPF), it is difficult to accurately predict the acute exacerbation by any inspection. Carcinoembryonic antigen (CEA) is a glycoprotein involved in cell adhesion and has a close association with epithelial malignancy. The aim of this study was to evaluate a relationship between CEA concentration and acute exacerbation rate in patients with IPF.
Methods: In this observational, retrospective study involving 34 patients with IPF whose serum CEA levels were measured when they were diagnosed as IPF. we evaluated the incidence rate of acute exacerbation of the lower serum CEA level group (< 4 ng/mL), as compared with the higher serum CEA level group (=4 ng/mL) using database of IPF patients from Kyung Hee university hospital for 5 years.
Results: Among 34 subjects, 16 and 18 were assigned to lower and higher serum CEA level group respectively. There were no significant differences in the baseline characteristics between the two groups, including gender, age, smoking history and lung function. There were 27 individual episodes of acute exacerbation among 34 patients during the study period. A total of 4 events occurred in the lower serum CEA level group, corresponding to an incidence rate of 0.01 per patient-year, while 23 episodes occurred in the higher serum CEA level group, corresponding to a rate of 0.07 per patient-year. Compared with the lower serum CEA level group, the adjusted relative risk for the incidence rate of acute exacerbation was 3.93 (95% CI 1.05 to 14.66) for the higher serum CEA level group.
Conclusions: In IPF, the higher serum CEA level group showed higher incidence rate of acute exacerbation, as compared with the lower serum CEA level group.

PS 1247 Pulmonology

Efficacy and Safety of Afatinib in Patients with Non-Small Cell Lung Cancer after Failure of Prior Gefitinib or Erlotinib

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Background: Afatinib is an irreversible ErbB family blocker that inhibits EGFR with activating mutations as well as the T790M resistance mutations. In non-small cell lung cancer (NSCLC), afatinib has been evaluated in the LUX-Lung trials, with improvement in progression-free survival (PFS) in patients with acquired resistance to prior EGFR tyrosine kinase inhibitor (EGFR-TKI) treatment. This study investigated afatinib under a Named Patient Use (NPU) program at a single institution in Korea.
Methods: We analyzed 53 patients with stage IV NSCLC that had been treated with = 1 platinum based chemotherapy, and with activating EGFR mutation or disease control for = 6 months with prior EGFR-TKI. The daily dose of afatinib was started with 50mg, which was decreased to 40mg and 30mg according to adverse events.
Results: Treatment duration of afatinib was from 4 to 377 days with a mean of 102 days. Of 53 analyzed patients, 2 received afatinib as 3rd line treatment, 24 as 4th line, 15 as 5th line and 12 as = 6th line. Nine patients achieved partial remission, 28 stable disease, and 9 progression, and 7 not-evaluable resulting in a response rate of 16.9% and a disease control rate (DCR) of 69.8%. Grade 3 skin rash and diarrhea occurred in one and 8 patients, respectively, and dosage reductions of afatinib were required in 28 patients, to 40mg in 20 and to 30mg in 8. Toxicities leading to drug discontinuation were experienced by 4 patients. Median PFS and overall survival were 4.6 months (95% CI, 3.6 - 5.5 months) and 13.4 months (9.2 - 17.6 months), respectively.
Conclusions: Afatinib demonstrated DCR of about 70% and PFS of 4.6 months in patients with NSCLC after failure of prior EGFR-TKI.