

## Hyperbilirubinemia in Lung Transplantation Patients

Division of Pulmonology, Department of Internal Medicine, Severance Hospital, Institute of Chest Diseases, Yonsei University College of Medicine, Seoul, Republic of Korea<sup>1</sup>, Department of Thoracic and Cardiovascular Surgery, Yonsei University College of Medicine, Seoul, Republic of Korea<sup>2</sup>

\*Ji Soo Choi<sup>1</sup>, Su Hwan Lee<sup>1</sup>, Song Yee Kim<sup>1</sup>, Hyo Chae Paik<sup>2</sup>, Jin Gu Lee<sup>2</sup>, Myung Jin Song<sup>1</sup>, Bo Ra Yoon<sup>1</sup>, Ah Young Leem<sup>1</sup>, Joo Han Song<sup>1</sup>, Kyung Soo Chung<sup>1</sup>, Eun Young Kim<sup>1</sup>, Ji Ye Jung<sup>1</sup>, Moo Suk Park<sup>1</sup>, Young Sam Kim<sup>1</sup>, Se Kyu Kim<sup>1</sup>, Joon Chang<sup>1</sup>

**Background:** Lung transplantation has become established treatment option for patients with end stage lung disease and steadily increased. Severe complications after lung transplantation have reported. Among them, we experienced several cases of hyperbilirubinemia. So, we reviewed for rare causes of hyperbilirubinemia after lung transplantation. **Method:** This is single center, retrospective cohort study of all patients who underwent lung transplantation between April, 1, 2011 and January, 1, 2016. We defined hyperbilirubinemia when total bilirubin level exceeding 4mg/dL (range, 0.4-1.5 mg/L) during at least 72 hours. **Results:** A total 33 lung transplant recipients developed hyperbilirubinemia among 115 lung transplantation recipients in 5 years. 24 patients have common cause for hyperbilirubinemia such as drug toxicity, biliary tract stone, sepsis, bleeding and liver failure. But 9 patients have rare cause, including two patients of hemophagocytic lymphohistiocytosis (HLH), three patients of thrombotic thrombocytopenic purpura (TTP), and four patients of ischemic cholangiopathy. Interval time between transplantation and hyperbilirubinemia is approximately 2 months in HLH and ischemic cholangiopathy. On the other hand, hyperbilirubinemia with TTP occurred approximately 4 months after transplantation. Patients with HLH were treated with etoposide plus steroid or steroid alone, and patients with TTP were treated to change basiliximab instead of tacrolimus with plasmapheresis. Patients with ischemic cholangiopathy received supportive treatment. However, all 9 patients died. **Conclusions:** The rare cause of hyperbilirubinemia is only 7.8% (9 of 115), and all cases are associated with mortality. So, if hyperbilirubinemia after lung transplantation is developed, early evaluation and management may be necessary.

## Two cases Pill induced bronchitis : Showing importance of timely removal by bronchoscopy

<sup>1</sup>Department of Internal Medicine and <sup>2</sup>Radiology and <sup>3</sup>Pathology, Veterans Health Service Medical Center, Seoul, Korea

\*Mi Ran Lee<sup>1</sup>, Eun Joo Lee<sup>2</sup>, Yoon Jung Kim<sup>3</sup>, Byung Joon Lee<sup>1</sup>, Hyo Jeong Lim<sup>1</sup>

**Introduction:** An aspirated pill can dissolve in the tracheobronchial tree causing inflammation and stenosis. Prompt recognition and timely removal of aspirated pill is essential to avoid serious sequelae in the airways. Here we report two cases of pill induced bronchitis resulted in airway inflammation and narrowing. **Case1:** A 83-year-old man presented with a 1-week history of blood tinged sputum, chest discomfort. A chest computed tomography (CT) scan showed 1.1cm sized ovoid material in right lower lobar (RLL) bronchus. We found out a partially dissolved pill impacted in RLL bronchus by bronchoscope. Bronchial mucosa were swollen and covered with inflammatory exudates. Four days after, inflammation of bronchus was still ongoing. Growth of granulation tissue, swelling and necrotic debris led to narrowing of bronchus. **Case2:** A 87-year-old man was visited our emergency room for chest discomfort and cough. A chest CT scan revealed a foreign body in RLL bronchus with peribronchial consolidation. We could perform the bronchoscopy. A pill was not present but we presumed that the pill had dissolved into the bronchial mucosa. After 1 week, necrotic change of bronchus intermedius and narrowing of RLL bronchus were progressing. After one month, narrowing of RLL bronchus was aggravated with granulation tissue, necrotic debris and fibrotic changes. **Conclusions:** Our cases suggest that if pill aspiration is suspected, early diagnosis and urgent management by bronchoscope is necessary in order to reduce the serious sequelae in the airway.

