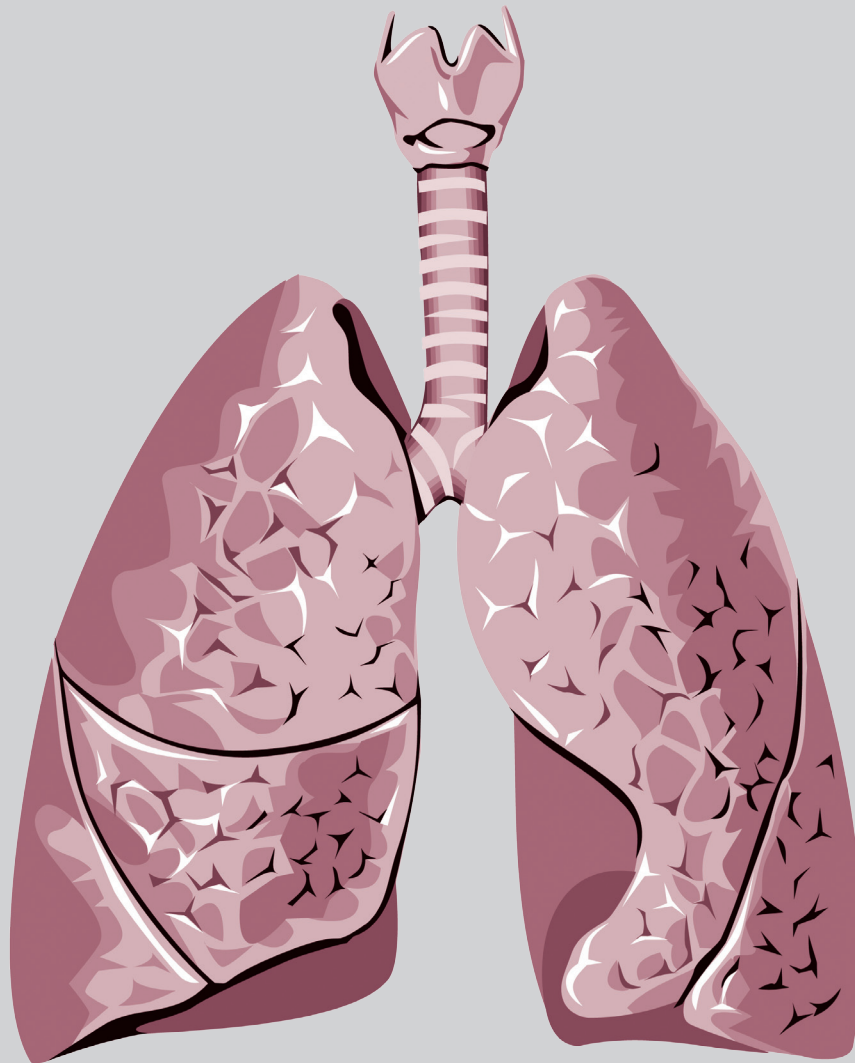


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Atrial Fibrillation and Central Sleep Apnea in Patients with Ischemic Stroke

Ping-Chi Liu*, Chung-Yao Chen**,***, Chung-Chieh Yu*,**,****

Introduction: Atrial fibrillation (AF) and central sleep apnea (CSA) are both common in patients with ischemic stroke and have been associated with adverse outcomes. However, whether AF is associated with CSA in patients with stroke has not been well studied. The primary objective of this study was to investigate the association between AF and CSA in patients with ischemic stroke.

Methods: This retrospective study consecutively included patients with ischemic stroke that were admitted for neurorehabilitation, had clinically suspected sleep-disordered breathing, and that had undergone in-hospital overnight polysomnography. The basic clinical data, underlying diseases and test results of the CSA and non-CSA patients were compared and analyzed.

Results: Of the 116 patients with sleep-disordered breathing, 26 (22.4%) were found to have CSA. Patients in the CSA group had a higher prevalence of AF than those in the non-CSA group (42.3% versus 11.1%). AF was positively associated with the presence of CSA (OR, 7.381; 95% CI, 1.39-27.25; $P = 0.003$), after adjusting for common confounders.

Conclusion: The co-aggregation of AF and CSA suggests important clinical implications for simultaneous screening and management of both conditions in patients with ischemic stroke. (*Thorac Med* 2020; 35: 1-9)

Key words: atrial fibrillation, central sleep apnea, ischemic stroke

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Effect of Surgery Waiting Times on Disease-Free Survival of Patients with Screen-Detected cT1N0 Lung Adenocarcinoma

Yu-Chung Hsiao, Hsao-Hsun Hsu*, Tung-Ming Tsai*, Hsien-Chi Liao*
Xu-Heng Chiang*, Mong-Wei Lin*, Jin-Shing Chen*

Introduction: The relationship between waiting time for surgery and clinical outcomes of patients with early-stage screen-detected lung cancer remains unclear. This study aimed to evaluate if delayed surgery affects disease-free survival (DFS) of patients with screen-detected cT1N0 lung adenocarcinoma.

Methods: This retrospective study reviewed the data of 700 patients with a preoperatively undiagnosed single cT1N0 lung adenocarcinoma who underwent surgical resection in our institute from March 2011 to January 2016. The patients were classified as the early group if the waiting time for surgery was 30 days or less, and the delayed group if the wait was 31 days or longer. Propensity-matched analysis was used to compare the clinical outcomes of these groups.

Results: The median waiting time for surgery was 16 days. In total, 513 (73.3%) and 187 (26.7%) patients were in the early and delayed group, respectively. The early group was correlated with a larger consolidation-to-tumor ratio, solid component diameter, and total tumor diameter. Patients in the delayed group received more staging workup before surgery than those in the early group. Multivariable analysis showed that smaller consolidation-to-tumor ratio, solid component diameter and serum carcinoembryonic antigen level were significantly correlated with better DFS. Delay in surgery did not affect DFS. After propensity-matching of clinical and demographic characteristics, there was no difference in DFS among the early and delayed groups.

Conclusion: Among patients with a preoperatively undiagnosed single cT1N0 lung adenocarcinoma, the results showed that a delay of up to 30 days from the time of diagnosis to the time of surgery may not affect DFS, and may be considered safe for such patients. (*Thorac Med* 2020; 35: 10-20)

Key words: disease-free survival, lung adenocarcinoma, surgery waiting time

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Safety Issues Associated with Midazolam Use in Elderly Patients Undergoing Procedural Sedation for Flexible Bronchoscopy

Meng-Cheng Ko, Ting-Yu Lin, Allen Chung-Cheng Huang, Yo-Lun Lo

Introduction: The incidence of lung disorders and cancers is higher in elderly individuals, who constitute a large proportion of patients who require bronchoscopy. This study aimed to assess safety issues in elderly patients undergoing a rigorous sedation protocol for flexible bronchoscopy (FB).

Methods: A retrospective analysis of 249 patients (inpatients and outpatients) who underwent midazolam sedation for FB during an 18-month period was performed. Patients were divided into 2 groups according to age (elderly ≥ 65 years] and young [< 65 years]). Patients were pretreated with alfentanil (5 mcg/kg), and then, based on clinical judgment, they received incremental midazolam boluses to achieve moderate sedation.

Results: Elderly patients accounted for 50% (n=124) of all patients analyzed. Of all 249 patients who received midazolam sedation, 37% experienced hypoxemia. Compared with the young patients, the elderly patients exhibited a significantly greater desaturation ratio (45% vs 30%; $P=0.01$) and lower hypotension rate (1% vs 7%; $P=0.01$).

Conclusion: Hypoxemia is a common safety issue in sedation for FB. Elderly patients undergoing midazolam sedation for FB were more likely to develop desaturation than young patients. Hypotension episodes were more likely to occur in young patients undergoing midazolam sedation for FB than in elderly patients. (*Thorac Med* 2020; 35: 21-27)

Key words: safety issues, midazolam, elder, procedural sedation

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Comparison of Quality of Medical Care for Prolonged Mechanical Ventilation Patients with and without Ventilator-Associated Pneumonia

Chih-Hung Lin, Jin-Yin Chang*

Background: The number of patients on prolonged mechanical ventilation in Taiwan is increasing every year because of the aging population, the increase in chronic diseases, and recent advances in medical equipment. Ventilator use often leads to complications, such as ventilator-associated pneumonia, and increased health care resource utilization.

Methods: This study used secondary data from Taiwan's National Health Insurance Research Database, Longitudinal Health Insurance Dataset, 2010 (LHID2010) provided by the Ministry of Health and Welfare. The study period was 2008-2012. The total number of patients was 2,992; there were 1,048 long-term ventilator-dependent patients without ventilator-associated pneumonia and 1,944 patients with ventilator-associated pneumonia. Logistic regression analysis was used to explore the odds ratio for the quality of medical care results between ventilator-dependent patients with and without ventilator-associated pneumonia.

Results: The quality of medical care results showed that there was a statistically significant correlation between multiple readmissions to the intensive care unit and hospital deaths and long-term respiratory disease without lung cancer; there was also a statistically significant correlation with demographic characteristics at the hospital level.

Conclusion: Follow-up research using the questionnaire or long-term medical record tracking to further explore the results of medical care, such as weaning success, in-hospital death, and nosocomial infection among ventilator-dependent patients with different respiratory diseases is needed. (*Thorac Med* 2020; 35: 28-34)

Key words: prolonged mechanical ventilation patients, pneumonia in prolonged mechanical ventilation patients, quality of medical care

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***Legionella* Pneumonia Complicated by Acute Respiratory Distress Syndrome Requiring Venovenous Extracorporeal Membrane Oxygenation and Continuous Renal Replacement Therapy Support: A Case Report**

Bo-Ruei Huang, Jiin-Torng Wu, Chih-Yu Hsu, Ming-Huang Chiu

Legionella species is a common atypical bacterial pathogen in both community- and hospital-acquired pneumonia. *Legionella* pneumonia may lead to severe medical sequelae, such as acute respiratory distress syndrome (ARDS) and multiple organ failure. Herein, we report the case of a 54-year-old man with type 2 diabetes mellitus, hypertension, and coronary artery disease. He was diagnosed with *Legionella* pneumonia complicated by severe ARDS and acute kidney injury. He was successfully treated with antibiotics and venovenous extracorporeal membrane oxygenation (ECMO) in combination with continuous renal replacement therapy (CRRT) support. This case report highlights the usually underdiagnosed *Legionella* infection and its substantial presentation. *Legionella* pneumonia should be detected earlier, and appropriate ECMO referral should be considered for *Legionella* pneumonia-associated refractory respiratory failure. In Taiwan, there is a paucity of reported cases of *Legionella* pneumonia that progressed to ARDS and were successfully treated with venovenous ECMO and CRRT support. (*Thorac Med* 2020; 35: 35-39)

Key words: *legionella* pneumonia, acute respiratory distress syndrome, extracorporeal membrane oxygenation

Amiodarone-Induced Unilateral Interstitial Pneumonitis: A Case Report

Erh-Lun Chen

Amiodarone is an anti-arrhythmic drug that is commonly used for patients with supraventricular and ventricular arrhythmias. One of the most severe side effects of amiodarone use is pulmonary toxicity. Here, we reported a patient with unilateral interstitial pneumonitis induced by amiodarone use. In light of this case, we should always keep in mind that interstitial pneumonitis may occur in patients with a history of taking amiodarone. However, other etiologies should be also excluded before making the diagnosis. Cessation of administration of amiodarone and initiation of corticosteroid use may be helpful in patients with this condition. (*Thorac Med* 2020; 35: 40-43)

Key words: amiodarone, unilateral interstitial pneumonitis, drug induced pulmonary toxicity

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