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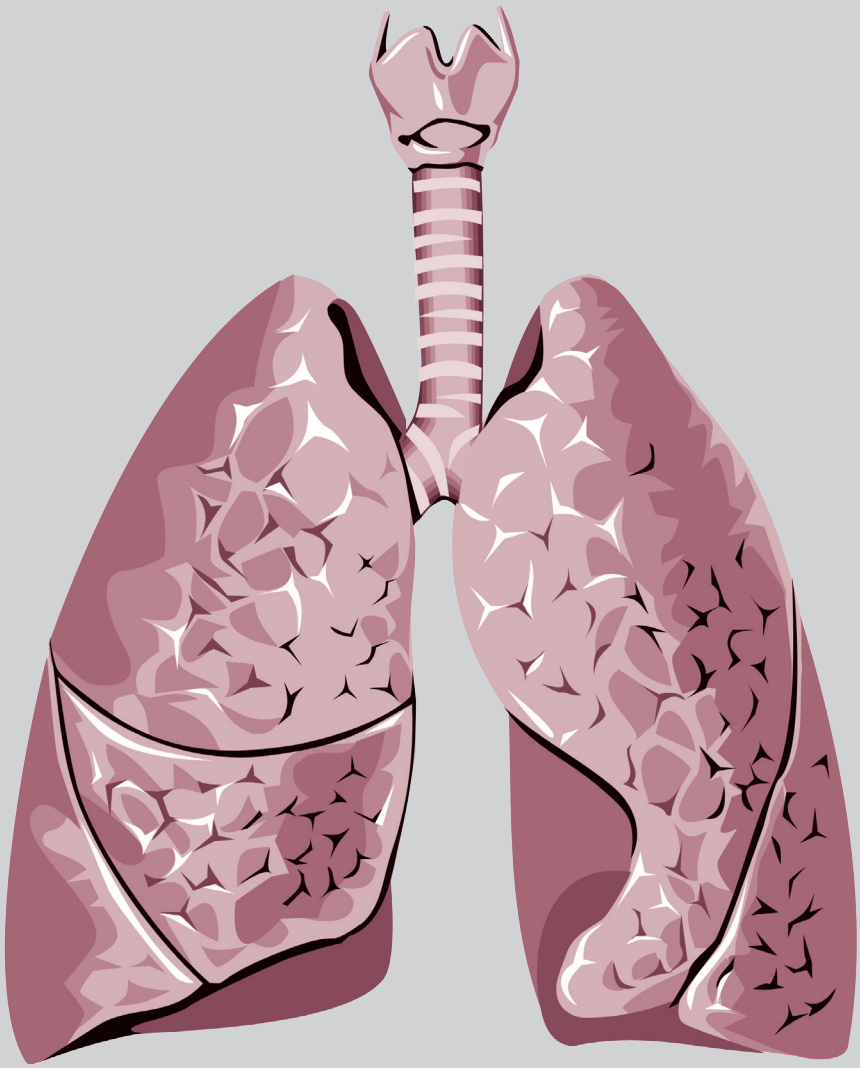

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CONTENTS

Real-World Experience with Immunotherapy for Lung Cancer in a Tertiary Hospital in Central Taiwan

Hsu-Yuan Chen[1], Yi-Cheng Shen[1], Hung-Jen Chen[1], Chih-Yen Tu[1], Yu-Chao Lin[1,2], Te-Chun Hsia[1,3]

Introduction: Clinical trials have demonstrated the promising effects of immunotherapy in lung cancer treatment, but real-world data is scarce. The main aim of this study was to explore real-world experience with immunotherapy in treating lung cancer patients.

Methods: Eligibility criteria included a diagnosis of an advanced stage of lung cancer and having received immunotherapy from 2015 to 2018. The protocol was approved by the institutional review board of our institution. Medical records were reviewed retrospectively.

Results: A total of 39 patients (males, 69.2%; mean age, 59.8 years) were enrolled. Clinical characteristics included non-squamous cell carcinoma in 74.4% of patients, stage IV in 92.3%, and brain metastasis in 35.9%; 17.9% of patients were hepatitis B carriers, 7.7% had received previous radiotherapy, and 76.9% had received combined chemotherapy: 1st treatment line (20.5%), 2nd (23.1%), 3rd (20.5%), and >= 4th (35.9%), respectively. Mean time to treatment failure was 8.9 months. The patients with brain metastasis who had received late-line therapy (>= 4th) showed a longer time to treatment failure. Common side effects included dermatitis (12.8%), fatigue (12.8%) and fever (10.3%), and the severe side effect was dermatitis (n=1, 2.6%).

Conclusion: Real-world data reflect the conditions of patients with a clinical medical need. Our study included subgroups with late-line therapy or those with brain metastasis, and revealed that those 2 groups experienced a longer time to treatment failure. Physicians should not only be familiar with immunotherapy as first-line therapy, but also consider it as part of the treatment plan for patient populations that need medical care in our daily practice.
(Thorac Med 2023; 38: 177-186)

Key words: Lung Cancer, immunotherapy

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Comparing the Real-World Efficacy of Erlotinib and Afatinib in Treating Advanced Lung Squamous Cell Carcinoma

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Background and Aims: Erlotinib and afatinib are drugs of choice for patients with advanced squamous cell carcinoma (SqCC) of the lung. Here, we aimed to study the efficacy of erlotinib and afatinib in real-world practice.

Methods: We retrospectively screened lung SqCC patients who received erlotinib or afatinib between Jan 2009 and Aug 2021 in a hospital-based cohort. We excluded those patients who had received erlotinib or afatinib for less than 2 weeks, who had received chemotherapy combined with erlotinib or afatinib, or who had a mixed histology. Progression-free survival (PFS) was evaluated.

Results: A total of 167 patients were analyzed (140 in the erlotinib group, 23 in the afatinib group, and 4 who had been treated with both erlotinib and afatinib). In the erlotinib group, 76.4% of patients had received erlotinib as the third- or higher line of therapy, compared with 39.1% in the afatinib group (p=0.030). Disease control rates in the erlotinib and afatinib groups were 28.6% and 21.7%, respectively (p=0.021). The proportions of patients who had discontinued tyrosine kinase inhibitor treatment due to adverse events in the erlotinib and afatinib groups were 1.4% and 21.7%, respectively (p=0.001). There was no significant difference in PFS between the erlotinib and afatinib groups (median 2.4 months [95% CI, 2.0 to 2.7] vs 2.7 months [95% CI, 2.2 to 3.2]; p=0.833). All of the patients who had received afatinib with prior erlotinib treatment showed benefits from erlotinib treatment, and 3 of them experienced stable disease after afatinib use.

Conclusion: Either erlotinib or afatinib can be a treatment option in a real-world setting for advanced lung SqCC patients who have progressed after prior treatments. We found no difference in PFS between erlotinib and afatinib treatment. Afatinib may provide benefits to some patients showing resistance to prior erlotinib treatment. ***(Thorac Med 2023; 38: 187-198)***

Key words: EGFR-TKI, SqCC, erlotinib, afatinib, efficacy, progression-free survival, adverse event

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Afatinib As Potential Treatment for NRG1 Fusion-Driven Non-Small Cell Lung Cancer: A Case Report

Chi-Hao Wu[1], Ching-Han Lai[1], Xin-Min Liao[1]

Driver mutations and tyrosine kinase inhibitors play pivotal roles in the treatment of advanced stage non-small cell lung cancer. Besides the common mutations, such as in EGFR, ALK, ROS1, and BRAF, there are some other mutations that are also worth targeting. With the development of next-generation sequencing technology and new drugs, an increasing number of mutations can now be targeted to improve the prognosis of non-small cell lung cancer. One of these uncommon mutations, neuregulin 1 (NRG1) fusion, has rarely been reported. Here, we reported a case of lung adenocarcinoma with this rare mutation -- NRG1 fusion -- that successfully responded to the drug afatinib. ***(Thorac Med 2023; 38: 199-204)***

Key words: NRG1 fusion, non-small cell lung cancer, afatinib, ErbB family, RNA-based next-generation sequencing

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Chest Wall Tuberculosis Mimicking Parasitic Infection: A Case Report

You-Lung Chang[1], Chien-Hong Chou[1]

Tuberculosis has long been known as the "great mimicker" because of its ever-changing presentation. Here, we reported the case of a young Filipino with asthma who initially presented with intermittent right upper quadrant abdominal pain. Further laboratory studies revealed high serum eosinophilia and eosinophil-predominant pleural effusion, which almost misled us to the diagnosis of parasitic infection, based on parasite findings in the stool. The definite diagnosis of chest wall tuberculosis was made based on the results of computed tomography and surgical procedure of the chest wall. ***(Thorac Med 2023; 38: 205-208)***

Key words: mycobacterium, eosinophilia, pleural effusion, parasite, eosinophilic granulomatosis with polyangiitis

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Immune Checkpoint Inhibitors-Related Interstitial Lung Disease Presenting as Usual Interstitial Pneumonia in a Patient with Small-Cell Lung Cancer: A Case Report and Literature Review

Hsiao-Chin Shen[1], Chi-Lu Chiang[1]

Immune checkpoint inhibitors (ICIs) such as programmed death (PD) 1 and PD ligand 1 inhibitors have proved to be effective in the treatment of advanced lung cancer. However, ICIs can also stimulate the immune system, resulting in immune-related adverse events (irAEs). ICI-induced pneumonitis, which is an irAE in the lung, displays a wide range of imaging features, including usual interstitial pneumonia (UIP), although this is relatively rare. The treatment for symptomatic ICI-induced pneumonitis involves stopping ICIs and administering systemic steroids. If the initial symptoms do not improve, a titrated steroid dose and additional immunosuppression can be considered. In this study, we reported the case of a patient with advanced small-cell lung cancer who received ICIs. This patient developed pneumonitis presenting an UIP pattern after a few courses of ICIs. She was successfully treated with steroid pulse therapy and mycophenolate mofetil. We described the imaging characteristics, and discussed the management strategies for this adverse event in patients with lung cancer treated with ICIs. ***(Thorac Med 2023; 38: 209-216)***

Key words: immune-related adverse events, pneumonitis, usual interstitial pneumonia

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Recurrent Solitary Fibrous Tumor of the Pleura after Surgical Resection in a 62-year-old Male

Yang-Han Lin[1], Jiunn-Min Shieh[1]

Solitary fibrous tumor (SFT) is a rare neoplasm derived from mesenchymal tissue. The pleura is the most common site of SFT, and the diagnosis is based on the pathologic study of a tissue specimen. The standard management of SFT is surgical excision, although the risk of local recurrence and metastasis after surgery has been frequently noted. We reported a male patient who was a heavy smoker and had chronic cough symptoms for 20 years. Right lower lung tumor was incidentally found during a hospital visit. The biopsy result confirmed the diagnosis of SFT, and the patient underwent tumor excision. Two episodes of local recurrence of SFT were noted, 1 at 6 years and 1 at 9 years, respectively, after the first surgery. Surgical tumor resection was performed at each recurrent episode. ***(Thorac Med 2023; 38: 217-221)***

Key words: solitary fibrous tumor, surgical resection, local recurrence

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Late-Onset Rrespiratory Failure in Organophosphate poisoning

Wei-Hung Chang[1], Chi-Feng Huang[1]

Organophosphate poisoning is not uncommon in Taiwan. We encountered a patient with organophosphate poisoning who initially showed non-specific symptoms, a late-onset intermediate syndrome presenting with abrupt respiratory failure following acute cholinergic crisis, and improvement in the condition after appropriate treatment with pralidoxime and atropine. Based on toxic studies present in the literature, organophosphate poisoning has a high mortality rate if the treatment is inappropriate or underestimated. ***(Thorac Med 2023; 38: 222-227)***

Key words: organophosphate poisoning (OP), intermediate syndrome (IMS), late-onset respiratory failure

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Foreign Body Inhalation-Related Pulmonary Actinomycosis Diagnosed by Transbronchial Lung Biopsy: A Case Report

Wen-Jui Chang[1,2], Chen-Yiu Hung[1,2], Shu-Min Lin[1,2]

Pulmonary actinomycosis is a rare disease related to aspiration of oral secretion or other objects such as a foreign body. The diagnosis of this disease is very difficult to confirm. We reported a 67-year-old Taiwanese man with pulmonary actinomycosis diagnosed by the pathology study of transbronchial lung biopsy specimens. Foreign body inhalation, which was later revealed to be animal bone-related, was determined during the examination. Although he had been under inadequate antibiotic treatment, the patient developed no deterioration of symptoms and chest radiography, which could be related to known variations in the treatment duration for pulmonary actinomycosis from case to case, or the fact that the infection focus had already been removed. ***(Thorac Med 2023; 38: 228-235)***

Key words: pulmonary actinomycosis, foreign body, transbronchial lung biopsy, Grocott-Gomori methenamine-silver nitrate stain

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Subglottic Lobular Capillary Hemangioma-Associated Extra-Thoracic airway Obstruction: A Case Report

En-Chi Hsu[1], Cheng-Hao Chuang[1,2]

Lobular capillary hemangioma, sometimes known as pyogenic granuloma, is a vascular proliferation of the skin and oral cavity that mimics granulation tissue grossly, but hemangioma microscopically. Most airway lobular capillary hemangiomas are located in the oral and nasopharyngeal mucosa. Here, we reported the case of a college student who presented to our clinics with dyspnea for 1 month. He had visited a local medical doctor, but the symptoms progressed despite medication treatment. Loud stridor during both inspiration and expiration was noted at the outpatient department. Tracing back his history, he was involved in a traffic accident with traumatic brain injury with a 2-week-long intubation period about 5 months ago, and aspiration pneumonia with a 1-week intubation 2 months before this presentation. The lung function test showed a flattened curve during inspiration, indicating upper airway obstruction. The chest film did not disclose an active pulmonary lesion, but a small protruding mass just below the vocal cords was found by bronchoscopic examination. The patient underwent surgical treatment, and recovered well. Our case highlights the role of a lung function test in providing an initial impression and indicating further diagnostic approaches that can be taken by the physician. ***(Thorac Med 2023; 38: 236-240)***

Key words: pyogenic granuloma, complication of intubation, stridor, dyspnea, lung function test

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Ideopathic Pleuroparenchymal Fibroelastosis Treated with Lung Transplantation: First Case Report in Taiwan and Review of the Literature

Pin-Li Chou[1], His Chieh-Ning[2], Han-Chung Hu[3], Wei-hsun Chen[1]

Pleuroparenchymal fibroelastosis (PPFE) is a rare subtype of interstitial lung disease, and presents with upper pulmonary lobe fibrosis and bilateral subpleural dense consolidation. There is no certain etiology for idiopathic PPFE, which progresses slowly but with rapid clinical deterioration. Surgical biopsy for pathological diagnosis was the gold standard in the past, but may result in pneumothorax, which is dangerous for these fragile lungs. Modified diagnostic criteria, including chest tomography imaging and clinical presentation, were adopted for our patient. There is not much evidence for medical treatment so far, so lung transplantation is the ultimate treatment for idiopathic PPFE, though reports on postoperative long-term follow-up are still scarce. We reported the case of a 41-year-old male patient diagnosed with idiopathic PPFE, who suffered from progressive dyspnea for 3 years and recurrent bilateral pneumothorax. He is the first patient in Taiwan to undergo bilateral lung transplantation, and had a smooth postoperative recovery and uneventful?? follow-up for 1.5 years. ***(Thorac Med 2023; 38: 241-249)***

Key words: pleuroparenchymal fibroelastosis (PPFE), end-stage lung disease, lung transplantation

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Salivary Bypass Stent and Intercostal Muscle Flap for Treatment of Cervical Esophageal Conduit Ischemia and Perforation

Yu-Hsiang Wang[1], Cheau-Feng Lin[1,2]

A 57-year-old man with esophageal squamous cell carcinoma in the middle to lower thoracic region underwent thoracoscopic esophagectomy and gastric tube reconstruction with mediastinal node dissection, and on the 7th day post-operation, developed cervical esophageal conduit ischemia and perforation. After decortication, intercostal muscle flap repair and adequate sepsis control, a salivary bypass tube (Boston Montgomery®) was emplaced to bypass the fistula and exclude the salivary alimentary stream. Few studies have reviewed the use of salivary bypass tubes for the management of cervical esophageal conduit ischemia. Herein, we reported a successful case of salvage salivary bypass stent placement for esophageal conduit ischemia and perforation. ***(Thorac Med 2023; 38: 250-254)***

Key words: Esophageal tumor, Squamous cell carcinoma, Anastomosis leakage Introduction

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Successful Treatment of Leptomeningeal Metastasis Using Intrathecal Chemotherapy in a Patient Harboring an Epidermal Growth Factor Receptor L858R Mutation: A Case Report

Geng-Ning Hu[1], Meng-Rui Lee[1], Chao-Chi Ho[1]

Leptomeningeal metastasis (LM) is a poor prognostic factor for lung cancer, and its incidence is increasing in non–small cell lung cancer (NSCLC) patients. The treatment effect of systemic chemotherapy and radiotherapy is not good. In patients with oncogenic drivers, the treatment of choice is tyrosine kinase inhibitors (TKIs), which have a high central nervous system (CNS) penetration ability. Here, we reported the case of 47-year-old female NSCLC patient with an epidermal growth factor receptor (EGFR) L858R mutation who was diagnosed as having LM via magnetic resonance imaging and cerebrospinal fluid cytology after treatment with TKIs, immunotherapy, chemotherapy, and anti-EGFR monoclonal antibody. Salvage whole brain radiotherapy was administered. Owing to the progression of CNS symptoms and intolerance of the side-effects of systemic anti-cancer therapy, osimertinib and bevacizumab combined intrathecal chemotherapy with pemetrexed (IP) were initiated. The patient achieved remission of neurologic symptoms, stable brain metastases and long-term survival without notable adverse events. IP, when combined with tailored systemic anti-cancer therapy, provides a potential therapeutic option for patients with EGFR-mutant LM who have failed TKIs treatment. ***(Thorac Med 2023; 38: 255-260)***

Key words: intrathecal chemotherapy, leptomeningeal metastasis, lung cancer

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Hyperbaric Oxygen Therapy to Treat Iatrogenic Air Embolism Following CT-guided Lung Biopsy: Case Reports

Chuan-Yen Sun[1], Yen-Wen Chen[1,2], Kuang-Yao Yang[1,2]

Computed tomography (CT)-guided biopsy is a well-established technique to obtain lung tissue for evaluation of a pulmonary lesion. Several complications after transthoracic biopsy have been documented, but seldom led to a catastrophic outcome. Air embolism is a rare but fatal complication of CT-guided lung biopsy and can result in morbidity and mortality. Hyperbaric oxygen therapy (HBOT) is defined as treatment with 100% oxygen in air pressure higher than 1.4 atmosphere absolute (ATA). It plays a crucial role in treating systemic air embolism and may reduce neurological sequelae. ***(Thorac Med 2023; 38: 261-266)***

Key words: air embolism, percutaneous lung biopsy, hyperbaric oxygen therapy

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Iatrogenic Tracheal Diverticulum with Spontaneous Recovery: A Case Report

Yun-Tse Chou[1], Sheng-Huan Wei[1], Chang-Wen Chen[1,2]

Tracheal diverticulum is a consequence of focal weakness of the trachea wall. Tracheal diverticula can be due to either congenital or acquired causes. Patients with tracheal diverticulum are usually asymptomatic and the condition is self-limited, but may develop serious infectious complications. We report the case of a 36-year-old female with iatrogenic tracheal diverticulum diagnosed by thoracic CT scan and bronchoscopy, who had a spontaneous recovery. ***(Thorac Med 2023; 38: 267-270)***

Key words: Tracheal diverticulum, tracheal wall, iatrogenic, bronchoscopy

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