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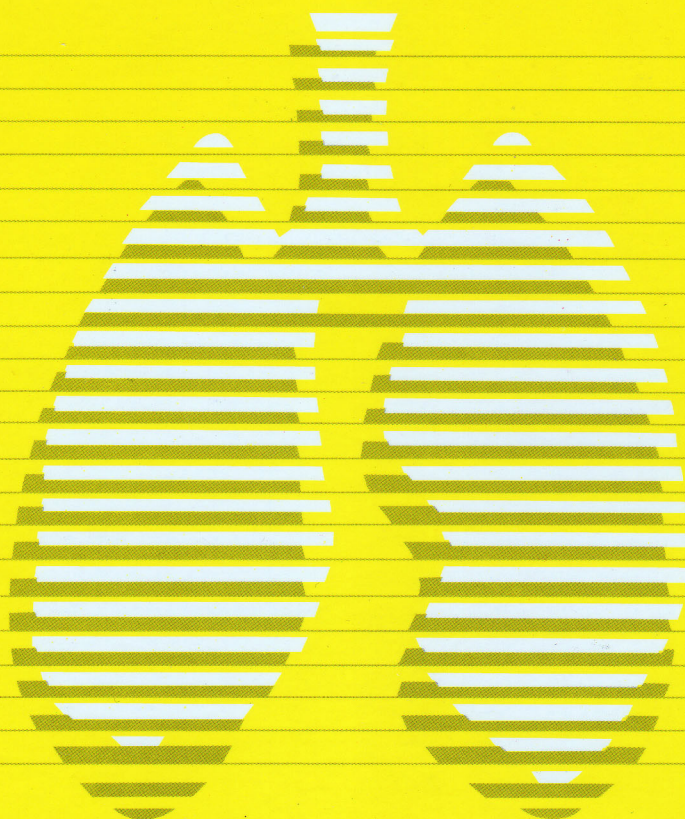
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Survival Predictors in Oldest-Old (≥ 85 Years Old) Patients with Acute Respiratory Distress Syndrome: A Prospective Observational Cohort Study

Ko-Wei Chang*, Meng-Jer Hsieh**,***, Shih-Wei Lin*, Li-Pang Chuang*,****, Ning-Hung Chen*,***, Han-Chung Hu*,***, Li-Fu Li*,***, Chiu-Hua Wang*****, Chung-Chi Huang*,***, Kuo-Chin Kao*,***

Introduction: Acute respiratory distress syndrome (ARDS) is a high-mortality condition in the intensive care unit. Older patients can require more time and attention in the hospital, especially in intensive care. In this study, we focus on the oldest-old (more than 85 years old) ARDS patients, with the aim of investigating survival predictors in this group.

Patients and Methods: In this prospective observational cohort study, we focused on patients who were admitted to our hospital's intensive care units with the diagnosis of ARDS between October 2012 and May 2015. Demographic, comorbidity, severity, lung mechanics, and laboratory data and survival outcomes were collected and analyzed.

Results: A total of 463 (49%) of 945 patients with ARDS were ≥ 65 years old. Eighty of these elderly patients with ARDS were ≥ 85 years old. The overall hospital mortality rate was 60% (48/80). The hospital survivors had lower Sequential Organ Failure Assessment (SOFA) scores (7.9 vs. 9.6, $p=0.021$), higher platelet counts ($208.7 \pm 78.2 \times 10^3/\mu\text{L}$ vs. $141.5 \pm 80.2 \times 10^3/\mu\text{L}$, $p<0.001$), higher albumin levels (2.7 ± 0.4 g/dL vs. 2.4 ± 0.6 g/dL, $p=0.016$) and lower blood urea nitrogen levels (33.4 ± 16.4 mg/dL vs. 52.8 ± 38.5 mg/dL, $p=0.003$) than the non-survivors. Multivariate logistic regression analysis found that only albumin level (odds ratio, 0.20; 95% confidence interval, 0.05-0.88, $p=0.003$) was significantly and independently associated with hospital mortality.

Conclusions: The oldest-old ARDS patients had high hospital mortality, and the most important survival predictor was serum albumin level. (*Thorac Med* 2018; 33: 221-229)

Key words: oldest-old, acute respiratory distress syndrome, SOFA score, albumin

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存活預測因子於急性呼吸窘迫症候群的老老人 (大於 85 歲)：前瞻性觀察世代研究

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李立夫 *,*** 王九華 ***** 黃崇旂 *,*** 高國晉 *,***

背景：急性呼吸窘迫症候群在加護病房中有很高的死亡率。老年人對於醫療照護上是一項負擔，尤其在加護照護。本篇研究中，我們針對罹患急性呼吸窘迫症候群的老老人（大於 85 歲），研究他們的存活預測因子。

方法：在這篇前瞻性觀察世代研究中，我們蒐集 2012 年 10 月至 2015 年 5 月所有入住本院加護病房，且符合急性呼吸窘迫症候群診斷的病患，分析人口學、共病症、嚴重度指標、肺部機械特性、實驗室數據和存活預後等資料。

結果：945 位急性呼吸窘迫症候群病患中，老年人有 463 位 (49%)、大於 85 歲有 80 位，院內死亡率為 60% (48/80)。院內存活病患較院內死亡病患有較低的相繼器官衰竭評分 (7.9 vs. 9.6, $p=0.021$)、較高的血小板 ($208.7 \pm 78.2 \times 10^3/\mu\text{L}$ vs. $141.5 \pm 80.2 \times 10^3/\mu\text{L}$, $p<0.001$)、較高的白蛋白 ($2.7 \pm 0.4 \text{ g/dL}$ vs. $2.4 \pm 0.6 \text{ g/dL}$, $p=0.016$)、和較低的血清尿素氮 ($33.4 \pm 16.4 \text{ mg/dL}$ vs. $52.8 \pm 38.5 \text{ mg/dL}$, $p=0.003$)。於多因子羅吉氏迴歸分析中，只有白蛋白為有意義且獨立的院內死亡預測因子（勝算比為 0.20, 95% 信賴區間為 0.05-0.88, $p=0.003$ ）。

結論：急性呼吸窘迫症候群的老老人有很高的院內死亡率，而最重要的存活預測因子是血清中白蛋白值。(*胸腔醫學* 2018; 33: 221-229)

關鍵詞：老老人，急性呼吸窘迫症候群，相繼器官衰竭評分，白蛋白

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Primary Pulmonary Artery Sarcoma Mimicking Pulmonary Thromboembolic Disease: A Case Report

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Primary pulmonary artery sarcoma is a rare disease entity, and patients might have the typical presentations of thromboembolic disease. We report a 50-year-old woman who presented with a 3-month history of dyspnea on exertion and chest tightness. Chest X-ray examination revealed a prominent right pulmonary trunk and a nodule at the left lower lung field; magnetic resonance imaging disclosed significant “filling defects” within bilateral pulmonary trunks. With the clinical diagnosis of pulmonary thromboembolism, she was treated with systemic anticoagulants, but the symptoms and radiographic findings progressed. Surgical biopsy of the pulmonary artery lesion revealed poorly differentiated pulmonary artery sarcoma. She died 1 year later despite treatment. Our case illustrates that pulmonary artery sarcoma should be included in the differential diagnosis of pulmonary thromboembolic disease when there is a lack of response to anticoagulation in patients with no evident risk factor for pulmonary thromboembolism, and in those with concomitant pulmonary nodules. (*Thorac Med* 2018; 33: 230-236)

Key words: pulmonary artery sarcoma, pulmonary thromboembolism, pulmonary thromboembolic disease

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類似肺動脈血栓栓塞性疾病的原發性肺動脈肉瘤： 一個病例報告

陳志誠 鄭之勛

原發性肺動脈肉瘤是很罕見的疾病，病人經常有像肺血栓栓塞性疾病的典型表現。我們報告了一位 50 歲女性，她的表現是長達三個月期間的運動喘及胸悶。胸部 X 光檢查發現右肺動脈幹變得很鼓且在左下肺葉有一顆結節。核磁共振掃描發現在兩側肺動脈幹有所謂“填充缺損”。臨床診斷為肺動脈血栓栓塞症，於是她開始使用抗凝血劑治療。追蹤時，其症狀及影像皆惡化。肺動脈的病灶經開刀後病理診斷為分化不良性的肺動脈肉瘤。然而即使經過開刀、電療及化療，病人仍在診斷的一年多後死亡。我們的案例闡明了：當病人沒有血栓栓塞症的危險因子，對於抗凝血劑治療沒有反應而且合併有肺結節者，肺動脈血栓症以外的疾病像是肺動脈肉瘤一定要列入鑑別診斷。(*胸腔醫學* **2018; 33: 230-236**)

關鍵詞：肺動脈肉瘤，肺動脈血栓栓塞症，肺動脈血栓栓塞性疾病

Undiagnosed Pulmonary Sequestration Associated with Pleomorphic Carcinoma of the Lung: Potential Risk in Pulmonary Surgery

Tung-Ming Tsai*, Cheng-Hung How*, Yao-Hui Tseng**, Jin-Shing Chen*

Lung cancer associated with pulmonary sequestration is extremely rare; undiagnosed pulmonary sequestration with an aberrant feeding artery may be risky during surgery for lung cancer. A 43-year-old man was diagnosed with large-cell pleomorphic carcinoma of the left upper lung lobe associated with a pre-existing opacity at the left lower lung lobe. During surgery for lung cancer, it became clear that the opacity was actually a pulmonary sequestration with an engorged, aberrant feeding artery hidden in the inferior pulmonary ligament. Retrospective review of the chest computed tomography revealed that the sequestration was associated with pleural adhesions and that the feeding artery originated from the abdominal aorta, which made preoperative diagnosis of the pulmonary sequestration difficult. We suggest that during lung cancer surgery, surgeons should be aware of the possibility of undiagnosed pulmonary sequestration, to prevent massive bleeding and catastrophic complications. (*Thorac Med* 2018; 33: 237-241)

Key words: lung cancer, pleomorphic carcinoma, pulmonary sequestration

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未確診的游離肺和多形性肺癌的關聯性： 胸腔手術潛在的危險性

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肺癌合併游離肺是一個極為罕見的疾病。肺癌手術中，術前未診斷的游離肺因為有著源自於主動脈的迷動脈，將使手術的風險大大提昇。一位四十三歲的男性，經診斷為左上肺大細胞多形性癌。術前發現左下肺葉有一陰影。肺癌手術中，意外發現此陰影為一游離肺，合併有一個巨大的迷動脈。追朔評估發現，電腦斷層顯示，此一游離肺躲藏在肺部沾粘之間，同時迷動脈起源自腹部主動脈。這些因素使得術前診斷游離肺的困難度大大增加。我們建議肺癌手術中，術者應該提高警覺，注意任何術前未診斷的游離肺存在的可能性，以避免產生大量出血等合併症的產生。(胸腔醫學 2018; 33: 237-241)

關鍵詞：肺癌，多形性癌，游離肺

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Double Primary Pulmonary Adenocarcinomas with Different Morphological Subtypes and Different Anaplastic Lymphoma Kinase Expression in a 47-Year-Old Never-Smoking Woman – A Case Report

Yi-Hung Pan*, Chih-Jen Yang*,****,*****, Jui-Ying Lee**, Chih-Hung Lin***, Ming-Shyan Huang*,*****

Multiple primary lung cancer (MPLC) is a potentially curable malignancy. It is difficult to diagnose accurately, since the diagnosis depends on a histologic presentation of lung cancer, especially when these intrapulmonary nodules share the same histologic type or similar subtypes. Molecular diagnosis, such as epidermal growth factor gene mutation status, has been reported to enhance the diagnosis of MPLC. Since anaplastic lymphoma kinase (ALK) gene rearrangement is also a critical target in non-small cell lung cancer, it might be a potential tool in aiding the MPLC diagnosis. Here, we reported a 47-year-old never-smoking woman who had 2 peripheral pulmonary nodules of similar size at her right lower lobe and left upper lobe. The patient underwent a bilateral video-assisted thoracic surgery wedge resection, and pathologic diagnosis showed the 2 nodules were adenocarcinomas, but with different pathologic morphological features. Different ALK gene rearrangement expression types were found using ALK immunohistochemical staining, and further confirmed through use of the fluorescence in situ hybridization method. The 2 nodules were diagnosed finally as a double primary stage I lung cancer instead of an intrapulmonary metastasis of a primary lung cancer. This is the first case report of a possible role for ALK expression in the diagnosis of MPLC. We share this rare case and present a literature review. (*Thorac Med* 2018; 33: 242-248)

Key words: multiple primary lung cancer, ALK (anaplastic lymphoma kinase)

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雙重原發性肺腺癌呈現不同之組織型態表現及不同間變性淋巴瘤激酶表現在一位 47 歲的非吸菸女性一案例報告

潘奕宏 * 楊志仁 *, ****, ***** 李瑞英 ** 林智鴻 *** 黃明賢 *, *****

雖然肺癌的預後仍然相當差，而多發性原發肺癌是有機會能治癒的，但臨床上往往難僅由肺癌之形態組織學來做出準確診斷，尤其是肺內腫瘤擁有相同的組織型或相似的組織亞型時。分子病理診斷，如表皮生長因子受體突變 (EGFR mutation) 狀況曾被報告過用以協助多發性原發性肺癌之診斷。鑑於間變性淋巴瘤激酶重組 (ALK rearrangement) 型態在非小細胞肺癌中亦是重要的治療標的，或許它也是潛在能協助多發性肺癌診斷的工具。在此我們報告一位 47 歲非吸菸女性有兩顆大小相似之週邊肺結節，一在右下肺而另一在左上肺。這位女性接受雙側胸腔內視鏡輔助切除術。病理檢查呈現此兩個腫瘤皆為肺腺癌但有不同之病理形態表現。有趣的是，免疫化學染色法下的間變性淋巴瘤激酶型態表現完全不同，且此結果也透過螢光原位雜交法 (FISH) 來驗證。最終此兩個腫瘤被診斷為雙重原發性肺癌，而非轉移性肺癌。迄今為止，尚未有文獻報告利用間變性淋巴瘤激酶之表現做為多發性原發性肺癌的診斷工具。我們在此分享此一案例並進行文獻回顧。(*胸腔醫學* 2018; 33: 242-248)

關鍵詞：多發性肺癌，間變性淋巴瘤激酶

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Primary Pulmonary Lymphoepithelioma-like Carcinoma Presenting with a Cavitory Nodule

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Yu-Ching Lin*,****, Ming-Szu Hung*,****, Ying-Huang Tsai*,**

Pulmonary lymphoepithelioma-like carcinoma (LELC) is a rare malignant tumor of the lung that is histopathologically similar to undifferentiated nasopharyngeal carcinoma. Pulmonary LELC presenting as a cavitory lung nodule is seldom reported in the literature. We reported a case of primary pulmonary LELC with a cavitory lung nodule, a rare primary lung cancer with a rare radiological presentation. The nodule was removed with video assisted thoracoscopic surgery. There was no tumor recurrence at the 1-year clinical follow-up. (*Thorac Med* 2018; 33: 249-253)

Key words: lymphoepithelioma-like carcinoma, primary lung cancer, cavitory nodule

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以開洞結節表現的原發性肺部類淋巴上皮癌－病例報告

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洪明賜*,**** 蔡熒煌**,**

原發性肺部類淋巴上皮癌是一種形態學上類似未分化的鼻咽癌的罕見肺部腫瘤。好發在亞洲地區且被認為與EB病毒感染有關。相較於其他非小細胞肺癌預後較好。文中我們報告一位41歲女性在身體健康檢查中偶然發現右中肺開洞性結節，病灶經由胸腔內視鏡輔助手術切除，證實是原發性肺部類淋巴上皮癌。術後追蹤一年未發現腫瘤復發。(*胸腔醫學* 2018; 33: 249-253)

關鍵詞：肺部類淋巴上皮癌肺癌，原發性肺癌，開洞

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Near-Fatal Air Travel after Diving: A Case of Impending Tension Pneumothorax on an International Flight

Chung-Kuang Yao*, **, Kun-Lun Huang*, Chung-Kan Peng*

Pulmonary barotrauma and decompression sickness are serious complications of scuba diving, caused by an inappropriate ascent. For those diving abroad, a strict surface interval requirement for flying after diving has been recommended in the U.S. Navy Diving Manual. We herein report a rare case, that of an experienced scuba diver who had severe dyspnea on an international flight home after a diving vacation abroad. Repeated ambient pressure change during 2 flight transfers led a diving complication becoming an impending tension pneumothorax at the airport terminal. The patient recovered well after tube thoracotomy and blebectomy. (*Thorac Med* 2018; 33: 254-260)

Key words: flying after diving, barotrauma, pneumothorax

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致命的潛水後飛行：國際航班上的壓力性氣胸個案

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肺部氣壓傷及減壓症皆為潛水的嚴重併發症，常發生於不正確的上升過程。針對國外的潛水，美國海軍潛水準則已嚴格地規定潛水後與飛行的海平面停留間隔。本罕見案例為一位具多年水肺潛水經驗的女性，在國外潛水假期後返國的航班上，發生嚴重的呼吸困難。兩次的航班轉機帶來反覆的環境壓力變化，導致病人在返國後發展成壓力性氣胸。病人經胸管引流術及肺泡摘除手術後痊癒。(*胸腔醫學* **2018; 33: 254-260**)

關鍵詞：潛水後飛行，氣壓傷，氣胸

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