The Myth of Positive End-expiratory Pressure Setting Using the Low Inflection Point in the Pressure-Volume Curve

Shian-Chin Ko, Chun-Min Hsieh

Acute respiratory distress syndrome (ARDS) is characterized by severe hypoxemia and impaired pulmonary mechanics. Positive end-expiratory pressure (PEEP) is very important in the treatment of patients with ARDS because PEEP can improve the gas exchange function and prevent cyclic alveolar collapse and reopening, thus preventing ventilator-induced lung injury (VILI). However, to date there is no consensus on setting the optimal PEEP. Most clinicians adjust PEEP according to arterial oxygenation without considering the pulmonary structural changes that may exaggerate lung injury due to alveolar over-distension by the high airway pressure. The pressure-volume (PV) curve, which can be performed at bedside, is used generally to assess pulmonary mechanics. Many investigators suggest setting PEEP above the lower inflection point (LIP) on the inflation limb of the PV curve to avoid end-expiratory alveolar collapse. This review analyzes the feasibility and limitations of this method and introduces new insights into PV curves. ***(Thorac Med 2005; 20: 1-7)***

Key words: acute respiratory distress syndrome, positive end-expiratory pressure, pressure-volume curve, ventilator-induced lung injury

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以壓力—容積曲線之下轉折點設定呼氣末正壓之迷思

柯獻欽　謝俊民

急性呼吸窘迫症候群 (acute respiratory distress syndrome, ARDS) 的病人常常需要呼吸器治療以維持生命，然而呼吸器設定失當將加重肺部發炎，稱為呼吸器導致肺傷害 (ventilator-induced lung injury, VILI)，目前公認的 VILI 發生機制包括：高潮氣容積 (tidal volume, V_T) 導致肺泡過度膨脹 (overdistension) 與肺泡反覆開閉 (cyclic alveolar closing and reopening)。呼氣末正壓 (positive end-expiratory pressure, PEEP) 對ARDS的治療十分重要，藉由塌陷肺泡的動員 (alveolar recruitment) 可以改善氣體交換功能，避免肺泡反覆開閉，進而預防 VILI 的發生，但是過高的 PEEP 將損及血行動力與造成肺泡過度膨脹，反而促進 VILI 產生。多年來對於如何設定理想的 (optimal) PEEP 仍多所爭議，臨床上習慣以動脈血氧 (arterial oxygenation) 來調整 PEEP 值，但此法完全不考慮 PEEP 所造成的肺部機械特性 (lung mechanics) 改變，忽略了 VILI 的發生機制。若考慮 PEEP 對肺部機械特性的影響，傳統觀念建議將 PEEP 設定在壓力—容積曲線 (PV curve) 的下轉折點 (lower inflection point, LIP) 之上，認為如此肺泡將可完全動員，使肺部擴張性 (compliance) 達到最佳程度。然而，新近許多研究證實：LIP 以上的區段仍存在有塌陷肺泡，肺泡動員在高壓區仍持續進行，LIP 與肺泡的臨界開啟壓力 (threshold opening pressure, TOP) 的關係較密切，與預防肺泡塌陷的臨界關閉壓力 (threshold closing pressure, TCP) 關係不大，故以吸氣段的 LIP 來設定 PEEP 似乎沒有生理根據。本文主要探討以 LIP 設定 PEEP 的適用性及其限制，並介紹 PV curve 的新觀念，強調肺泡動員對 PV curve 之重大影響，除了 LIP 之外，希望能找到其他運用 PV curve 的方法，使 ARDS 病人之 PEEP 設定能更符合呼吸生理需求。*(胸腔醫學 2005; 20: 1-7)*

關鍵詞：急性呼吸窘迫症候群、呼氣末正壓、呼吸器導致肺傷害

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Epidemiological Characterization of Pan-drug-Resistant *Acinetobacter baumannii* Isolated in a Medical Center

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Background: The aims of this study were to assess the isolation rate, characteristics and diversity of pan-drug-resistant *Acinetobacter baumannii* (PDRAB) strains over a period of 3 years at Kaohsiung Chang-Gung Memorial hospital.

Methods: A retrospective study was carried out from January 2001 through December 2003 at Kaohsiung Chang Gung Memorial Hospital. We compiled the data from a laboratory database for *A. baumannii* from patient specimens from any site. The medical records of these patients were subsequently reviewed, and pan-drug-resistant strains were obtained.

Results: A total of 2807 *A. baumannii* isolates were included, and 49 isolates met the diagnostic criteria for PDRAB. We identified 40 true infectious strains and excluded 9 colonized ones. The isolation rate of PDRAB increased remarkably over time (3.53 per 1000 strains in 2001, 3.84 in 2002, and 36.07 in 2003). The events occurred not only in the intensive care units, but also in the general wards. Compared to the non-PDR *A. baumannii* patients, the majority of the PDRAB patients had co-morbid illnesses, a previous antibiotics treatment history, or had undergone invasive procedures.

Conclusions: PDRAB infections have been seen increasingly at our hospital over the past few years. The data obtained in this study should alert clinicians to the emergence of a potentially difficult and dangerous organism. In addition, the improper use of antibiotics, invasive medical procedures, and patients with multiple co-morbid illnesses were common in PDRAB infection.
(Thorac Med 2005; 20: 8-16)

Key words: Pan-drug-resistant *Acinetobacter baumannii*

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汎抗藥性靜止桿菌在某南台灣醫學中心的流行病學特徵

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前言：這篇研究的目的在了解高雄長庚紀念醫院，汎抗藥性靜止桿菌菌株在約三年來的發生率、特徵和變異性。

方法：這篇研究從2001年1月1日到2003年12月31日止在高雄長庚醫院做回溯性分析。我們利用從病人檢體所採得的相關資料獲得汎抗藥性菌種，再從病人病歷記錄去做分析。

結果：從2807患者身上的靜止桿菌得到49株符合汎抗藥性菌種的診斷，我們再定義出40隻真正的感染性菌株並排除了9隻非感染性菌株。我們發現汎抗藥性菌株的分離率在三年內明顯增加，在2001年的分離率是千分之3.53，2002年為千分之3.84，而在2003年更高達千分之36.07。這樣的個案不只在加護病房發現，在普通病房也相繼出現。且病人中有相當高的比例有合併潛在疾病，廣效性抗生素使用病史和接受侵入性處置。

結論：汎抗藥性靜止桿菌過去三年在本院明顯增加。這篇文章得到的相關數據臨床醫師對這種治療困難且具傳染性的細菌加以注意，儘量減少不必要的抗生素使用和侵入性處置，也對合併多重潛在疾病患者提高警覺。***(胸腔醫學 2005; 20: 8-16)***

關鍵詞：汎抗藥性靜止桿菌

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Clinical Outcomes of Community-Acquired Pneumonia in Young Adults: Analysis Using the Pneumonia Severity Index (PSI)

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Background: Community-acquired pneumonia (CAP) is one of the most common causes of severe illness and death in the elderly; however, young adults, although in the minority, are also among the fatalities.

Objective: To describe the clinical outcomes and identify the risk factors associated with CAP mortality in young adults.

Method: We retrospectively reviewed the records of 490 young adult patients (15-50 years old) admitted to our hospital with the diagnosis of community-acquired pneumonia from January 2001 to December 2002. We used the pneumonia severity index (PSI) to stratify these 490 patients into different risk groups. Of this group, 19 died of severe CAP. The factors associated with mortality in these young adults were analyzed.

Results: Higher degrees of severity in the PSI risk groups led to significantly increased mortality in the young adults patients with CAP (group I (0.58%), group II (1.25%), group III (6.67%), group IV (33.33) and group V (50.00%)). Factors affecting mortality included malignancy, liver disease, altered mental status, respiratory rate > 30/min, systolic blood pressure < 90 mmHg, pulse rate > 125/min, pH< 7.35, BUN> 30 mg/dl, glucose>250 mg/dl, hematocrite < 30%, partial pressure of arterial oxygen < 60 mmHg, and pleural effusion on the chest radiograph. Using logistic regression analysis, only age and blood urea nitrogen > 30 mg/dl were significant factors associated with mortality.

Conclusion: In our series, severity and PSI grouping could predict, with excellent results, the outcome of young adults with CAP. In the analysis of factors affecting the clinical outcome, age and blood urea nitrogen > 30 mg/dl had the greatest impact on mortality in young adults with CAP. ***(Thorac Med 2005; 20: 17-24)***

Key words: community-acquired pneumonia, young adult, outcomes

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以肺炎嚴重程度指數（PSI）分析年輕人社區性肺炎的臨床結果

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背景：社區性肺炎是一種常見疾病。在老年人造成嚴重併發症或死亡，健康年輕人也會有同樣的結果。

目的：探討年輕人社區性肺炎死亡的相關危險因子和結果。

方法：我們迴朔本院在2001年1月至2002年12月，共有490位年齡介於15-5歲之間病人因社區性肺炎住院。依據嚴重程度指數 (PSI) 分級，共有19位病人死亡。我們分析這些年輕人死亡的相關變數。

結果：依據嚴重程度分級，不同的嚴重程度分級確實影響了年輕病人的死亡率；分級I有0.58%病患死亡，分級II有1.25%病患死亡率，分級III有6.67%病患死亡，分級IV有33.33%病患死亡和分級V有50.00%病患死亡。年輕人大部分身體都健康，但有受許多危險因素會影響死亡，這些項目包括了惡性腫瘤、肝病、意識不清、呼吸率 > 30/分鐘、收縮壓 < 90mmHg、心跳 > 125/分鐘、酸鹼度(pH) < 7.35、血液尿素氮 (BUN) > 30 mg/dl、血糖 > 250 mg/dl、血紅素 < 30%、動脈血氧分壓 (PaO_2) < 60mmHg和胸部x光的肋膜積水。我們在進一步的迴歸分析發現僅年齡和血液尿素氮明顯使死亡率增加。

結論：我們發現肺炎嚴重程度指數(PSI)的分級可以作為年輕人社區性肺炎臨床結果的預後因子的分析。尤其年齡和血液尿素氮BUN > 30 mg/dl明顯影響了年輕人社區性肺炎的死亡率。***(胸腔醫學 2005; 20: 17-24)***

關鍵詞：社區性肺炎、年輕人

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Evaluation of Outcome in Elderly Critically Ill Patients with Nosocomial Klebsiella Pneumoniae Bacteremia

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Background: Gram-negative bacteremia is considered to have little impact on mortality in ICU patients. However, this may not be true in elderly patients.

Objective: To determine outcome and attributable mortality in elderly critically ill patients with nosocomial bacteremia involving *Klebsiella pneumoniae.*

Design: A retrospective matched cohort study.

Setting: Thirty-bed medical ICU at Taipei Veterans General Hospital.

Patients: Thirty-one medical ICU patients aged more than 65 years old with *K. pneumoniae* bacteremia and 62 matched control patients.

Methods: The matching of the control patients (1:2 ratio) was done on the basis of the APACHE II score and age. Without the impact of *K. pneumoniae* bacteremia, this matching procedure was expected to result in a similar mortality rate for the 2 groups.

Results: Elderly patients with *K. pneumoniae* bacteremia had a significantly higher mortality rate (61.3% vs 26.1%, p=0.003) and more thrombocytopenia (51.6% vs 26.1%, p=0.034) than the control group. Attributable mortality was 35.2%. There was no significant difference in length of ICU stay (33.48 days vs. 32.69 days, p=0.858) and number of ventilator days (31.90 days vs. 29.01 days, p=0.434) between the two groups.

Conclusions: After adjusting for severity of disease, *Klebsiella pneumoniae* bacteremia had significantly increased mortality among the elderly patients. ***(Thorac Med 2005; 20: 25-32)***

Key words: elderly, *Klebsiella pneumoniae*, bacteremia

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老年重症患者合併克雷白氏肺炎桿菌菌血症之預後探討

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背景：在加護病房中一般認為合併革蘭氏陰性菌菌血症對於額外增加死亡率並不明顯，不過這在老年患者並不一定如此。

目的：探討老年重症患者合併院內感染克雷白氏肺炎桿菌菌血症之預後以及克雷白氏肺炎桿菌菌血症在相同疾病嚴重度的老人患者是否有更高的死亡率。

設計：回溯性配對性研究。

場所：台北榮總之三十床內科加護病房。

對象：31 位年齡超過 65 歲的內科重症患者合併克雷白氏肺炎桿菌菌血症以及 62 位的對照組患者。

方法：以 1:2 比例配置對照組病患主要是基於 APACHEII 分數以及年齡。從這個疾病嚴重度分類系統我們可以得到預期死亡率；若無其他因素影響，經由此配對方法所得到的預期死亡率在實驗組與對照組應該是相同的。

結果：老年重症患者合併克雷白氏肺炎桿菌菌血症比起對照組有明顯較高的死亡率 (61.3% vs 26.1%, p=0.003) 以及血小板低下症 (51.6% vs 26.1%, p=0.034)。在相同疾病嚴重度的患者，合併克雷白氏肺炎桿菌菌血症所額外增加的死亡率高達 35.2%。而加護病房的住院天數 (33.48 days vs. 32.69 days, p=0.858) 及呼吸器使用天數 (31.90 days vs. 29.01 days, p=0.434)，兩者則無明顯差異。

結論：在考量病患的疾病嚴重度之下，合併克雷白氏肺炎桿菌菌血症的老年患者確實有較高的死亡率。***(胸腔醫學 2005; 20: 25-32)***

關鍵詞：老年，克雷白氏肺炎桿菌，菌血症

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The Difference in the Clinical Features of Acute Interstitial Pneumonitis and Severe Acute Respiratory Syndrome

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Purpose: In the early stages, the clinical and chest radiographic findings of acute interstitial pneumonitis (AIP) are often similar to those of severe acute respiratory syndrome (SARS). However, patients with AIP have a poor prognosis, while those with SARS can achieve a fair outcome. The objective of this study was to identify the differences in the early clinical features of these 2 diseases.

Methods: The AIP group in our study included 5 patients with AIP who were histologically diagnosed at our hospital, and patients selected from a review of previously reported AIP cases. The SARS group included 76 patients with SARS who were treated at our hospital. The clinical symptoms, illness duration, laboratory data, and initial chest radiographic findings for each disease were evaluated.

Results: A total of 69 patients with AIP were included in this study. The mean illness duration was significantly longer in the AIP group (16.3 ± 18.3 days) than in the SARS group (3.4 ± 2.5 days) ($p < 0.001$), and fever, myalgia, and diarrhea were significantly more prevalent in the SARS group (100%, 48.7% and 31.6%, respectively) than in the AIP group (50%, 1.6% and 0%, respectively) ($p < 0.001$). The white blood cell count was significantly higher among the AIP patients (15440 ± 7835/mm^3) than the SARS patients (6000 ± 2900/mm^3) ($p < 0.001$). No lesions were noted, and the involvement of 1 lobe in the initial chest radiographic presentation was significantly more prevalent among the SARS patients (26.3% and 43.4%) than the AIP patients (0% and 0%) ($p<0.001$). The intubation rate and mortality rate were significantly higher in the AIP group (92.5% and 47.8%) than the SARS group (30.3% and 19.7%) ($p<0.001$).

Conclusion: For a differential diagnosis of AIP and SARS, special attention should be given to the following clinical findings: shorter illness duration, fever, myalgia, diarrhea, and a normal leukocyte count. Initial chest radiographic findings with no lesions, or the involvement of 1 lobe, were more common among the SARS patients than the AIP patients. ***(Thorac Med 2005; 20: 33-41)***

Key words: acute interstitial pneumonitis, severe acute respiratory syndrome

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急性間質性肺炎與嚴重急性呼吸道症候群臨床表徵之區別

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目的：急性間質性肺炎的早期臨床表現和胸部影像與嚴重急性呼吸道症候群相似。本研究探討兩種疾病的早期臨床表現和胸部影像之區別。

方法：本研究中急性間質性肺炎組的資料取材自五位在本院經過肺部生檢確定診斷之病人以及由文獻回顧先前發表之急性間質性肺炎病人。嚴重急性呼吸道症候群組的資料取材自七十六位在本院接受治療之病人。兩組病人之臨床表現，發病時間，檢驗數據，早期胸部影像均加以評估。

結果：本研究總共收錄六十九位急性間質性肺炎病人。急性間質性肺炎組病人之平均發病時間（16.3 ± 8.3 天）明顯長於嚴重急性呼吸道症候群組病人（3.4 ± 2.5 天）（$p < 0.001$）。嚴重急性呼吸道症候群組病人產生發燒，肌肉酸痛和腹瀉之發生率（100%，48.7% 和 31.6%）明顯高於急性間質性肺炎組病人（50%，1.6% 和 0%）（$p < 0.001$）。急性間質性肺炎組病人之白血球數（15440 ± 835/ 毫米^3）明顯高於嚴重急性呼吸道症候群組病人（6000 ± 900/ 毫米^3）（$p < 0.001$）。嚴重急性呼吸道症候群組病人早期胸部影像中沒有病灶和只有單一肺葉有病灶之百分比（26.3% 和 43.4%）明顯高於急性間質性肺炎組病人（0% 和 0%）（$p < 0.001$）。急性間質性肺炎組病人之插管率和死亡率（92.5% 和 47.8%）明顯高於嚴重急性呼吸道症候群組病人（30.3% 和 19.7%）（$p < 0.001$）。

結論：為鑑別診斷急性間質性肺炎和嚴重急性呼吸道症候群，下列臨床表現應予重視：發病時間，發燒，肌肉酸痛，腹瀉和白血球數。早期胸部影像學檢查中沒有病灶和只有單一肺葉有病灶較常見於嚴重急性呼吸道症候群而非急性間質性肺炎之病人。***(胸腔醫學 2005; 20: 33-41)***

關鍵詞：急性間質性肺炎，嚴重急性呼吸道症候群

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Modified Pneumonia Severity Index and Length of Hospital Stay in Patients with Community-Acquired Pneumonia: Experience of a Medical Center in Taiwan

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Background: Fine's pneumonia severity index (PSI) has not been validated in Taiwan. Furthermore, the relationship between length of hospital stay (LOS) and PSI in community-acquired pneumonia (CAP) has not been well established. The aim of this study was to identify the risk factors for mortality and prolonged hospitalization in CAP patients stratified into 5 risk classes, based on a modified Fine's PSI.

Methods: We enrolled all CAP patients admitted to the Division of Respiratory and Critical Care Medicine at Taichung Veterans General Hospital, from January 1, 2002 to December 31, 2002. Fine's PSI was modified to exclude patients from nursing homes and those with neoplastic disease. The patients' clinical and laboratory data on the first day of admission were recorded retrospectively. The predictor variables for mortality and LOS were analyzed with univariate and multivariate statistical methods.

Results: A total of 151 patients (mean age, 68 ± 16) were enrolled. Fourteen patients (9.3%) died, and the risk of mortality increased significantly in proportion to the PSI risk class. ($p \leq 0.001$) Mean LOS was 14.3 ± 12.6 days. LOS increased from class I to IV, but not class V. Chronic lung disease was the only factor predicting LOS in severe pneumonia. (Class IV and V)

Conclusion: Our modified Fine's PSI can be used to predict longer LOS and mortality in the hospital. Chronic lung disease was an important factor in predicting LOS. ***(Thorac Med 2005; 20: 42-50)***

Key words: modified pneumonia severity index, length of hospital stay, community-acquired pneumonia

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社區性肺炎的嚴重度分級與住院天數的研究

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前言：Fine 的肺炎嚴重程度分類指標 (PSI) 於台灣的運用尚未被廣泛地檢視，同時該肺炎指標 (PSI) 和住院天數長短的關聯性亦尚未確立，本文之目的在於運用該項肺炎指標來檢視本院社區型肺炎病患之死亡率和住院天數。

方法：我們回溯性地納入西元 2002 年一年中住院於台中榮民總醫院社區型肺炎。我們使用修正過的 Fine 肺炎嚴重程度分類指標 (Modified PSI) 依照住院首日之臨床及實驗室分項，將病患依嚴重程度分為 5 組，並找出增加肺炎死亡率及延長住院天數的危險因子。

結果：共有一百五十一位病患收案 (平均年齡 68 歲)，14 位病患 (9.3%) 死亡，死亡率和肺炎嚴重指標 (PSI) 的分類呈正相關。平均住院天數為 14.3 ± 12.6 天，住院天數的長短和肺炎嚴重指標分類 I—IV 呈正相關，然第 V 類則否。慢性阻塞性肺病的病患，因肺炎而住院其住院天數會顯著延長。

結論：使用修正過的 Fine 肺炎嚴重指標，同樣能預測社區型肺炎病患的死亡率及住院天數，慢性阻塞性肺病的肺炎病患，其住院天數會顯著延長。***(胸腔醫學 2005; 20: 42-50)***

關鍵詞：修正過的肺炎嚴重指標、住院天數、社區型肺炎

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Successful Treatment with Itraconazole for Chronic Necrotizing Pulmonary Aspergillosis with a Delayed Diagnosis — A Case Report

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A 65-year-old diabetic female patient presented with dyspnea and respiratory distress before admission. Hyperglycemia was evident on admission, and diabetic ketoacidosis (DKA) was confirmed. She was intubated with ventilator support due to respiratory failure. The clinical course improved despite progressive pulmonary infiltration and cavitation after extubation. Pulmonary aspergillosis was confirmed by bronchial biopsy. Chronic necrotizing pulmonary aspergillosis (CNPA) was highly likely, based on the patient's subacute course. But the diagnosis was delayed, which could have led to more morbidity and a greater chance of mortality. Despite a two-month delay in diagnosis for this patient, her lung lesion completely regressed after a nearly 6-month outpatient antifungal therapy regimen with itraconazole. ***(Thorac Med 2005; 20: 51-57)***

Key words: chronic necrotizing pulmonary aspergillosis, semi-invasive pulmonary aspergillosis, pulmonary aspergillosis

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經 Itraconazole 成功治療的慢性壞死性肺麴菌病—病例報告

陳嘉明** 吳沼漧 林孟志 黃昭誠*

在此我們報告一位 65 歲患有糖尿病的女性病患，住院之前以呼吸困難伴隨呼吸急迫來表現，急診發現有高血糖症的現象，並有糖尿病性酮酸血症伴隨代謝性酸中毒。住院期間，在疑似續發性肺部感染之下，因呼吸衰竭而接受插管及呼吸器治療。臨床上的改善無法和一系列胸部 X- 光相吻合，胸部 X- 光發現有進行性的肺部浸潤以及之後的空洞形成。肺麴菌病經由氣管組織切片證實。根據病患臨床上的亞急性表現，近似慢性壞死性肺麴菌病。但延遲診斷已發生，可足以引起高罹病率和死亡率。經過近 6 個月 itraconazole 的抗黴菌治療，肺部恢復幾近完全正常。*(胸腔醫學 2005; 20: 51-57)*

關鍵詞：慢性壞死性肺麴菌病，半侵入性肺麴菌病，肺麴菌病

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Subcutaneous Emphysema and Pneumomediastinum During A Minor Dental Procedure: A Case Report and Literature Review

Chen-Liang Tsai, Chin-Pyng Wu

Subcutaneous and mediastinal emphysema can occur on occasion following a dental procedure. The high speed dental drill and the air and water syringe are the instruments most frequently involved in theses cases. We report a case of subcutaneous emphysema and pneumomediastinum soon after a minor dental procedure. The relevant literature is reviewed, including the clinical symptoms, diagnosis, possible serious complications, and management. ***(Thorac Med 2005; 20: 58-62)***

Key words: subcutaneous emphysema, pneumomediastinum, dental procedures

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小型牙科手術導致皮下氣腫及縱膈氣胸—病例報告及文獻回顧

蔡鎮良　吳清平

牙科手術治療已經是一種經常性的手續，但少有有關胸腔併發症之報告。隨著牙科器械發展，氣動式高壓器具廣泛使用，手術併發之皮下氣腫及縱膈氣胸發生機會亦隨之上升。在此我們報告一個案於牙冠手術過程中併發皮下氣腫及縱膈氣胸，同時對其病因、臨床表現、可能之嚴重併發症及處理作一文獻回顧。
(胸腔醫學 2005; 20: 58-62)

關鍵詞：牙科手術，皮下氣腫，縱膈氣胸

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Esophageal Stricture Induced by Chemo-radiotherapy — A Case Report

I-Chen Chang, Yuh-Min Chen, Reury-Perng Perng

Esophageal complications induced by radiotherapy are not uncommon. Although esophageal stricture after radiotherapy still is a relatively rare complication, the incidence and severity of esophagitis has increased when radiotherapy is combined with chemotherapy. We present a patient with stage IIIb adenocarcinoma of the lung, who developed esophageal stricture after induction chemotherapy, followed by concurrent chemo-radiotherapy. The chemotherapeutic agents that might increase the effects of radiation are reviewed. For the management of patients who developed esophageal stricture, medical treatment with supportive care is usually used. Balloon dilatation is another choice. However, the recurrence rate is high. Surgical intervention is used when medical treatment is ineffective. ***(Thorac Med 2005; 20: 63-68)***

Key words: esophageal stricture, lung cancer, chemo-radiotherapy

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合併化學治療及放射治療引起的食道狹窄—病例報告

張一誠　陳育民　彭瑞鵬

在過去因高劑量放射治療引起的食道病變並非罕見的併發症，且有急性和慢性之分。發生機會似乎隨合併化學治療及放射治療而增加。我們提出一位肺癌病患，於接受合併化學治療及放射治療後，發生食道狹窄的併發症，並討論該患者使用之化學治療藥物是否影響食道狹窄之發生。另整理現行之內外科治療方式。*(胸腔醫學 2005; 20: 63-68)*

關鍵詞：食道狹窄，肺癌，合併化學及放射治療

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Pulmonary Nocardiosis Manifesting as a Solitary Mass and Acute Respiratory Distress Syndrome in an Immunocompetent Host

Chen-Yu Chen, Kuang-Yao Yang, Yu-Chin Lee, Reury-Perng Perng

Nocardiosis is caused by *Nocardia* spp., which is a ubiquitous, aerobic, Gram-positive, weakly acid-fast bacillus found in soil and water, and on vegetables. The predisposing factors for pulmonary nocardiosis include organ transplantation, malignancy, tuberculosis, acquired immunodeficiency syndrome (AIDS), alveolar proteinosis, alcohol abuse, and chronic obstructive pulmonary disease (COPD). Hematogenous dissemination to almost every organ system has been reported, especially to the central nervous system and the skin. Chest radiography shows varying changes, which present from mild infiltration to a single or multiple large cavitary mass. Pleural effusion or empyema is noted in about 50% of patients. The mortality rate is correlated with the immune status; it approaches 50% in those with central nervous system lesions, and is less than 10% in those with pulmonary disease only.

Acute respiratory distress syndrome (ARDS) caused by solitary pulmonary nocardiosis has rarely been reported, thus we present and discuss in detail this unusual manifestation. A 61-year-old previously healthy man complained of fever with cough and shortness of breath lasting for 1 week. His chest radiography initially showed a mass in the right upper lobe and massive right side pleural effusion. Later, pulmonary nocardiosis was diagnosed by means of a culture of the material obtained from fine-needle aspiration. A relatively rare species, *N. caviae* (*N. otitidiscaviarum*), was isolated 3 weeks later. Localized pulmonary nocardiosis rapidly developed into septic shock with ARDS, with frequent attacks of paroxysmal supraventricular tachycardia (PSVT). After 4 weeks of intravenous imipenem and amikin, he was weaned from the mechanical ventilator. Antibiotics were then shifted to oral trimethoprim-sulfamethoxazole for 3 months. In a stable condition, the patient was transferred to a respiratory care ward for tracheostomy care.
(Thorac Med 2005; 20: 69-75)

Key words: pulmonary nocardiosis, lung mass, acute respiratory distress syndrome, septic shock, paroxysmal supraventricular tachycardia, fine-needle aspiration

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肺土壤絲菌病以單一肺腫塊及急性呼吸窘迫症表現

陳正昱　陽光耀　李毓芹　彭瑞鵬

土壤絲菌病 (nocardiosis) 是由土壤絲菌屬 (Nocardia) 細菌所引起的，該屬細菌均是好氧的放線菌，顯微鏡下可見分支有珠狀突起的格蘭氏陽性絲狀桿菌，耐酸性染色 (acid-fast stain) 通常為弱陽性。它普遍存在於土壤、蔬菜或水中，星狀土壤絲菌 (*N. asteroides*) 是其中最常見的人類致病菌。土壤絲菌病的病程可由急性至慢性，肺部的土壤絲菌感染通常是經由吸入性的途徑，常出現於器官移植、愛滋病、惡性腫瘤、膠原病等免疫不全的狀況、慢性阻塞性肺疾病、肺蛋白沉著症及嗜酒的病人。全身性散佈則是經由血路傳播，尤以腦膿瘍或腦膜炎及皮膚感染最為常見。胸部 X 光表現可由輕微的肺浸潤至大面積有開洞的腫塊，病灶數目可單一或多發，約一半病人會出現肋膜積液甚至膿胸。土壤絲菌病預後與感染的部位及病人的免疫狀況有關，單純的肺部感染治癒率在九成以上。若造成遠處的擴散感染，治癒率大為下降，合併腦膿瘍的死亡率約為百分之五十。

本病例報告的目的為提出一肺土壤絲菌病較少見到的合併症急性呼吸窘迫症及其處理的方式。一個六十一歲原本健康的病人，住院前一週出現發燒、咳嗽及氣促的情形。胸部 X 光呈現右側大量肋膜腔積液及右上肺部腫塊，經超音波定位經胸抽吸診斷出肺土壤絲菌病較為罕見的菌種 *N. caviae* (又稱 *N. otitidiscaviarum*)。病程於兩週內快速惡化而出現敗血性休克及急性呼吸窘迫症，插管後因無法脫離呼吸器而接受氣切，同時發現頻頻出現上心室性心搏過速。使用有效的抗生素靜脈注射 imipenem 及 amikin 一個月後病情才獲得控制，然後改用每十二小時口服 sulfamethoxazole 800 毫克及 trimethoprim 160 毫克，服藥三個月後病人於穩定狀況轉到慢性呼吸照護病房。***(胸腔醫學 2005; 20: 69-75)***

關鍵詞：肺土壤絲菌病，肺部腫塊，急性呼吸窘迫症，敗血性休克，上心室性心搏過速，細針抽吸

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Mediastinal Teratoma with Pulmonary Involvement Presenting as Hemoptysis — A Case Report

Yu-Cheng Chang, Ming-Chih Yu, Fu-Chean Chen*, Chun-Nin Lee

Hemoptysis is described in many disease processes. However, a mediastinal teratoma is rarely considered in a patient presenting with hemoptysis. Since the mediastinal teratoma has no specific symptoms, its definite diagnosis is difficult before surgical intervention. Chest computed tomography is an important medium in evaluating mediastinal lesions. Bronchoscopy may be helpful in cases of a mediastinal teratoma with pulmonary involvement of the bronchial trees. We report herein a case of hemoptysis caused by a mediastinal teratoma with pulmonary involvement. ***(Thorac Med 2005; 20: 76-80)***

Key words: teratoma, hemoptysis

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縱膈腔畸胎瘤併肺部侵犯以咳血爲表徵：病例報告

張祐洭　余明治　陳復銓*　李俊年

很多疾病的病徵會表現出咳血。當一個病人咳血時，很少會去想到縱膈腔畸胎瘤。因為縱膈腔畸胎瘤沒有特別的徵狀，所以在外科處置之前要確定診斷是很困難的。在評估縱膈腔疾病時，電腦斷層掃描是重要的。當縱膈腔畸胎瘤併肺部之支氣管侵犯時，以支氣管鏡檢查可能會有幫助。我們報告一個病例為縱膈腔畸胎瘤以咳血為徵狀表現。***(胸腔醫學 2005; 20: 76-80)***

關鍵詞：畸胎瘤，咳血

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Metastatic Pulmonary and Pleural Melanoma of Unknown Origin — A Case Report and Literature Review

Chung-Wei Tsai*,**, Gee-Chen Chang**,***, Jeng-Yuan Hsu**

In patients with metastatic melanoma, pulmonary and/or pleural lesions, as the only presentation, are uncommon. Very rarely have cases of primary pulmonary and pleural melanoma been reported. In our case, the patient presented with cough and dyspnea. The cytological examination, which showed suspected melanin pigment with an unknown primary site in this case, is important in such conditions. In general, these are often associated with melanin pigments, though special staining is needed in cases of hypomelanoic or amelanoid melanomas. Combination chemotherapy is the mainstay for metastatic melanomas, though the prognosis remains poor to date. ***(Thorac Med 2005; 20: 81-85)***

Key words: lung neoplasm, melanoma

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原發不明之肋膜及肺部轉移性惡性黑色素細胞瘤—一病例報告及文獻回顧

蔡宗衛　張基晟　許正園

惡性黑色素細胞瘤是一種少見的疾病，其中不明原發部位之轉移性癌較為少見。而文獻中肋膜或肺部之原發性惡性黑色素細胞瘤更為罕見之病例報告。我們報告一例經由肋膜積液之細胞學診斷發現之病患。其臨床上以咳嗽及呼吸困難表現。肋膜積液細胞學檢查懷疑是黑色素細胞瘤，卻無其它好發部位之病灶。回顧文獻，本例雖未能完全符合更嚴謹之判定準則，然而經過一系列詳細之理學及影像檢查，並未發現其它之原發部位而尚待將來繼續追蹤。高度之警覺及正確之細胞學檢查，配合病理之免疫染色，具有重要之價值。*(胸腔醫學 2005; 20: 81-85)*

關鍵詞：肺腫瘤、惡性黑色素細胞瘤

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Large Chest Wall Osteosarcoma — A Case Report

Chien-Ying Wang, Chen-Sung Lin, Chih-Ming Lin, Chih-Cheng Hsieh, Linag-Shun Wang

Primary osteosarcomas of the chest wall are very rare. We report a patient with a large osteosarcoma of the left chest wall. This 40-year-old man suffered from left chest pain for several weeks, and chest radiological examinations revealed a tumor mass, 15x15x20 cm in size, in the left chest wall firmly adherent to the aortic arch. Sono-guided needle biopsy was performed, but a histological diagnosis could not be obtained. Complete surgical resection of the tumor was attempted, but failed due to aortic wall involvement. Postoperative chemotherapy was administered with a poor response. The patient died of carcinomatosis within 13 months after surgery.

The optimal therapeutic strategy for primary chest wall osteosarcoma, a rare tumor with a high grade malignancy, is not well defined. However, it is generally accepted that early diagnosis plus complete resection with adequate safe margins are the important factors that will determine the prognosis. The role of chemotherapy or radiotherapy has not been well clarified in the treatment of this neoplasm. ***(Thorac Med 2005; 20: 86-90)***

Key words: chest wall, osteosarcoma, surgery

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胸壁巨大骨肉瘤—病例報告

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原發性胸壁骨肉瘤非常少見，我們報告一例左側胸壁巨大骨肉瘤。一位 40 歲男性病患，主述左側背疼痛有數週，胸部 X 光及電腦斷層掃瞄發現，左胸壁有一巨大腫瘤且侵犯胸主動脈，經超音波穿刺切片檢查並無法得到確切之診斷，因此接受胸壁腫瘤的外科切除手術，根據組織病理化驗，確定診斷為骨肉瘤。在手術之後他繼之接受輔助性化學藥物治療，病患於手術後十三個月，死於局部擴散及肺部轉移。

如同少數高度惡性腫瘤，針對原發性胸壁骨肉瘤之治療方法並無定論。但一般可接受之治療方法為，早期診斷及外科手術切除，而足夠的安全切除邊緣為一重要的預後因子。手術之後的輔助性化學藥物治療或放射治療並無定論。*(胸腔醫學 2005; 20: 86-90)*

關鍵詞：胸壁，骨肉瘤，外科切除

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Aortobronchial Fistula with Hemoptysis after Aortic Graft Replacement — A Case Report

Chien-Tung Chiu, Shih-Feng Liu, Meng-Chih Lin

Aortobronchial fistula after the graft replacement of a thoracic aorta is rare. We describe the case of a 69-year-old man who presented with recurrent hemoptysis. Thirteen years before he had had a type A aortic dissection, and had undergone a graft replacement of the thoracic aorta. Chest radiography and bronchoscopy showed non-specific abnormalities. The thoracic computed tomography (CT) scan and the CT angiography revealed a pseudoaneurysm formation in the proximal descending aorta with contrast medium leakage, and aortography revealed a pseudoaneurysm in the distal graft with contrast leakage. An aortobronchial fistula resulting from a pseudoaneurysm was diagnosed. Surgery was recommended and he was treated successfully. If aortobronchial fistulas are undetected, mortality is 100%. A high index of suspicion of an aortobronchial fistula should be maintained in any patient with hemoptysis after thoracic aorta surgery. ***(Thorac Med 2005; 20: 91-95)***

Key words: aortobronchial fistula, hemoptysis

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胸腔主動脈術後併發主動脈氣管瘻管—一個案例報告

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胸腔主動脈術後並發主動脈氣管瘻管是非常罕見的。在這裡我們報導一個 69 歲男性病患因咳血而求診，13 年前因患有 A 型主動脈剝離接受了皮瓣置換術。一開始的胸部 X 光和支氣管鏡並無特別的發現。但在電腦斷層和電腦斷層血管攝影上發現了在降主動脈的近端有偽動脈瘤且有顯影劑外漏的情況。主動脈血管攝影則看到了偽動脈瘤在之前皮瓣的遠端且也有顯影劑外漏的情況。那時考慮是偽動脈瘤進展成主動脈氣管瘻管。病人之後接受了外科手術治療，癒後良好。若有主動脈氣管瘻管而沒被診斷，致死率通常是百分之百。面對曾接受胸腔主動脈手術的病人，若有呈現咳血的症狀時。應將主動脈氣管瘻管列入鑑別診斷中。*(胸腔醫學 2005; 20: 91-95)*

關鍵詞：咳血，主動脈氣管瘻管

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Multifocal Liposarcomas of the Chest Wall — A Case Report

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We present a rare case of multifocal liposarcomas that originated in the chest wall. A 61-year-old woman palpated a mass lesion in her left chest wall, at the subclavicular area. Intermittent local tenderness and radiation pain to the left arm were noted. On physical examination, an elastic and mobile tumor measuring 5 x 3 cm was palpated in the left chest wall. Ultrasonic examination revealed that the tumor was well defined and heterogenous in density. Under the impression of a chest wall lipoma, she underwent excision of the tumor. After removing the superficial larger tumor, another deep, dumbbell-shaped tumor was found by finger palpation. Excision of the deeper tumor was performed, as well. Histopathological findings revealed that the tumors were well-differentiated, sclerosing liposarcomas containing cells with atypia, hyperchromatic nuclei and occasional lipoblasts. During 12 months of follow-up, no local recurrence was noted. There has been no report in the literature of chest wall liposarcomas presenting as multifocal tumors. ***(Thorac Med 2005; 20: 96-100)***

Key words: chest wall liposarcoma

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多發性胸壁脂肪肉瘤—病例報告

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我們報告一個罕見的多發性胸壁脂肪肉瘤的病例，這是一位 61 歲的女性，她在左胸壁鎖骨下的位置觸摸到一個腫瘤，同時感到局部壓痛及左上臂的輻射性疼痛。在理學檢查上，於左前胸可觸摸到一個有彈性的、可動的、約 5X3 公分大小的腫瘤，超音波檢查則顯示此腫瘤的邊緣完整、密度不均。臨床初步診斷為一胸壁脂肪瘤，於是幫病人安排了腫瘤切除手術，術中移除較表淺且較大的腫瘤後，經由手指觸摸又發現了另一顆較深的、啞鈴形的腫瘤，這顆較深的腫瘤也於術中一併切除。組織病理上顯示這兩顆腫瘤均為分化良好的硬化型脂肪肉瘤，他們的細胞具有非典型、高染色質的細胞核，偶而可見脂肪母細胞。在術後至今 12 個月的追蹤期間，沒有觀察到局部復發的情形。在文獻回顧中，不曾有過類似的多發性胸壁脂肪肉瘤的報告。*(胸腔醫學 2005; 20: 96-100)*

關鍵詞：胸壁脂肪肉瘤

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