

# Erythromycin Modulates $\beta$ 2-integrins (CD11b/CD18) Expression and Intracellular Oxidant Capacity in Airway Neutrophils of Patients with Bronchiectasis

Meng-Heng Hsieh, Chun-Hua Wang, Chien-Ying Liu, Chih-Teng Yu,  
Horng-Chyuan Lin

Bronchiectasis is a chronic airway disease of diverse etiology, characterised by persistent bacterial colonization, bronchial inflammation, and progressive tissue damage. A neutrophil influx with oxidants and pro-inflammatory cytokines production not only provides opsonophagocytic protection from microbes, but is also implicated in further airway inflammation. To investigate whether erythromycin (EM) can affect neutrophil-mediated antimicrobes and airway inflammation, a 2-week course of therapy with EM (250 mg, 4 times per day) or duracef (250 mg, twice per day) was administered. Twenty-three bronchiectasis patients in stable condition after adequate chest care and hydration were enrolled in a randomized fashion. Leukocyte adhesion molecules CD11b/CD18 and DCFH in induced sputum and blood samples were determined by flow cytometric assay, and the sputum IL-8 and TNF- $\alpha$  levels were measured using the ELISA method before and after treatment. EM significantly increased the expression of CD11b and CD18, from  $296.6 \pm 31.0$  [expressed as mean fluorescence intensity (M.F.I.) of 10000 cells] to  $416.1 \pm 35.1$ , and from  $265.3 \pm 23.0$  to  $350.4 \pm 21.1$  ( $p < 0.05$ ; respectively), but not in patients using duracef ( $308.2 \pm 19.8$  to  $325.9 \pm 19.8$  and  $280.2 \pm 19.3$  to  $277.6 \pm 14.9$ ). There were significant correlations between the expressions of baseline CD11b and CD18 before antibiotic therapy ( $r = 0.72$ ,  $n = 23$ ,  $p < 0.0001$ ) and between the changes in CD11b and CD18 either after treatment with erythromycin ( $r = 0.77$ ,  $n = 13$ ,  $p < 0.005$ ) or in both groups ( $r = 0.72$ ,  $n = 23$ ,  $p = 0.0001$ ). The mean DCF fluorescence intensity of neutrophils in the induced sputum of patients receiving EM was significantly increased, from  $400.8 \pm 49.1$  to  $811.3 \pm 129.2$  ( $p < 0.01$ ), whereas duracef did not change the mean DCF fluorescence intensity (from  $495.6 \pm 141.0$  to  $531.2 \pm 129.9$ ;  $p > 0.05$ ). The TNF- $\alpha$  and IL-8 levels in the EM and duracef groups did not significantly change after treatment. In conclusion, EM upregulates the expression of CD11b/CD18 on neutrophils to increase the production of intracellular H<sub>2</sub>O<sub>2</sub>, for a microcidal effect. (*Thorac Med* 2005; 20: 503-516)

Key words: bronchiectasis, erythromycin, adhesion molecules (CD11b/CD18), intracellular hydrogen peroxide, tumor necrosis factor- $\alpha$ , interleukin-8

## 紅黴素在支氣管擴張症病人呼吸道中調節粘分子的表現 及中性白血球細胞中氧化能力

謝孟亨 王圳華 劉劍英 余志騰 林鴻銓

支氣管擴張症是一個由各種病因造成的慢性呼吸道疾病，特徵為持續性的細菌附著共生、支氣管發炎和持續進展的組織破壞。中性白血球藉著氧化物及產生前發炎激素，不僅提供微生物的吞噬作用，同時也暗示著進一步的呼吸道發炎。為了研究紅黴素對中性白血球在對抗微生物及呼吸道發炎的角色，我們以隨機的方式，讓病人接受兩週抗生素(紅黴素及二代孢頭素)。共有 23 位病情穩定，並持續肺部治療復健的病人，在治療前後，以 flowcytometry 測血中及痰中白血球粘附(CD11b/CD18)及 DCFH，以 ILISA 測痰中 IL-8 及 TNF- $\alpha$ 。結果發現，使用紅黴素的病人，CD11b 及 CD18 有意義的增加(CD11b 從 296.6M.F.I. 增加至 416.1M.F.I.，CD18 從 265.3 M.F.I. 增加至 350.4 M.F.I.， $p<0.05$ )；使用二代孢頭素的病人則無差異。中性球 DCF 強度在使用紅黴素的病人也明顯增加(400.8 增加至 811.3， $p<0.01$ )，而使用二代孢頭素的病人則無此現象。兩組痰中 IL-8 及 TNF- $\alpha$  在治療前後皆無明顯差異。結論是，紅黴素可增加中性球 CD11b/CD18 的表現，增加細胞內過氧化氫，而增加殺菌作用。(胸腔醫學 2005; 20: 503-516)

關鍵詞：支氣管擴張症、紅黴素、粘分子(CD11b/CD18)、腫瘤壞死因子(TNF- $\alpha$ )、介白素-8(IL-8)

# Delayed Treatment and Management of Active Tuberculosis in A Medical Center in Taiwan

Chuang-Chou Tu, Gwan-Han Shen, Jeng-Yuan Hsu

Mycobacterium tuberculosis infection remains an important public health issue in Taiwan. The delayed diagnosis and treatment of hospitalized patients is considered to be a factor contributing to the nosocomial spread and also creates a threat for health care workers.

We retrospectively analyzed the records of 91 patients diagnosed with active pulmonary tuberculosis after admission, from January 1999 to January 2000. We found the overall median interval between admission and diagnosis (delayed diagnosis) was  $3.96 \pm 4.09$  days; treatment delay was  $13.89 \pm 4.09$  days; and management delay was  $14.12 \pm 4.22$  days. Elderly patients (> 65 years old) had a greater chance of a delayed diagnosis (mean 5.31 days vs. 1.61 days). Compared with the pulmonary section, the neurological section had more significantly delayed treatment and management (delayed treatment,  $21.05 \pm 7.18$  days; delayed management,  $25.33 \pm 7.55$  days). But the neurologists were still very alert to pulmonary tuberculosis; their delay in diagnosis (median delayed diagnosis,  $4.25 \pm 2.21$ ) showed no difference from that of the other sections.

Our results suggest that physicians in Taiwan might not delay in suspecting pulmonary tuberculosis, but that delayed treatment and management does occur. Delayed tuberculosis culture reports might contribute to most delays, even in a medical center with a rapid BACTEC 960 system. More sensitive tuberculosis diagnostic methods and the early isolation of patients suspected of having tuberculosis might be important factors leading to a reduction of the risk to health care workers. (*Thorac Med* 2005; 20: 517-523)

Key words: pulmonary tuberculosis, delayed diagnosis, delayed treatment, delayed management

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Division of Chest Medicine, Department of Internal Medicine, Taichung Veterans General Hospital, Taichung, Taiwan, R.O.C.

Address reprint requests to: Dr. Gwan-Han Shen, Division of Chest Medicine, Department of Internal Medicine Taichung Veterans General Hospital No.160, Sec.3, Taichung Chung-Kang Road, Taichung, Taiwan, R.O.C.

# 台灣一醫學中心活動性肺結核病患住院時延遲性治療及處置之分析

涂川洲 沈光漢 許正園

肺結核在台灣仍是公共衛生一重要課題，而住院時病患延遲性診斷及治療常常造成院內感染並造成對醫護人員之為害。

我們收集自 1999 年 1 月至 2000 年 1 月共 91 位活動性肺結核病患。我們發現所有病患平均延遲性診斷天數為  $3.96 \pm 4.09$  天、延遲性治療天數為  $13.89 \pm 4.09$  天、延遲性處置天數為  $14.12 \pm 4.22$  天。大於 65 歲的老年病患較大的機會會延遲診斷。與胸腔科比較，神經內科有較顯著之延遲性治療及延遲性處置(延遲性治療天數為  $21.05 \pm 7.18$  天，延遲性處置天數為  $25.33 \pm 7.55$  天)。年老的病人 (> 65 歲) 有較大之延遲性診斷的機會 (平均 5.31 天比 1.61 天)，與胸腔科比較，神經科有較顯著之延遲性治療及處置 (延遲性治療： $21.05 \pm 7.18$  天，延遲性處置： $25.33 \pm 7.55$  天)，然而神經科醫師對於肺結核此疾病還是有很高的警覺性，他們對此疾病之延遲診斷 (平均為  $4.25 \pm 2.21$  天) 與其它科並無差異。

我們的結果顯示在台灣的醫生對於肺結核的存疑並不會延遲，但是卻會發生延遲治療及處置。延遲肺結核痰液培養報告可能是造成大部分延遲治療及處置之原因，即便在有 rapid BACTEC 之醫學中心。更敏感的肺結核診斷方法以及及早將懷疑是肺結核之病患隔離是降低醫護人員感染之重要因素。(胸腔醫學 2005; 20: 517-523)

關鍵詞：肺結核，延遲性診斷，延遲性治療，延遲性處置

# Association of *p53* codon 72 Polymorphisms with Chronic Obstructive Pulmonary Disease

Chih-Hung Shih, Wei-Erh Chen, Wu-Huei Hsu, Chuen-Ming Shih,  
Yi-Ching Wang\*

**Background:** Polymorphisms in the genes controlling acquired somatic mutations may explain some of the observed differences in susceptibility to chronic obstructive pulmonary disease (COPD) caused by cigarettes. Thus, we investigated the relationship between the *p53* codon 72 polymorphism and susceptibility to COPD.

**Methods and patients:** Seventy patients with COPD and 64 healthy-smoker subjects were included. Polymorphisms of the *p53* block were delineated using an allele-specific polymerase chain reaction (PCR) approach. The allele-specific PCR technique was verified by direct dideoxy sequencing of PCR products.

**Results:** The genotype was analyzed using the polymerase chain reaction-restriction fragment length polymorphism technique with genomic DNA isolated from peripheral blood lymphocytes. The distribution frequencies of genotypes of the *p53* codon 72 polymorphism were significantly different between the COPD and the control groups. Higher odds ratios (ORs) for COPD were seen for individuals with *p53* Pro/Pro and Arg/Pro genotypes against Arg/Arg genotype [OR = 2.50, 95% CI 1.47-4.49,  $p = 0.008$ ].

**Conclusion:** The *p53* codon 72 polymorphism was significantly associated with the presence of smoking-related COPD. (*Thorac Med* 2005; 20: 524-529)

Key words: *p53*, polymorphism, chronic obstructive pulmonary disease

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Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, China Medical University Hospital, Taichung, 404, Taiwan, R. O. C.; \*Department of Life Sciences, National Taiwan Normal University, Taipei 116, Taiwan, R. O. C.

Address reprint requests to: Dr. Chuen-Ming Shih, Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, China Medical University Hospital, No.2, Yuh-Der Road, Taichung 404, Taiwan

## ***p53* condon 72 基因多形性與慢性阻塞性肺病之間的關聯性**

施志宏 程味兒 徐武輝 施純明 王憶卿\*

**前言：**慢性阻塞性肺病的形成與環境物質的刺激（尤其是抽煙）以及個體的遺傳特質有關聯。抽煙除了引起發炎反應，與慢性阻塞性肺病的形成可能有關之外，抽煙本身也可能形成氣管上皮構造的改變。而 *p53* 基因的多形性與其控制後天的 (acquired) 體質突變 (somatic mutation)，可能可以部分解釋外在環境因子對於個體造成影響的敏感性 (susceptibility) 差異，其中包括了慢性阻塞性肺病。因此我們研究 *p53* 基因多形性與慢性阻塞性肺病感受性之間的關連。

**方法：**我們收集七十位慢性阻塞性肺病患者與六十四位健康的抽煙者。使用對偶基因專一性 (allele-specific) 的聚合酶鏈反應 (PCR; polymerase chain reaction) 技術來進行 *p53* 基因的多形性分析。對偶基因專一性 (allele-specific) 的 PCR 技術是經由直接的雙去氧 (dideoxy) 而定出 PCR 產物的序列來核對。

**結果：**利用聚合酶鏈反應-限制性片段長度多型性 [PCR-RFLP (restriction fragment length polymorphism)] 的技術分析周邊血液淋巴球 genomic DNA 純化出來的基因序列。*p53* 基因型的分佈頻率在慢性阻塞性肺病患者與對照組有明顯的不同。慢性阻塞性肺病患者有較高頻率 *p53* Pro/Pro 及 Arg/Pro 基因型，相對於吸煙的健康人 Arg/Arg 基因型 [OR = 2.50, 95% CI 1.47-4.49,  $p = 0.008$ ]。

**結論：**我們認為，與吸煙有關之慢性阻塞性肺病和 *p53* 基因多形性有顯著的關聯。(胸腔醫學 2005; 20: 524-529)

**關鍵詞：***p53* 基因，基因多形性，慢性阻塞性肺病

# Mucolytic Property of Sustained-Release Ambroxol (Loxol SR®) in Patients with Chronic Bronchitis

Chun-Yao Lin, Jen-Fu Shih\*, Diahn-Warng Perng\*, Horng-Chyuan Lin\*\*, Chun-Hua Wang\*\*, Chih-Teng Yu\*\*, Zyting Chu\*\*\*, Yu-Chih Liu

**Background:** Chronic bronchitis features sputum hypersecretion and chronic airway obstruction. Mucolytics have long been speculated to reduce viscosity and help sputum expectoration in chronic bronchitis. This trial was designed to study the effect of sustained-release ambroxol (ASR) (Loxol SR®), a mucolytic agent, on symptoms and sputum viscosity in chronic bronchitis.

**Methods:** From Nov. 2001 to April 2003, 57 patients with chronic bronchitis were recruited into this randomized, parallel, double-blinded, and placebo-controlled trial for a 14-day treatment period. Sputum samples of qualified patients were collected for quality analysis and viscosity measurement, using a rheometer AR 500. Patient questionnaires were filled out for clinical symptoms evaluation. Data regarding changes in sputum quality, viscosity, and the evaluation questionnaire were analyzed to compare the differences between the ASR and placebo groups.

**Result:** After 7- and 14-day treatments, there was no statistical difference in the changes in sputum quality and the evaluation questionnaires between the ASR and placebo groups. For the sputum viscosity measurement, a significant reduction of viscosity ( $p=0.042$ ) was observed after 7 days. However, this effect was not seen on the 14<sup>th</sup> day.

**Conclusion:** Our findings suggest that Loxol SR® improves sputum viscosity in chronic bronchitis. (*Thorac Med 2005; 20: 530-540*)

Key words: hyperviscosity, ambroxol, Loxol SR®, chronic bronchitis

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\* Department of Thoracic Medicine, Veterans General Hospital

\*\* Thoracic Medicine II, Chang Gung Memorial Hospital, Lin-kou Medical Center  
Thoracic Medicine, Chang Gung Memorial Hospital, Keelung branch

\*\*\* Genovate Biotechnology Co., Ltd.

Address reprint requests to: Dr. Yu-Chih Liu, Department of Thoracic Medicine, Chang Gung Memorial Hospital, Keelung Branch, 222, Mai-Chin Road, Keelung, 204 Taiwan

## 緩釋型 ambroxol (Loxol SR®) 改善慢性支氣管炎病人痰液黏稠度

林群堯 施振甫\* 朱紫汀\*\*\* 彭殿王\* 林鴻銓\*\* 王圳華\*\* 余志騰\*\* 劉育志

**前言：**慢性支氣管炎的疾病特徵是咳痰困難及氣道受阻。改善痰液黏稠度可能可以改善慢性支氣管炎的症狀。此篇研究的目的是在探討一新緩釋型黏液溶解藥物 ambroxol (Loxol SR®) 是否可以改善慢性支氣管炎病人的症狀及痰液的外觀特性。並以客觀的流體計 (rheometer AR 500) 來測量病人痰液黏稠度 (viscosity) 是否改善。

**方法：**本篇研究是從 2001 年 11 月到 2003 年 4 月收集 57 名慢性支氣管炎病患。隨機平行雙盲分為實驗組及安慰劑對照組。在經過七天及十四天的治療後，收集病患症狀問卷及痰液，來分析實驗藥物在慢性支氣管炎病患上主觀症狀、痰液量和外觀是否有改善功效。另外收集的痰液以流體計 (AR500) 測量痰液黏稠度，來分析緩釋型 ambroxol 是否能改善痰液黏稠度。

**結果：**不論是七天或十四天的給藥，病患的主觀症狀、痰液量和外觀的改善上，緩釋型 ambroxol 和對照組沒有統計上的差異。但在痰液黏稠度上，流體量計測量出七天的緩釋型 ambroxol 治療對照安慰劑，痰液黏稠度的改善有統計上的差異 ( $p = 0.042$ )。但在十四天的治療後緩釋型 ambroxol 治療組的痰液黏度雖有改善但沒有統計上的差異。

**結論：**我們發現在七天的給藥後，緩釋型 ambroxol 有效減少病患痰液黏度的功能。但無法有意義改善慢性支氣管炎病人的主觀症狀、痰液的量和外觀。(胸腔醫學 2005; 20: 530-540)

**關鍵詞：**痰液黏稠過度、ambroxol、Loxol SR® 慢性支氣管炎

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基隆長庚醫院 胸腔內科，\* 台北榮民總醫院 胸腔內科，\*\* 林口長庚醫院醫學中心 胸腔內科

\*\*\* 健亞生物科技股份有限公司

索取抽印本請聯絡：劉育志醫師，基隆長庚醫院 胸腔內科，基隆市麥金路 222 號



# Outcome and Prognostic Factors Associated with Resectable Stage IIIA N2 Non-Small Cell Lung Cancer

Chun-An Lu, Chih-Hung Chen, Yi-Cheng Wu\*, Hui-Ping Liu\*, Ying-Huang Tsai

**Background and Purpose:** The outcomes of patients with stage IIIA ipsilateral mediastinal lymph node (N2) metastasized resectable non-small cell lung cancer (NSCLC) are poor due to the higher recurrence rate after operation. The purpose of this study was to evaluate the prognostic factors associated with survival in patients with stage IIIA N2 NSCLC who have undergone complete surgical resection. These findings may be useful in clinical strategy and for further study.

**Methods:** From Jan 1999 through December 2003, we retrospectively reviewed the records of patients with stage IIIA NSCLC who had undergone complete resection and were found to have positive N2 lymph node metastasis in the final pathology. We recorded the patient's clinical and tumor characteristics, recurrence sites, and survival. The outcomes after surgical resection were statistically analyzed.

**Results:** Fifty-four patients were enrolled for analysis. There were 32 (59.3%) males and 22 (40.7%) females. The median age was 63 years (range, 39-77). The median follow-up time for all patients was 20.4 months. The median disease-free time and survival time were 24.7 months and 28.7 months, respectively. Adjuvant radiotherapy did not have a significant beneficial effect on survival. The recurrence rate was 57.4% and distant metastasis was the major cause. The most frequent site of distant metastasis was the bone. Only the independent factor of the number of N2 metastases had a significant impact on survival ( $p=0.02$ ), and the hazard ratio of multiple N2 to single N2 metastasis was 3.2. Other factors, including gender, age older than 65 years or not, visceral pleural invasion, and a tumor size larger than 3 cm or not, did not have a significant effect on survival.

**Conclusions:** The survival of patients with stage IIIA N2 NSCLC was unsatisfactory. The independent factor of the number of N2 metastases had a significant effect on survival, and the prognosis of patients with multiple N2 metastases was poor, compared to patients with single N2 metastasis. (*Thorac Med* 2005; 20: 541-547)

Key words: IIIA, N2, non-small cell lung cancer, lymph node metastasis

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Division of Pulmonary and Critical Care Medicine, Chang Gung Memorial Hospital, Taipei, Taiwan

\*Division of Thoracic & Cardiovascular Surgery, Chang Gung Memorial Hospital, Taipei, Taiwan

Address reprint requests to: Dr. Ying Huang Tsai, Division of Pulmonary and Critical Care Medicine, Chang Gung Memorial Hospital, 5, Fu-Hsing St. Kweishan, Taoyuan, Taiwan

## 可手術切除的 IIIAN2 非小細胞肺癌的預後及影響因子

盧俊安 陳志弘 吳怡成\* 劉會平\* 蔡熒煌

**背景：**可切除的 IIIAN2 非小細胞肺癌預後通常是不好的，主要的原因是術後有很高的復發機率。本研究的目的是探討術後 IIIAN2 非小細胞肺癌的預後及影響因子，並期望這些發現能提供進一步的臨床策略及研究。

**方法：**我們回溯性地納入西元 1999 年至 2003 年 5 年期間的非小細胞肺癌，在醫院接受完全手術治療，並最後病理報告證實同側縱膈腔有淋巴結轉移的病人。我們記錄病人的臨床及腫瘤特徵和預後。最後再以統計學加以分析這些病人的預後及其影響因子。

**結果：**共有 54 位病人收案。32 為是男性，22 位是女性。非小細胞肺癌術後復發時間的中位數為 20.4 個月；存活中位數為 28.7 個月。只有同側縱膈腔淋巴結的轉移個數和預後有相關 ( $p=0.02$ )，而多個淋巴結轉移造成死亡的相對危險性是單個淋巴結轉移的 3.2 倍。

**結論：**IIIAN2 的存活率是令人失望的。縱膈腔淋巴結轉移個數是影響預後的因子；若病人有多個縱膈腔淋巴結轉移的預後就比較不好。(胸腔醫學 2005; 20: 541-547)

**關鍵詞：**IIIA、N2、淋巴結轉移

# The Effect of Self-extubation on the Outcome of Mechanical Ventilation

Tzong-Cherng Chen, Shiang-Ling King\*, Jhi-Horng Wang

**Background:** Unplanned extubation (UE) is a recognized complication of translaryngeal intubation and several adverse effects on outcome have been demonstrated. In this study, we sought to investigate the effect of self-extubation (SE) on the outcome of mechanical ventilation in our Respiratory Therapy Care Unit (RTCU).

**Methods:** A retrospective, case-controlled study of patients who were admitted to the RTCU of Taipei Veterans General Hospital over a period of 3 years (January 2001 to December 2003). Patients who required more than 12 hours of mechanical ventilation with an endotracheal tube (ETT) were included in this study. Two control subjects in the same RTCU who had not self-extubated were matched to each case based on age, gender, indication for mechanical ventilation, Acute Physiology and Chronic Health Evaluation II score (APACHE II) and time hospitalized (within the same quarter). We excluded accidental-extubation (AE) events from this study to reduce the effect of the nursing staff.

**Results:** UE occurred in 105 patients (15.5 %). AE occurred in 9 patients (8.6%) and they were excluded from the study. Thirty-five patients (45.5%) required reintubation within 72 hours of SE. Compared to the control groups, those who self-extubated had a longer length of RTCU stay (19.7 vs 25.7 d,  $p=0.03$ ), but had no difference in the duration of MV and hospital stay, mortality rate, and the need for chronic care. Patients who failed SE had a longer duration of MV, length of RTCU and hospital stay, a higher rate of mortality, ventilatory dependence and the need of a tracheostomy as compared to those who tolerated SE. Successful SE reduced the duration of MV and the length of RTCU stay, but had no other obviously beneficial effect on outcome as compared with the control group.

**Conclusions:** In this retrospective study, SE only resulted in a prolonged duration of ICU stay. Failed SE represented poor outcomes. In contrast, successful SE reduced the duration of MV and the length of ICU stay, but had no other beneficial effect on outcomes. (*Thorac Med* 2005; 20: 548-554)

Key words: unplanned extubation, self-extubation, accidental extubation, outcome

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Department of Respiratory therapy, Taipei Veterans General Hospital, Taiwan

\*Division of Chest Medicine, Department of Internal Medicine, Taichung Veterans General Hospital, Taiwan

Address reprint requests to: Dr. Jhi-Horng Wang, Department of Respiratory therapy, Taipei Veterans General Hospital, 201, Sec. II, Shih-Pai Road, Taipei, Taiwan, R.O.C.

## 自拔氣管內管對使用呼吸器病人預後的影響

陳宗成 金湘玲\* 王家弘

**前言：**未經計劃的氣管內管拔除已經被證明有許多不良的併發症。我們在呼吸治療加護病房，觀察自拔氣管內管對病人預後的影響。

**方法：**我們回溯分析台北榮民總醫院 2001 年一月至 2003 年十二月，呼吸治療加護病房中，接受氣管內管及呼吸器治療大於 12 小時且發生自拔氣管內管病患。每個案例依據年齡、性別、呼吸衰竭的原因、APACH II 的分數及住院時間，找出兩個對照病患。基於減低護理人員照顧品質的影響，我們排除意外氣管內管拔除的案例。

**結果：**發生未經計劃的氣管內管拔除共有一百零五位病患 (15.5%)，我們排除其中屬於意外性氣管內管拔除的九位病患。三十五位病患 (45.5%) 在自拔氣管內管 72 小時內需要再次插管。自拔氣管內管的病患在呼吸治療加護病房住院時間比較長 ( $p = 0.03$ )，但是在依賴呼吸器的時間、住院時間、死亡率、慢性照護需求，與未發生自拔氣管內管的病患並無差異。自拔氣管內管失敗的病患比成功的病患，需要較長的呼吸器支持時間、住院時間及呼吸治療加護病房住院時間，死亡率較高，也比較需要氣切手術及長期依賴呼吸器。自拔氣管內管成功可減短呼吸器支持的時間及呼吸治療加護病房住院的時間，不過在其它預後方面並無明顯的助益。

**結論：**此次回溯研究發現自拔氣管內管只導致加護病房住院時間延長。自拔氣管內管失敗代表病患的預後較差。相對地，成功自拔氣管內管可減短呼吸器支持時間及加護病房住院時間，不過在其它預後方面並無明顯的差異。(胸腔醫學 2005; 20: 548-554)

**關鍵詞：**未經計劃的氣管內管拔除、自拔氣管內管、意外氣管內管拔除、預後

# Treatment of Outpatient Community-Acquired Lower Respiratory Tract Infection with A Newer Quinolone: A Study of Sparfloxacin

Chia-Jung Chang\*, Chang-Wen Chen, Wei-Chieh Lin, Tzuen-Ren Hsiue

**Background:** Sparfloxacin, an oral quinolone antibiotic, is active against most pathogens isolated in community-acquired respiratory infections. This trial compared its efficacy with amoxicillin/clavulanic acid plus clarithromycin.

**Methods:** Forty adult patients with community-acquired lower respiratory tract infection (including pneumonia) were randomized to groups taking sparfloxacin (200mg/day) or amoxicillin (750mg/day)/clavulanic acid (375mg/day) plus clarithromycin (500mg/day) for a maximum of 14 days. All patients who had been compliant (study medication taken for at least 3 days) and without a major protocol violation were evaluated for the efficacy analysis.

**Results:** The clinical success rate was good for both treatment protocols (sparfloxacin was 75% [15/20], amoxicillin/clavulanic acid plus clarithromycin was 85% [16/19],  $p = 0.73$ ). The clinical success rate among patients with pneumonia treated with amoxicillin/clavulanic acid plus clarithromycin was higher, although there was no significant difference ( $p = 0.23$ ). Adverse effects with sparfloxacin included 1 patient with gastrointestinal upset and 1 patient with photosensitivity. Gastrointestinal upset (mainly diarrhea) was the principal side effect among patients taking amoxicillin/clavulanic acid plus clarithromycin.

**Conclusion:** Sparfloxacin was as effective as amoxicillin/clavulanic acid plus clarithromycin in the treatment of community-acquired lower respiratory tract infection. (*Thorac Med* 2005; 20: 555-563)

Key words: sparfloxacin, lower respiratory tract infection

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Section of Chest Medicine, Chia-Yi Christian Hospital\*

Department of Internal Medicine, National Cheng-Kung University Medical Center, Tainan, Taiwan

Address reprint requests to: Dr. Chang-Wen Chen, Section of Chest Medicine, Department of Internal Medicine, National Cheng-Kung University Medical Center, 138 Sheng-Li Road, Tainan, Taiwan

## 以新型 Quinolone 治療社區性下呼吸道感染的門診病人： 一個關於 Sparfloxacin 的研究

張家榮\* 陳昌文 林偉傑 薛尊仁

**背景：**Sparfloxacin，quinolone 類抗生素的一種，對於社區性呼吸道感染的大部分菌種都是有效的。本試驗中我們比較了 sparfloxacin 與 amoxicillin/clavulanic acid 加 clarithromycin 在 40 個社區性下呼吸道感染病人的療效及記錄了兩組藥物產生的副作用。

**方法：**此研究收錄了 40 個社區性下呼吸道感染的病人，隨機地分成兩組，一組接受 sparfloxacin (每日 200 毫克)，另一組接受 amoxicillin (每日 750 毫克)/clavulanic acid (每日 375 毫克) 加 clarithromycin (每日 500 毫克) 的治療，比較兩組病人的療效及副作用。

**結果：**臨床的成功率在兩組病人都相當不錯：sparfloxacin 有 75%；amoxicillin / clavulanic acid 加 clarithromycin 有 85%，兩組並無統計上的差別 ( $p = 0.73$ )。在肺炎的病人以 amoxicillin/clavulanic acid 加 clarithromycin 治療有較高的成功率，但兩組間並無統計上的差別 ( $p = 0.23$ )。副作用方面：以 sparfloxacin 治療的病人，一個有胃腸不適，一個有光敏感；以 amoxicillin/clavulanic acid 加 clarithromycin 治療病人，腹瀉是主要的副作用。

**結論：**在治療社區性下呼吸道感染 sparfloxacin 與 amoxicillin/clavulanic acid 加 clarithromycin 是同樣有效的。(胸腔醫學 2005; 20: 555-563)

**關鍵詞：**Sparfloxacin，下呼吸道感染

# Blood Glucose Control in Critically Ill Patients Using a Titrated Protocol in an Intensive Care Unit

Yow-Ren Lin, Jia-Horng Wang

**Background:** Intensive blood sugar control is important in critically ill patients, but, in our experience, this is difficult to be performed, especial when using the traditional sliding-scale intravenous insulin infusion (IVII).

**Objective:** To maintain blood sugar within a range of 81 mg/dl to 200 mg/dl in critically ill patients with an improvement in outcome.

**Design:** Combined retrospective-prospective before-after cohort study.

**Setting:** Thirty-bed medical ICU in a medical center.

**Patients:** Two cohorts of 30 consecutive ICU patients with poor blood sugar control and requiring insulin infusion.

**Methods:** Patients in the control cohort received insulin infusions adjusted according to target blood glucose ranges and sliding scales at the physicians discretion.

Patients in the study cohort received an insulin infusion titrated using a standardized protocol targeting a blood glucose level of 81-200 mg/dl.

**Measurements and results:** Efficiency was measured by comparing the time spent within the target range between cohorts, and the days needed for IVII. Safety was assessed by comparing the incidence of hypoglycemia (< 60 mg/dl) and complication of hypoglycemia, such as seizure, change in consciousness, and cold sweating. Patients in the study cohort maintained their blood glucose within the target range longer ( $14.1 \pm 7.0$  vs  $9.3 \pm 6.1$  h/day;  $p < 0.001$ ) than the controls. The duration of IVII was shorter in the study cohort ( $5.9 \pm 4.3$  vs  $11.9 \pm 7.4$  days;  $p < 0.001$ ) than in the controls. More hypoglycemia was noted in the study cohort, but there were no clinical symptoms of hypoglycemia.

**Conclusions:** Standardization of IVII with titration improves the efficiency of glycemic control in critically ill adults. The traditional sliding-scale IVII used in Taiwan has less glycemic control efficiency in critically ill patient. (*Thorac Med* 2005; 20: 564-573)

Key word: intravenous insulin infusion, critical care, intensive care unit, glycemic control

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Respiratory Therapy Department, Taipei Veterans General Hospital

Address reprint requests to: Dr. Jia-Horng Wang, Respiratory Therapy Department, Taipei Veterans General Hospital, No. 201, Sec. 2, Shih-Pai Road, Taipei 112, Taiwan

## 以持續性靜脈胰島素注射在重症病人的血糖控制

林祐任 王家弘

**背景：**積極的血糖控制在重症病人是很重要的，但是，在我們經驗上卻是很難實行的，尤其是用目前在台灣常被使用的連續性靜脈注射胰島素方法。

**目標：**將重症病人的血糖控制在 81 到 200 mg/dl 之間。

**設計：**回溯—前瞻性分析。

**場所：**台北某醫學中心之三十床呼吸治療加護病房。

**對象：**60 位血糖控制不佳，需要使用持續性靜脈注射胰島素之重症病人。

**方法：**本實驗是一回溯—前瞻性分析，以傳統和我們新的方法，分二組比較，希望能比較出目前台灣常用之血糖方法是較不適用的，且新方法能將重症病人的血糖能控制在較正常的範圍之內 (81-200 mg/dl)。

**測量及結果：**以我們的方法可以將重症病人的血糖控制在預定的範圍之內 ( $14.1 \pm 7.0$  vs  $9.3 \pm 6.1$  小時/天;  $p < 0.001$ )，且使用的時間也可以縮短 ( $5.9 \pm 4.3$  vs  $11.9 \pm 7.4$  天;  $p < 0.001$ )。雖然，似乎有較多低血糖的情形發生，但因以嚴密的測量血糖，都沒有發生低血糖的併發症。

**結論：**我們的持續性胰島素注射法可以使得重症病人的血糖較易被控制在較正常的範圍，而是傳統方法較無法達到的。(胸腔醫學 2005; 20: 564-573)

**關鍵詞：**靜脈胰島素注射，重症照護，加護中心，血糖控制



# Linezolid Treatment for Methicillin-Resistant *Staphylococcus aureus* Infection in Critically Ill Patients

Cheng-Yi Wang, Vin-Cent Wu, Jih-Shuin Jerng, Chong-Jen Yu, Po-Ren Hsueh, Pan-Chyr Yang

**Background:** Linezolid is indicated in MRSA (methicillin-resistant *Staphylococcus aureus*) infections that do not respond well to vancomycin or teicoplanin; however, data concerning its efficacy in critically ill patients remain limited. The aim of this study was to evaluate the efficacy of treatment for MRSA infection with linezolid in critically ill patients.

**Patients and Methods:** We retrospectively reviewed the medical records and microbiological data of patients who had received linezolid for MRSA infection during ICU admission from November 2002 to December 2004. The microbiological as well as clinical responses to treatment were evaluated.

**Results:** A total of 25 patients (median age, 64.8 years; 88% male) were included. End-stage renal disease (48%) and hypertension (48%) were the most common co-morbidities. Pneumonia was the most common infection site (64%). Treatments with linezolid were 60% successful microbiologically, with 14% intermediate responses and 24% failures. Clinically, 36% of infections were cured, 12% were considered as intermediate, and 52% failures. Thrombocytopenia (72%) and anemia (44%) were the most common adverse reactions. Univariate analysis showed that diabetes and renal failure during admission were associated with a decreased probability of clinical cure.

**Conclusions:** The efficacy of linezolid in MRSA infection in critically ill patients remains high, despite a previous failure with vancomycin or teicoplanin. However, the potential development of anemia and thrombocytopenia during drug use should also be kept in mind. (*Thorac Med* 2005; 20: 574-581)

**Key words:** Linezolid, Vancomycin, MRSA

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Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan  
Address reprint requests to: Dr. Jih-Shuin Jerng, Department of Internal Medicine, National Taiwan University Hospital, No. 7, Chung-Shan South Road, Taipei 100, Taiwan

## 以 Linezolid 治療重症病患的抗 Methicillin 金黃色葡萄球菌感染

王誠一 吳允升 鄭之勛 余忠仁 薛博仁 楊泮池

**背景：**Linezolid 主要用在 vancomycin 或 teicoplanin 治療失敗的 MRSA 感染，本研究乃針對重症病患使用 linezolid 治療 MRSA 感染之療效。

**方法：**我們回溯性分析 2002 年 11 月到 2004 年 12 月中，加護病房病人因為 MRSA 感染需要使用 Linezolid 進行治療的相關紀錄，包括臨床和微生物學方面的資料。

**結果：**全部總共 25 位病人，平均年齡是 64.8 歲，88% 是男性。最常見的既有疾病是末期腎衰竭(48%)和高血壓(48%)，主要的感染是肺炎(64%)；使用 Linezolid 治療在微生物上可以獲得 60% 成功，14% 難以判定，24% 失敗；臨床上 36% 可以治癒，12% 難以判定，52% 失敗。血小板低下(72%)和貧血(44%)是最常見的副作用。單變數分析發現，臨床上治療成功與否和糖尿病以及治療期間有無腎衰竭有關。

**結論：**Linezolid 在 vancomycin 或 teicoplanin 治療失敗的 MRSA 感染之重症病患，仍有相當不錯的效果，但要小心發生血小板低下或貧血。(胸腔醫學 2005; 20: 574-581)

**關鍵詞：**Linezolid、Vancomycin、MRSA

# Values of Static Lung Volume Measurements in the Assessment of Bronchodilator Responses in COPD

Sheng-Hsiang Lin, Ping-Hung Kuo\*, Pan-Chyr Yang\*

**Background:** The bronchodilator test (BDT) is essential in the diagnosis and severity staging of chronic obstructive pulmonary disease (COPD). Of late, the assessment of improvement in lung hyperinflation has been emphasized. The purpose of this study was to evaluate the values of static lung volume (SLV) measurements in the assessment of BDT in COPD.

**Methods:** Seventy patients with COPD were investigated. Static lung volumes were measured by the helium dilution method. Positive BDT response was defined as forced expiratory volume in 1 second (FEV<sub>1</sub>) according to the American Thoracic Society (ATS) guideline, and for any SLV as changes =12% of baseline and 200 ml.

**Results:** The baseline FEV<sub>1</sub>, residual volume (RV), total lung capacity (TLC) and inspiratory capacity (IC), were 56 ± 17% (mean ± SD), 169 ± 60%, 120 ± 25% and 127 ± 32% of predicted, respectively. Mean changes after BDT were 12% for FEV<sub>1</sub> ( $p < 0.0001$ ), 9% for FVC ( $p < 0.0001$ ), 10% for IC ( $p < 0.0001$ ), -5% for RV ( $p = 0.0004$ ) and 0.1% for TLC ( $p = 0.5$ ). Changes in IC strongly correlated with changes in FEV<sub>1</sub> and FRC ( $p < 0.001$ ). Measurement of FEV<sub>1</sub> identified 23 (33%) patients as responders. A greater proportion of responders were uncovered by measurement of IC (40%) than of RV (19%) ( $p = 0.005$ ) or of TLC (1.4%) ( $p < 0.0001$ ). Changes in SLVs identified 24% (17/70) more patients as responders in addition to those in FEV<sub>1</sub> (23/70), with changes in IC covering the majority (14/17).

**Conclusion:** These data suggest that a remarkable proportion of COPD patients who have significant volume responses during BDT was not identified by measuring FEV<sub>1</sub>, based on the current ATS criteria. In addition, IC is the most appropriate parameter in the assessment of bronchodilator responsiveness in such patients. (*Thorac Med 2005; 20: 582-590*)

Key words: chronic obstructive pulmonary disease, bronchodilator test, static lung volume, inspiratory capacity, helium dilution method

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Department of Internal Medicine, Far Eastern Memorial Hospital, Taipei County, Taiwan

\*Department of Internal Medicine, National Taiwan University Hospital, Taiwan

Address reprint requests to: Dr. Ping-Hung Kuo, Department of Internal Medicine, National Taiwan University Hospital, No. 7, Chung-Shan South Road, Taipei 100, Taiwan

# 靜態肺容積測量於評估慢性阻塞性肺病支管擴張試驗的價值

林聖翔 郭炳宏\* 楊泮池\*

**前言：**支管擴張試驗常用於慢性阻塞性肺病的診斷與分期。除了一秒吐氣量外，近來評估肺部過度膨脹的改善也漸漸被重視。本研究是探討靜態肺容積變化於慢性阻塞性肺病病人的支管擴張試驗的價值，與其和一秒吐氣量變化的比較。

**方法：**以國立台灣大學附設醫院，西元2000年1月至2005年3月間70位經診斷慢性阻塞性肺病並安排至肺功能室施行支管擴張試驗的病人為實驗對象，以追溯方式作分析。變化大於12%視為支管擴張試驗有反應。

**結果：**這70位病人的一秒吐氣量，肺殘餘容積，全肺容積和吸氣容量分別為預測值的 $56 \pm 17\%$  (平均 $\pm$ 標準差)， $169 \pm 60\%$ ， $120 \pm 25\%$ 和 $27 \pm 32\%$ 。支管擴張試後平均變化為：一秒吐氣量12% ( $p < 0.0001$ )，努力性肺活量9% ( $p < 0.0001$ )，吸氣容量10% ( $p < 0.0001$ )，肺殘餘容積-5%和全肺容積0.1% ( $p = 0.5$ )。吸氣容量的變化和一秒吐氣量、功能肺餘容量的變化有密切相關 ( $p < 0.001$ )。依據一秒吐氣量的變化，33%的病人可視為對支管擴張試驗有反應。依據吸氣容量的變化，40%的病人可視為對支管擴張試驗有反應，大於肺殘餘容積的19% ( $p = 0.005$ )、全肺容積的1.4% ( $p < 0.0001$ )。利用慢速肺量計 (slow spirometry) 及氦氣稀釋法 (helium dilution method) 測量靜態肺容積的變化可於一秒吐氣量外偵測24% (17/70) 陽性支管擴張試驗率，而大部分 (14/17) 可由吸氣容量的變化測得。

**結論：**慢性阻塞性肺病病人在支管擴張試驗中，相當比率的病人於一秒吐氣量外有顯著的靜態肺容積變化。而吸氣容量 (inspiratory capacity) 的變化為其中最敏感的項目。(胸腔醫學 2005; 20: 582-590)

**關鍵詞：**靜態肺容積、慢性阻塞性肺病、支管擴張試驗、吸氣容量

# IL-10-1082 Nucleotide Polymorphism and Risk of Non-small Cell Lung Cancer

Jen-Chih Lee, Chuen-Ming Shih, Yao-Ling Lee\*, Hui-Ling Chiou\*

**Study objectives:** Interleukin-10 (IL-10) is mainly an anti-inflammatory cytokine that is produced by a number of cells, including normal and neoplastic cells, and has been implicated in autoimmunity, transplantation tolerance, and tumorigenesis. Inter-individual variations in IL-10 production genetically contributed to polymorphisms within the IL-10 promoter region. The aim of this study was to determine whether polymorphisms in the IL-10 gene promoter were involved in predisposing an individual to non-small cell lung cancer (NSCLC).

**Patients:** A total of 120 patients with non-small cell lung cancer were recruited into this study, together with 135 age- and gender-matched healthy smokers acting as control subjects.

**Measurements:** Polymorphisms of sites within the promoter region of the IL-10 gene were analyzed using a polymerase chain reaction-restriction fragment length polymorphism technique on genomic DNA isolated from peripheral lymphocytes. The validity of this technique was proven by direct sequencing of polymerase chain reaction products. Statistical analyses were conducted to explore the contribution of the polymorphism of the IL-10 promoter to the susceptibility to NSCLC.

**Results:** The distribution frequencies of the genotype of IL-10-1082 were significantly different between NSCLC patients and controls. Higher ORs for NSCLC were seen for individuals with IL-10-1082 GG/GA genotypes against the AA genotype [OR = 5.82, 95% CI 2.88-12.0,  $p < 0.0001$ ].

**Conclusion:** The polymorphism of the IL-10 gene was significantly associated with the occurrence of NSCLC. (*Thorac Med* 2005; 20: 591-598)

Key words: interleukin-10, polymorphism, non-small cell lung cancer

## IL-10-1082 核苷酸多型性與非小細胞肺癌的風險性

李仁智 施純明 李瑤玲\* 邱慧玲\*

**前言：**在正常細胞或是腫瘤細胞可釋放出 IL-10 (Interleukin-10)。IL-10 是一種主要抗發炎的細胞激素，它和自體免疫疾病，移植耐受性與腫瘤發生等有相關性。個別間的 IL-10 變化和 IL-10 啟動子(promoter) 區域的基因多型性有關。本研究目的是來探討 IL-10 啟動子的基因多型性與非小細胞肺癌發生的關聯性。

**方法：**我們收集了一百二十位非小細胞肺癌病人與 135 位年紀、性別相符合的健康吸煙者來進行比較。在由周邊淋巴細胞上分離出的基因體序列用聚合酶鏈反應 (PCR; polymerase chain reaction) - 片段長度多型性 (fragment length polymorphism technique) 技術來分析 IL-10 啟動子區的基因多型性。我們用聚合酶鏈反應產品的直接定序 (direct sequencing) 來證實這項技術的有效性。接下來用統計分析來探索 IL-10 啟動子的基因多型性在非小細胞肺癌病人的敏感性分佈。

**結果：**IL-10-1082 的基因型分佈頻率在非小細胞肺癌病人與控制組上有明顯的不同。在非小細胞肺癌病人身上的 IL-10-1082 GG/GA 基因型的出現頻率明顯高於 AA 基因型 [OR = 5.82, 95% CI 2.88-12.0,  $p < 0.0001$ ]。

**結論：**IL-10 的基因多型性和非小細胞肺癌的發生有顯著的相關性。(胸腔醫學 2005; 20: 591-598)

**關鍵詞：**Interleukin-1，基因多型性，非小細胞肺癌

# Esophageal Gastrointestinal Stromal Tumor Presenting as a Mediastinal Mass — A Case Report

Shih-Yi Lee, Fung-J Lin, Chin-Yin Sheu\*, Shou-Chuan Shih\*\*,  
Chi-Yuan Tzen\*\*\*, Chen-Wei Huang

Gastrointestinal stromal tumors (GIST) are primary non-epithelial mesenchymal neoplasms of the gastrointestinal tract. They can arise anywhere from the lower esophagus to the anus. However, an esophageal GIST presenting as a mediastinal mass has rarely been reported. We present such a patient and discuss the importance of the differential diagnosis of a mediastinal mass. Since GIST may respond to a tyrosine kinase inhibitor, diagnosing this tumor before extensive surgery is crucial. (*Thorac Med* 2005; 20: 599-605)

Key words: gastrointestinal stromal tumors, mediastinal tumor, molecular-targeted therapy

# 以縱膈腔腫塊為表現的食道腸胃道實質腫瘤—病歷報告

李士毅 林芳杰 許清寅\* 施壽全\*\* 黃琛瑋 曾岐元\*\*\*

食道腸胃道實質腫瘤是一種腸胃道非上皮性實質腫瘤。近可從食道下端，遠可至肛門的腸胃道發生此種腫瘤。然而，食道腸胃道實質腫瘤以縱膈腔腫塊為表現的病例卻很少被報告。在此，我們提出一個發生在 51 歲男性，以間歇性腹痛為最初表現，生理檢查發現有腹部腫瘤，放射線檢查卻發現，病因為縱膈腔腫塊的少見的病例。

除此之外，我們還討論重要的鑑別診斷，及放射線檢查可能提供的線索，用以做為手術前評估。因為，如同已報導的研究指出，tyrosine kinase 抑制劑可以縮小腸胃道實質腫瘤。如此，內服藥物有機會提高腫瘤的可手術性及器官保留的範圍，使得對於這種以縱膈腔腫塊為表現的食道腸胃道實質腫瘤的術前評估，更顯重要。(胸腔醫學 2005; 20: 599-605)

關鍵詞：腸胃道實質腫、縱膈腔腫瘤、分子標靶治療



# Bilateral Pulmonary Sclerosing Hemangiomas: A Case Report

Hsin-Yuan Chen, Chih-Feng Chian, Toan Chen\*, Horng-Chin Yan,  
Chin-Pyng Wu, Wann-Cherng Perng

We present a rare case of bilateral pulmonary sclerosing hemangiomas. The patient underwent computed tomography (CT)-guided biopsies along with a pathological examination and immunohistochemical studies, and was diagnosed accurately without surgical intervention. The related literature is reviewed. (*Thorac Med* 2005; 20: 606-612)

Key words: pulmonary sclerosing hemangioma, immunohistochemical stain

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Division of Pulmonary Medicine, Department of Medicine, and \*Department of Pathology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan, R.O.C.

Address reprint requests to: Dr. Wann-Cherng Perng, Division of Pulmonary Medicine, Department of Medicine, Tri-Service General Hospital, Number 325, Section 2, Cheng-Kung Road, Neihu 114, Taipei, Taiwan, R.O.C.

## 罕見病例報告—雙側肺臟硬化性血管瘤

陳興源 簡志峰 陳拓安\* 顏鴻欽 吳清平 彭萬誠

肺臟硬化性血管瘤 (Pulmonary Sclerosing Hemangioma) 一般認為是一種少見的肺部良性腫瘤。臨床表現多為無症狀單一肺部界限清楚之錢幣狀腫塊。我們報告此一病例以電腦斷層指引穿刺配合近年發展的免疫組織化學染色法 (immunohistochemical stains) 得到正確的術前診斷，避免無必要且更具侵入性的外科處置。此或許可為診斷此疾病之新方法，並值得進一步研究討論。(胸腔醫學 2005; 20: 606-612)

關鍵詞：肺臟硬化性血管瘤，免疫組織化學染色法

# Unusual Pulmonary Radiological Manifestation : Coexistence of Neoplasm and Mycobacterium — A Case Report

Shih-Wen Cheng, Rong-Sow Lee, Jia-Horng Wang, Ming-Sheng Chern\*

The pulmonary manifestations of coexisting bronchogenic carcinoma and Mycobacterium are diverse, but most tumors and Mycobacterium cluster in close proximity. The radiographic presentation is primarily composed of spontaneous regression thin-walled cavitation and satellite lesions are rare. We report a case of 72 year-old healthy male who presented with the symptoms of left chest pain and cough. Chest X-ray and chest computerized tomography revealed an ill-defined lesion with satellite infiltrates in the left upper lung field. The result of sputum smear for acid-fast stain initially was positive and anti-tuberculous therapy was prescribed. The pulmonary lesion became smaller with thin-walled cavitation after anti-tuberculosis therapy. Progressive enlargement was noted at the outpatient clinic. Lung cancer was proved by sono-guided aspiration cytology. The possibility of malignancy coexisting with pulmonary tuberculosis in an ill-defined lesion is considered. (*Thorac Med 2005; 20: 613-618*)

Key words: Tuberculosis, lung cancer, spontaneous regression, thin wall cavitation, satellite lesion

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Division of Respiratory Therapy, Taipei Veterans General Hospital, Taipei, Taiwan

\*Department of Radiology, Veterans General Hospital-Taipei, Taiwan

Address reprint requests to: Dr. Jia-Horng Wang, Respiratory Therapy Department, Veterans General Hospital-Taipei, 201, Section 2, Shih-Pai Road, Taipei, Taiwan

## 少見的肺部放射學上表現：腫瘤合併分枝桿菌感染 —病例報告

鄭世文 李榮壽 王家弘 陳名聖\*

肺腫瘤合併分枝桿菌感染的表現是多樣化的，但大多皆僻鄰而生。同時表現自發性消退，薄壁開洞，以及衛星病灶是相當少見的。在此我們報告一例 72 歲男性病患，罹患肺癌和分枝桿菌感染，症狀為左胸痛及咳嗽，放射學上一開始表現肺浸潤增加以及衛星病灶，再加上痰液的培養發現耐酸性染色痰液檢查陽性反應，於是我們馬上給予抗肺結核藥物。之後肺部病灶呈現縮小和開洞，似乎對藥物有不錯效果；雖然之後痰液培養出 *Mycobacterium fortuitum*，因影像上覺得稍有進步，所以抗結核藥物仍持續給予，當作治療。然而在治療後期發現病灶漸漸變大，進一步的經由超音波導引穿刺細胞學檢查發現惡性腫瘤細胞，證實有肺癌基於此不常見的肺腫瘤合併非結核分枝桿菌感染的表現，使我們了解縱使痰液的培養有耐酸性桿菌的存在或培養出非結核分枝桿菌，也要考慮惡性腫瘤存在的可能性。(胸腔醫學 2005; 20: 613-618)

關鍵詞：結核分枝桿菌，肺腫瘤，自發性消退，薄壁開洞

# The Application of Bronchoalveolar Lavage in the Diagnosis of Chronic Eosinophilic Pneumonia — Two Case Report

Yu-Chang Hsu, Hong-Chung Wang, I-Jan Liu, Hung-Yang Tao

Chronic eosinophilic pneumonia (CEP) is an uncommonly idiopathic and subacute disease that is characterized by blood eosinophilia, peripheral pulmonary infiltrates on chest radiographs and prompt responses to corticosteroid therapy. We report 2 patients with non-productive cough, progressive dyspnea and prolonged fever, who had blood eosinophilia and an elevated level of serum eosinophilic cationic protein (ECP), and bilaterally peripheral pulmonary infiltrates on chest radiographs. Due to the fact that these patients were unwilling to receive open lung biopsy, bronchoscopy with bronchoalveolar lavage (BAL) was performed instead. Lavage fluid analyses showed increased numbers of eosinophils and elevated levels of ECP. These findings were consistent with the clinical diagnosis of CEP. Both patients received corticosteroid therapy and showed rapid clinical and radiographic improvement. BAL fluid analysis may provide an alternatively useful tool in establishing the diagnosis of CEP, and allows the patient to avoid certain surgical risks. (*Thorac Med 2005; 20: 619-626*)

Key words: bronchoalveolar lavage, eosinophilic cationic protein, chronic eosinophilic pneumonia, eosinophilia

# 支氣管肺泡沖洗術於診斷慢性嗜伊紅性肺炎的應用 —二病例報告

許育彰 王鴻昌 劉宜讓 陶宏洋

慢性嗜伊紅性肺炎是一種不常見且原因未明的疾病。這是一種亞急性的病症，特徵為血中嗜伊紅性血球過高、影像學檢查有兩側肺部週邊浸潤陰影、及對類固醇治療反應極佳。我們報告兩病例，有長時間咳嗽、呼吸困難、及發燒症狀，且有血中嗜伊紅性血球過多及血清嗜伊紅性陽離子蛋白濃度升高現象和影像學檢查有兩側肺部週邊浸潤病灶。他們不願意接受肺部組織切片檢查以尋求病因。於是我們為這兩位病人實施支氣管肺泡沖洗術，並發現於支氣管肺泡沖洗液中嗜伊紅性血球數目及嗜伊紅性陽離子蛋白濃度有升高的現象。這些發現是診斷慢性嗜伊紅性肺炎的要件。於是他們接受了類固醇治療並且於臨床上及影像學上有很迅速明顯的進步。支氣管肺泡沖洗液的分析對於此病的診斷提供了另一種有用的選擇並可避免不必要的手術危險。(胸腔醫學 2005; 20: 619-626)

關鍵詞：支氣管肺泡沖洗術，慢性嗜伊紅性肺炎

# **Pulmonary Endometriosis at an Unexpected Site Found with CT Scanning: A Case Report and Literature Review**

Tsun-Po Wang, Hui-Ping Liu\*, Ying-Huang Tsai, Yao-Kuang Wu

Parenchymal pulmonary endometriosis is an extremely rare cause of hemoptysis and poses a diagnostic problem to clinicians. Only 50 cases have been reported in the English literature since the first published case. All of the reported cases have been attributed to pulmonary endometriosis, although less than one-third of them have had histologic evidence. We report the case of a 17-year-old female with a history of an induced abortion. She presented with periodic hemoptysis occurring in the 2 days prior to menstruation over a 6-month period. A series of studies were done, but only the chest CT revealed sub-segmental ground-glass attenuation in the left lung, suggesting an inflammatory process. Due to the uncertain etiology, she underwent emplacement of a double-thorn hook wire, localization under CT-guidance, and a wedge resection of the left lung lesion using video-assisted thoracic surgery (VATS). Incidentally, we found some ecchymosis patches on the left lingular lobe, which were not found on the chest CT, and those were resected, as well. The histopathologic examination revealed ectopic endometrial tissue on the specimen of the lingula, but only a fresh hemorrhage on the left lower lobe. She was treated with danazol due to the hemoptysis recurring 3 months later. No recurrence of hemoptysis was noted in 6 months of follow-up. The approach to diagnosis and treatment of pulmonary endometriosis is reviewed and the inconsistency of the chest CT and VATS findings is discussed. (*Thorac Med* 2005; 20: 627-632)

Key words: pulmonary endometriosis, catamenial hemoptysis, video-assisted thoracic surgery (VATS)

## 胸腔電腦斷層上未預期發現的肺部子宮內膜異位症 —病例報告及文獻回顧

王琮柏 劉會平\* 蔡熒煌 吳耀光

肺實質性的子宮內膜異位症是非常少見引起咳血的原因之一，更帶給了臨床醫師在確定診治上的困擾。至今只有 50 個零星病例在英文文獻中被報告，但其中只有 1/3 的病人是經由病理組織報告來確定診斷。在此，我們報告一位 17 歲的女性病人以週期性的咳血來表現。經過一系列的檢查後，胸部電腦斷層顯示在左下葉有一塊疑似發炎的病兆。為了確定診斷及後續治療，我們利用一個新的定位工具 - 雙棘角線圈定位後施行胸腔內視鏡楔狀切取手術。術中意外於左上葉發現數個瘀血狀的病兆。最後的病理組織報告顯示在意外發現的左上葉病兆中有完整的異位性子宮內膜組織而在電腦斷層顯示的左下葉病兆中只有出血的病理變化。在本文中，我們詳細地探討了關於肺部子宮內膜異位症併發經期性咳血的診斷、治療及在手術中意外發現了術前電腦斷層未診斷出來的子宮內膜異位病兆的可能原因。(胸腔醫學 2005; 20: 627-632)

關鍵詞：肺部子宮內膜異位症，經期性咳血，內視鏡輔助之胸腔手術



# Life-threatening Pulmonary Hemorrhage due to Cytomegalovirus Pneumonitis in a Patient with Chronic Myeloid Leukemia and Stem Cell Transplantation Failure

Chih-Jan Wang, Min-Li Chang, Yu-Min Wang, Ting-Yu Lin, Horng-Chyuan Lin

In allogeneic transplantation, approximately 50% of the complications affect the lung, and pulmonary complications cause about 30% of all deaths, including viral infection. Cytomegalovirus (CMV) continues to be an important cause of morbidity and mortality in transplant recipients despite the use of ganciclovir prophylaxis. Herein, we describe a patient with chronic myeloid leukemia (CML) who received an unrelated allogeneic peripheral blood stem cell transplantation (PBSCT), and developed CMV pneumonitis and pulmonary hemorrhage. (*Thorac Med* 2005; 20: 633-641)

Key words: pulmonary hemorrhage, cytomegalovirus pneumonitis, chronic myeloid leukemia

# 慢性骨髓性白血病病患接受幹細胞移植併發巨細胞病毒肺炎及致命性肺出血

王志冉 張敏麗 王郁閔 林定佑 林鴻銓

在同種異體移植，有 50% 的病人會引發肺部的併發症，其中 30% 會導致死亡，包括病毒感染。移植病患在預防性治療使用 ganciclovir 下，巨細胞病毒感染仍在發病及死亡中佔了重要的角色。在此，我們報告一位慢性骨髓性白血病病患接受非親屬同種異體的周邊血幹細胞移植，併發巨細胞病毒肺炎及肺出血。  
(*胸腔醫學* 2005; 20: 633-641)

關鍵詞：肺出血，巨細胞病毒肺炎，慢性骨髓性白血病

# Uncommon True Traction Diverticulum in the Proximal Thoracic Esophagus — A Case Report

Hao-Wei Wang, Kung-Min Wang, Liang-Shun Wang

Diverticula of the thoracic esophagus are uncommon disorders. Most of the reported cases occur in the mid-esophageal and epiphrenic regions. Proximal thoracic esophageal diverticula are extremely rare, and have been reported almost exclusively as pulsion-typed false diverticula. Here we report a 60-year-old male who presented with progressive swallowing disturbance and food regurgitation. Esophagoscopy and esophagography disclosed an esophageal diverticulum at the thoracic inlet. The patient underwent simple diverticulopexy surgery. The diverticulum contained whole layers of the esophageal wall. Traction force from the tubercular granuloma in the right apical lung, due to previous tuberculosis infection, was thought to be responsible for its pathogenesis. The symptoms were successfully alleviated after surgery. (*Thorac Med* 2005; 20: 642-647)

Key words: esophageal diverticulum, deglutition disorders, esophageal motility disorders

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Division of Thoracic Surgery, Department of Surgery, Taipei Veterans General Hospital and School of Medicine, National Yang-Ming University, Taipei, Taiwan, R.O.C.

Address reprint requests to: Dr. Liang-Shun Wang, Professor, Division of Thoracic Surgery, Taipei Veterans General Hospital, 201, Sec 2, Shih-Pai Road, Taipei 112, Taiwan

## 罕見真性牽引式之近端胸腔食道憩室—病例報告

王皓巍 王孔民 王良順

胸腔段的食道憩室是一少見的疾病，在文獻上多位於食道中段以及橫膈上部之區域。近端的胸腔食道憩室（靠近胸腔入口）則更為罕見，且文獻上的病例幾乎皆為推進式的假性憩室。我們報告一位 60 歲的男性病患，主訴進行性的吞嚥困難及食物逆流，食道鏡檢與食道攝影檢查發現一個位於胸腔入口處的食道憩室。食道功能檢查結果並無食道運動功能障礙。病患接受憩室固定術的手術治療，此憩室具有完整的食道壁。這個憩室形成的原因推測是由於肺結核感染後形成的結核肉芽腫所產生的牽引力量。病患接受手術治療後，症狀得到明顯的改善。*(胸腔醫學 2005; 20: 642-647)*

關鍵詞：食道憩室，吞嚥障礙，食道運動功能障礙

# Hemorrhagic Shock Due to Intercostal Artery Laceration after Thoracocentesis — A Case Report

Chang-Ke Chu, Chang-Wen Chen, Wu-Wei Lai\*, Wei-Chieh Lin, Tzuen-Ren Hsiue

Thoracocentesis is a commonly employed diagnostic and therapeutic procedure in patients with pleural effusion. We encountered a patient in whom thoracocentesis resulted in hypovolemic shock due to a massive amount of intrathoracic bleeding. We review the literature and discuss the possible complications of thoracocentesis. (*Thorac Med 2005; 20: 648-651*)

Key words: hemothorax, shock, thoracocentesis

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Department of Internal Medicine, National Cheng Kung University Hospital, Tainan. \*Department of Surgery, National Cheng Kung University Hospital, Tainan

Address reprint requests to: Dr. Chang-Wen Chen, Department of Internal Medicine, National Cheng Kung University Hospital, No. 138, Sheng-Li Rd., Tainan, 704, Taiwan, R.O.C.

# 肋膜積液穿放術引起之肋間動脈撕裂所造成的出血性休克 —病例報告

曲長科 陳昌文 賴吾為\* 林偉傑 薛尊仁

對於肋膜積液的病人而言，肋膜積液穿放術是常用的診斷及治療方式。氣胸及小量的出血是常見的併發症，但嚴重的併發症卻鮮少報告。我們遇到一位病人在穿放術後造成大量的胸內出血。我們回顧文獻並探討肋膜積液穿放術所可能造成的併發症。(胸腔醫學 2005; 20: 648-651)

關鍵詞：血胸，休克，肋膜積液穿放術

# **Pneumoconiosis Mimicking Lung Cancer with Metastasis in Positron Emission Tomography — A Case Report**

Yu-Chao Lin, Hung-Jen Chen, Chih-Yen Tu, Chuen-Ming Shin, Wu-Huei Hsu

Coal dust inhalation can result in industrial bronchitis and coal workers' pneumoconiosis (CWP), presenting as either simple pneumoconiosis or complicated CWP. With prolonged excessive exposure, small opacities in simple pneumoconiosis may coalesce and form larger opacities, recognized as progressive massive fibrosis (PMF) greater than 1 cm in diameter on chest roentgenography. Even though the degree of respiratory impairment or the presence of symptoms does not always correlate well with the extent of PMF, most workers frequently describe dyspnea, cough, and sputum production. This may be caused by a deviation in the prominent area of coalescence, the loss of upper zone lung volume, the elevation of the hila, and basilar emphysema.

We present the case of a patient with an absence of occupational exposure history, who presented with a large opacity in pneumoconiosis that had a rapid onset of symptoms with dyspnea, and caused a diagnostic dilemma in attempting to distinguish a primary or metastatic neoplasm from an unusual presentation of PMF. Limited data on the PET appearance of pneumoconiosis has been reported. Whereas PET imaging may be useful in distinguishing benign from malignant disease, its role in the diagnosis of malignancy in the setting of pneumoconiosis with possible superimposed granulomatous infection remains unclear. With these considerations in mind, a PET scan was performed for this patient. Unfortunately, the PET scan could not distinguish between the possible diagnoses. Surgical intervention was arranged and the pathologic result proved pneumoconiosis. (*Thorac Med* 2005; 20: 652-657)

Key words: pneumoconiosis, positron emission tomography

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Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine China Medical University Hospital, Taichung, Taiwan

Address reprint requests to: Dr. Hung-Jen Chen, Department of Internal Medicine, China Medical University Hospital, No. 2, Yuder Road, Bei Chiu, Taichung, Taiwan 404

# 塵肺症在正子攝影下以肺癌合併轉移的形式表現 —病例報告

林裕超 陳鴻仁 涂智彥 施純明 徐武輝

碳塵吸入常會造成職業性支氣管炎及煤礦工人塵肺症進而表現為單純性或複雜性塵肺症。長時間曝露使得腫塊會融合成大腫塊，即在胸部 X 光可見大於 1 公分之進行性肺部纖維化。即使呼吸損害程度不一定和胸部 X 光上可見之腫塊大小有相關，但是病人常會表現有呼吸困難，咳嗽有痰。甚至由於明顯融合區域而產生上肺葉容積減少、肺門上移、下肺葉肺氣腫等問題。

本文報告一病例胸部 X 光上有融合大腫塊，由於伴隨快速發展的呼吸困難及缺乏職業史，使得區分是原發性或轉移性腫瘤或者是不典型之進行性肺部纖維化相當困難。塵肺症於正子攝影掃描之影像已有少數提出。正子攝影掃描常用於分辨良性及惡性之腫塊，但是用於判別惡性腫塊於塵肺症病人或合併肉芽腫病的感染之角色仍未明確。進一步安排正子攝影掃描。但是仍不能排除惡性腫瘤。進而安排外科手術證實為塵肺症。(胸腔醫學 2005; 20: 652-657)

關鍵詞：塵肺症、正子攝影掃描



# Adult Form of Acid Maltase Deficiency First Manifested as Repeated Hypercapnic Respiratory Failure — A Case Report

I-Min Hung, Chih-Hung Chen, Long-Sun Ro\*, Ying-Huang Tsai, Yao-Kuang Wu

Acid maltase deficiency (AMD) is a form of glycogen storage disease, which is an inherited autosomal recessive disease and rarely found in adults. It is characterized by a glycolysis enzyme (acid maltase) deficiency, mainly involving the glycogen-stored rich tissue, and may result in skeletal muscle weakness and respiratory failure. We report a 41-year-old man with adult onset AMD with an initial presentation of repeated hypercapnic respiratory failure and episodic proximal muscle weakness, without lung parenchymal or airway disease. Nerve conduction velocity and electromyography tests both indicated myopathy. Muscle biopsy finally confirmed the diagnosis of AMD. Hypercapnic respiratory failure is a syndrome commonly seen by pulmonary and critical care clinicians. Neuromuscular disorders, especially myopathies, should be highly suspected in a respiratory failure patient without lung disease. (*Thorac Med* 2005; 20: 658-663)

Key words: acid maltase deficiency, respiratory failure, glycogen storage disease

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Division of Pulmonary and Critical Care Medicine, Chang Gung Memorial Hospital, Taipei, Taiwan

\*Department of Neurology, Chang Gung Memorial Hospital, Taipei, Taiwan

Address reprint requests to: Dr. ao-Kuang Wu, Division of Pulmonary and Critical Care Medicine, Chang Gung Memorial Hospital, 5, Fu-Hsing St., Kweishan, Taoyuan, Taiwan

## 以反覆高二氧化碳呼吸衰竭為表現的成人型酸性麥芽糖 酵素缺乏症——病例報告

洪一民 陳志弘 羅榮昇\* 蔡熒煌 吳耀光

酸性麥芽糖酵素缺乏症在成人當中是一個罕見的遺傳染色體隱性疾病。因為肝醣分解酵素缺乏而造成肝醣的堆積，最主要造成骨骼肌無力及呼吸衰竭。我們報告一個病例以反覆高二氧化碳性呼吸衰竭及近端肌肉無力為表現，神經傳導速率測驗、肌電圖及神經反覆性刺激測試確定為肌肉病變。最後經由肌肉切片、特殊染色及最後的單核球酸性麥芽糖酵素定量分析，確定為酸性麥芽糖酵素缺乏症。高二氧化碳型呼吸衰竭對臨床醫師是常見的一種表現，對於反覆性發作及肺部疾病不足以解釋臨床表徵時，神經肌肉系統病變仍然是需要我們高度警覺。(胸腔醫學 2005; 20: 658-663)

關鍵詞：酸性麥芽糖酵素缺乏症，呼吸衰竭，肝醣堆積症

# Intrathoracic Malignant Peripheral Nerve Sheath Tumor with Rapid Recurrence — A Case Report

Fu Tsung Tsai, Chih Hung Chen, Hui Ping Liu\*, Ying Huang Tsai

Malignant peripheral nerve sheath tumor (MPNST) is a rare type of neurogenic tumor with an incidence of 0.001% in the general population. The tumor is usually associated with neurofibromatosis type 1 (NF-1). We report a rare case of intrathoracic MPNST with rapid recurrence and growth, as presented in a NF-1 patient.

A 26-year-old NF-1 male patient had a giant intrathoracic MPNST in the right paraspinal area. He underwent surgical excision, and a mass, 25x30 cm, was incompletely removed due to diffuse tumor infiltration and its bleeding easily. He suffered from early recurrence and rapid tumor growth less than 2 months after the operation. Although transarterial embolization (TAE) was performed before the second operation, the tumor still could not be excised completely. Post-operative radiotherapy was done, but he died of acute respiratory failure and sepsis during the radiotherapy course. (*Thorac Med* 2005; 20: 664-669)

Key words: neurofibromatosis type 1, plexiform neurofibroma, malignant peripheral nerve sheath tumor

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Division of Pulmonary and Critical Care Medicine, Chang Gung Memorial Hospital, Taipei, Taiwan

\*Division of Thoracic Surgery, Chang Gung Memorial Hospital, Taipei, Taiwan

Address reprint requests to: Dr. Ying Huang Tsai, Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, Chang Gung Memorial Hospital, No. 5, Fusing St., Gueishan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

## 胸內惡性周邊神經鞘腫瘤併快速復發—病例報告

蔡富聰 陳志弘 劉會平\* 蔡熒煌

惡性周邊神經鞘腫瘤是一種罕見的神經原性腫瘤，在一般族群中的發生率只有 0.001%。這種腫瘤經常合併有第一型神經纖維瘤病。我們報告一例罕見的胸內惡性周邊神經鞘腫瘤併第一型神經纖維瘤病。

一位二十六歲的第一型神經纖維瘤病的男性病人，臨床表現為一個巨大的胸內右側脊椎旁惡性周邊神經鞘腫瘤。手術中，發現了一個 25x30 公分的腫瘤，因為瀰漫性的腫瘤浸潤以及容易出血，無法完全切除。手術後兩個月，他的腫瘤很快就復發且迅速成長。儘管在第二次手術前使用了經動脈血管栓塞術，腫瘤依舊無法完全切除。安排了術後的放射線治療，不過，在治療的過程中，他死於急性呼吸衰竭及敗血症。(胸腔醫學 2005; 20: 664-669)

關鍵詞：第一型神經纖維瘤病，叢狀神經纖維瘤，惡性周邊神經鞘腫瘤

# Methotrexate-Induced Hypersensitivity Pneumonitis in a Patient with Rheumatoid Arthritis — A Case Report

Chen-Wei Huang, Chao-Hsien Lee, Chien-Liang Wu

Hypersensitivity pneumonitis is caused by exposure to a variety of agents. Differentiating hypersensitivity pneumonitis from other interstitial lung diseases is not easy. The diagnosis relies on a combination of exposure history, symptoms, radiological findings, and pathological characteristics. Once this diagnosis is made, corticosteroids should be administered as soon as possible, and exposure to the causative agent avoided.

We report a 59-year-old woman with rheumatoid arthritis for 4 years, who was treated with several medications including methotrexate. She was admitted to our hospital with pneumonia, presenting with fever, chills, dry cough, and general malaise. Subsequently, she had increasing dyspnea, hypoxemia, and progressive diffuse interstitial pneumonia and fever, which persisted despite antibiotics treatment. Because she was taking methotrexate, methotrexate-induced pneumonitis was strongly suspected, and was later diagnosed after a series of studies. The patient improved dramatically after the steroid treatment, and she was discharged with complete resolution of the hypersensitivity pneumonitis. Methotrexate pneumonitis should be considered in patients treated with the drug and presenting with interstitial pneumonia. (*Thorac Med* 2005; 20: 670-676)

Key words: hypersensitivity pneumonitis, methotrexate, rheumatoid arthritis

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Division of Chest Medicine, Department of Internal Medicine, Mackay Memorial Hospital, Taipei, Taiwan  
Address reprint requests to: Dr. Chao-Hsien Lee, Division of Chest Medicine, Department of Internal Medicine, Mackay Memorial Hospital, No. 92, Sec. 2, Chung Shan N. Rd, Taipei, Taiwan

## 類風濕性關節炎病患使用 Methotrexate 所引致的過敏性肺炎—病例報告

黃琛璋 李昭賢 吳健樑

暴露到許多種物質會引起過敏性肺炎。要區別過敏性肺炎和其他間質性肺病並不容易。診斷必須要結合暴露病史、症狀、影像學發現，以及病理學特徵。一旦診斷確立，要儘快投與類固醇並且避免繼續暴露到引發之物質。

我們報告一名患有類風濕性關節炎之 59 歲女性病患，其於門診長期接受數種藥物治療，其中包括低劑量的 methotrexate。病人於入院前一星期呈現發燒、畏寒、乾咳、全身倦怠之徵狀且隨後出現持續性喘、缺氧，同時胸部 X 光及斷層掃描呈瀰漫性間質性浸潤且臨床徵象並不因廣泛性抗生素之使用而改善。由於病人有使用多種藥物之病史，經進一步的內視鏡肺切片之病理診斷為藥物引致之間質性肺炎，臨床徵象及間質性病變在使用了類固醇後明顯改善。由於風溼性關節炎治療藥物引致之間質性肺炎，methotrexate 為首要藥物且其發生常為特發性與使用之時間長短或劑量大小無相關性。因此，當病患使用 methotrexate 之病史且發生間質性肺炎時，須將藥物引起的過敏性肺炎列入鑑別診斷。*(胸腔醫學 2005; 20: 670-676)*

關鍵詞：過敏性肺炎、methotrexate、類風濕性關節炎

# Human Pulmonary Edema Caused by *Fusarium* Mycotoxins — A Case Report

Yi-Wen Huang\*, Min-De Hung, Jin-Chi Xu, San-Min Chang\*\*, Hsien-Chieh Liao\*\*,  
Wen-Liang Huang

Research indicates the ingestion of *Fusarium* mycotoxins can lead to various diseases in animals, including pulmonary edema in swine, equine leucoencephalomalacia in horses, hepatotoxic and nephrotoxic effects in other domestic animals, and carcinogenesis in laboratory animals. Some published research points to an association with esophageal cancer, hepatitis, and hepatic cell carcinoma in humans, however, these reports do not mention acute pulmonary edema being caused by the ingestion of this kind of mycotoxin. Herein, we report a case of acute pulmonary edema attributed to eating a rotten pear. We excluded many causative factors for pulmonary edema and diagnosed *Fusarium* mycotoxins. The patient was treated with supportive care and a non-invasive positive pressure ventilator. There was a good response and the lung edema resolved completely. After a follow-up of 9 months from discharge, the patient had no sequelae. To our understanding, this is the first case of human pulmonary edema related to the ingestion of *Fusarium* mycotoxins reported in the medical literature. (***Thorac Med* 2005; 20: 677-683**)

Key words: human pulmonary edema, *Fusarium* mycotoxins

# 鐮刀黴菌毒素 (*Fusarium Mycotoxins*) 所引發的人類肺水腫 ——病例報告

黃伊文\* 洪敏德 徐錦池 張善閔\*\* 廖顯杰\*\* 黃文良

根據文獻記載，食入鐮刀黴菌毒素 (*Fusarium mycotoxins*) 可讓各種動物致病，包括豬的肺水腫 (pulmonary edema)，馬的白腦質疏松症 (equine leucoencephalomalacia)，家禽畜的肝腎病變，以及實驗動物的惡性腫瘤等。在人類方面，亦曾報告過食入此種毒素可能與食道癌、肝炎，甚至是肝癌有關。但卻從無報告過導致急性肺水腫的情形。在此，我們提出一例吃了發霉的水梨所引發的急性肺水腫個案。在排除許多肺水腫的形成因素之後，我們認定黴菌毒素為致病原因。患者接受了支持性的治療以及非侵襲性正壓呼吸器的使用後，病況改善良好，X光上的肺水腫也消褪的很快。患者在出院後九個月的追蹤時，顯示無任何後遺症。就我們所知，這可能是全球首例被報告由食入鐮刀黴菌毒素 (*Fusarium mycotoxins*) 所造成的人類急性肺水腫。(胸腔醫學 2005; 20: 677-683)

關鍵詞：人類肺水腫、*Fusarium mycotoxins*



# Primary Tracheal Neurilemmoma Mimicking Asthma: A Case Report

Yu-Ting Tseng, Yih-Leong Chang\*, Yung-Chie Lee

Primary tracheal tumors are rare; most of them are malignant, and benign tracheal tumors are seldom seen. Because of their non-specific symptoms or signs, late diagnosis may be attributed to a silent tumor, to a denying patient, or to a physician's delay. We report a case of primary tracheal neurilemmoma which was initially diagnosed and treated as asthma. However, the symptoms were not relieved. Five months later, he received chest CT and bronchoscopic examinations. The results revealed an endotracheal tumor. Segmental resection and reconstruction with primary anastomosis were performed. Pathology showed a neurilemmoma. After operation, this patient returned to normal life without sequelae, and regular follow-up at the OPD showed good surgical results. (*Thorac Med* 2005; 20: 684-689)

Key words: tracheal neurilemmoma, asthma, tracheal reconstruction

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Division of Thoracic Surgery, Department of Surgery, Department of Pathology\*, National Taiwan University Hospital  
Address reprint requests to: Dr. Yung-Chie Lee, Department of Thoracic Surgery, National Taiwan University Hospital  
No. 7 Chung-Shan South Road, Taipei, Taiwan, R.O.C.

## 以氣喘症狀表現的原發性氣管纖維鞘瘤：病例報告

曾宇鼎 張逸良\* 李元麒

原發性氣管腫瘤很罕見，大部分是惡性，良性的更少遇見。由於症狀的表現並無特異性，診斷的延遲可歸因於安靜的腫瘤、病人的否認或是檢查者的延遲。我們在此報告一個原發性氣管纖維鞘瘤的病例，剛開始被當作氣喘治療，但症狀並無改善，四個月後，病人接受了電腦斷層與支氣管的檢查，兩個結果都顯示為氣管內腫瘤，經由手術做部分氣管切除及重建，術後病人恢復良好，門診定期追蹤的結果並無氣管息肉或狹窄的情形發生。(胸腔醫學 2005; 20: 684-689)

關鍵詞：氣管神經纖維鞘瘤，氣喘，氣管重建

# Disseminated *Fusarial solani* Infection with Pulmonary Involvement in an Immunocompromised Patient — A Case Report and Literature Review

Tse-Hung Lin, Wei-Yu Liao, Pan-Chyr Yang, Sow-Hsong Kuo\*

Modern chemotherapy improves outcomes in patients with hematological malignancies. Unfortunately, the incidence of infectious complications increases as a result of the immunosuppression induced by chemotherapy. Broad-spectrum antibiotics have had a major role in the control of these infections, but their use results in the emergence of fungi as opportunistic pathogens. *Aspergillus*, *Candida*, and *zygomycetous* species account for the majority of such infections, but cases due to less virulent molds, including *Fusarium* species, are being recognized with increasing frequency. A case of disseminated *Fusarial solani* infection with lung and skin involvement in a patient with acute myeloid leukemia (AML) is reported. The patient died of fusariosis even though lipid-based amphotericin B formulations and voriconazole were administered. The prognosis of disseminated fusarial infection in the immunocompromised host is usually poor. Profound and prolonged neutropenia appears to be the major predisposing and prognostic factor. The infection seems to respond to newer therapeutic approaches in patients who will ultimately recover from immunosuppression, but the infection may relapse if neutropenia recurs. (*Thorac Med* 2005; 20: 690-696)

Key words: *Fusarium solani*, immunocompromised host, acute myeloid leukemia

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Department of Internal Medicine and \*Laboratory Medicine, National Taiwan University Hospital, Taiwan  
Address reprint requests to: Dr. Wei-Yu Liao, Department of Internal Medicine, National Taiwan University Hospital,  
No. 7, Chung-Shan South Road, Taipei 100, Taiwan

# 免疫功能不全病人發生全身性茄型鐮胞菌感染合併肺部侵犯一病例報告及文獻回顧

林澤宏 廖唯昱 楊泮池 郭壽雄\*

雖然化學治療可以改善血液腫瘤病人的預後，但是化學治療後發生免疫功能抑制卻會使得病人併發感染的機率增加，廣效性抗生素雖然在這些感染的控制上扮演一個重要的角色，但是卻會造成一些伺機性的黴菌感染，例如：麴黴菌、念珠菌這些較常見的黴菌感染，一些以前認為毒性較弱的黴菌，例如：鐮胞菌在臨床上卻越來越常見。我們報告一個急性骨髓白血病的病人，因為化學治療後白血球過低而併發全身性茄型鐮胞菌感染合併肺部和皮膚的侵犯，雖然我們用了 lipid-base amphotericin B 和 voriconazole 來治療，但病人最後仍然死亡。此外，我們針對茄型鐮胞菌感染的臨床表現及治療作一文獻回顧發現雖然鐮胞菌和麴黴菌有相似的臨床表現和病理切片結果，可是我們可由臨床上鐮胞菌較會有陽性血液培養結果〈50~70%〉，皮膚病灶〈60~70%〉和對傳統抗黴陽性菌藥如 amphotericin B 的治療效果不好，來高度懷疑是鐮胞菌的感染，而且在用 amphotericin B 治療效果不好的病人，可以考慮用 voriconazole 來治療，並用病人是否退燒、生命徵象是否穩定、血液培養是否轉陰性及皮膚病灶是否消失來評量治療的效果。此外病人的白血球過低現象對存活率有絕對的影響，因此除了給顆粒性白血球群落生長因子(G-CSF)外，顆粒性白血球灌輸也許可以幫助我們爭取時間來等病人白血球恢復正常。(胸腔醫學 2005; 20: 690-696)

關鍵詞：茄型鐮胞菌、免疫功能不全、急性骨髓白血病

# Cardiopulmonary Exercise Test in a Patient with Pulmonary Arteriovenous Malformation: A Case Report

Te-Chih Hsiung\*, Meng-Jer Hsieh, Kun-Eng Lim\*\*, Cheng-Hui Lee

Pulmonary arteriovenous malformation (PAVM) is caused by abnormal communication between pulmonary arteries and veins. We present a case of PAVM with initial presentations of unexplained dyspnea, polycythemia and clubbing fingers. The chest radiograph revealed nonspecific infiltration in the right lower lung field. The cardiopulmonary exercise test (CPET) revealed a low work capacity (69% of predicted value) and a low anaerobic threshold (AT; 35% of predicted value), combined with a low  $\text{O}_2$ /pulse at maximal exercise. A high  $\text{CO}_2$  equivalent at AT ( $\dot{V}\text{E}/\dot{V}\text{CO}_2$ ; 64) and a low transcutaneous oxygen saturation (87%, 82%) were present at rest and maximal exercise. There were also an abnormal breathing pattern of reduced tidal volume (VT) and an increased respiratory frequency observed throughout the exercise. The results of the CPET indicated the existence of pulmonary circulation impairment. Intracardiac shunting was excluded by echocardiography. Diffuse PAVM was finally diagnosed by CT angiography. Hence, the CPET, when used with patients with unexplained dyspnea, could be an effective tool for screening uncommon disease, such as the diffuse PAVM in our case. (*Thorac Med* 2005; 20: 697-702)

Key words: pulmonary arteriovenous malformation; cardiopulmonary exercise test

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\*Division of Pulmonary Medicine, St. Paul Hospital, Taoyuan; Division of Pulmonary and Critical Care Medicine, Chang-Gung Memorial Hospital, Taipei; Second Division, \*\*Department of Radiology, Chang-Gung Memorial Hospital, Taipei

Address reprint requests to: Dr. Meng-Jer Hsieh, Division of Pulmonary and Critical Care Medicine, Chang-Gung Memorial Hospital, No.5, Fuhsing St., Gueishan, Taoyuan 333, Taiwan (R.O.C.)

## 肺動靜脈畸型在運動肺功能的表現——病例報告

熊得志\* 謝孟哲 林坤榮\*\* 李政輝

肺部動靜脈畸型是由於不正常的動脈與靜脈的交通所致。本篇報告一個肺部動靜脈畸型的病例，一開始以喘，紅血球增生以及杵狀指來表現。胸部 X 光發現在右下方有一非特異性的浸潤，運動肺功能 (cardiopulmonary exercise test) 顯示出低 work capacity (預測值的 69%)，Anaerobic threshold (預測值的 35%)，併最大運動時有低 O<sub>2</sub>/pulse，高的 CO<sub>2</sub> equivalent at AT (VE/VCO<sub>2</sub>; 64) 以及低的血氧濃度 (在休息及最大運動時分別是 87%, 82%)。同時在運動過程當中尚有不正常的呼吸型態，包括降低的潮氣容積及增加的呼吸速率。運動肺功能的結果指出肺循環的問題。心臟超音波排除了心內血液分流，最終藉由電腦斷層血管攝影診斷出廣泛性肺部動靜脈畸型。運動肺功能檢查對於未知原因的喘的病人是一有效工具，藉以篩檢出較罕見的問題，如同本病例報告的廣泛性肺動靜脈畸型。(胸腔醫學 2005; 20: 697-702)

關鍵詞：肺動靜脈畸型，運動肺功能

# Small Cell Lung Cancer with Initial Presentation Mimicking Liver Abscess

Han-Lin Hsu\*, Cheng-Yi Wang, Chong-Jen Yu, Pan-Chyr Yang

Distant metastasis and paraneoplastic syndromes are often seen in small cell lung cancer patients, and can sometimes mislead in the diagnosis of lung cancer. We report a 69-year-old man presenting with persistent fever for days and an initial diagnosis of liver abscess. His condition did not improve after antibiotic treatment. Small cell carcinoma was proved by echo-guided liver biopsy. A small nodule in the right lung, which was barely seen in the initial chest radiograph, was detected by chest CT scan. Small cell lung cancer with liver metastasis was documented. The hepatic lesion and fever improved after chemotherapy. (*Thorac Med* 2005; 20: 703-708)

Key words: Lung cancer; small-cell lung cancer; liver metastasis; fever

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Department of Internal Medicine, National Taiwan University Hospital

\*Department of Internal Medicine, Wan-Fang Hospital, Taipei Medical University

Address reprint requests to: Dr. Chong-Jen Yu, Department of Internal Medicine, National Taiwan University Hospital, National Taiwan University College of Medicine, No. 7 Chung-Shan South Road, Taipei, Taiwan

## 小細胞肺癌合併肝轉移及腫瘤伴隨症候群之一病例報告

許翰琳 王誠一\* 余忠仁\* 楊泮池\*

遠處轉移和腫瘤伴隨症候群為小細胞肺癌病人之常見症狀，但同時存在時可能會造成肺癌診斷上之困難。在此我們報告一 69 歲男性病人主訴持續發燒，由於合併肝實質病變，其初步診斷為肝膿瘍。而後，病人接受抗生素治療，但臨床症狀並無改善。經超音波肝組織切片證實肝實質病變細胞為小細胞肺癌。小細胞肺癌合併肝轉移為確定診斷。病人接受化學治療後，肝轉移和發燒明顯改善。(胸腔醫學 2005; 20: 703-708)

關鍵詞：小細胞肺癌，肝轉移，發燒



# Choroidal Metastasis as the Primary Presentation of Non-Small Cell Lung Cancer: A Case Report

Chih-Teng Chiang, Jin-Yuan Shih, Pan-Chyr Yang

Although lung cancer is a common cause of choroidal metastasis, choroidal metastasis is seldom encountered in medical clinical practice. We present a 67-year-old female patient with non-small cell lung cancer that initially manifested as choroidal metastasis. The patient received 2 cycles of gemcitabine and cisplatin, but the disease progressed. The chemotherapy regimen was changed to docetaxel for 4 cycles, and a partial response was achieved. Fourteen months after the diagnosis of lung cancer, the patient was mentally alert with fair activity, but blind in the right eye. (*Thorac Med* 2005; 20: 709-714)

Key words: choroidal metastasis, lung cancer, adenocarcinoma, non-small cell lung cancer

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Department of Internal Medicine, National Taiwan University Hospital, National Taiwan University College of Medicine, Taipei, Taiwan

Address reprint requests to: Dr. Jin-Yuan Shih, Department of Internal Medicine, National Taiwan University Hospital, No 7, Chung-Shan S. Road, Taipei 100, Taiwan

## 以眼脈絡膜轉移為初始表現之非小細胞肺癌一病例報告

江志騰 施金元 楊泮池

雖然肺癌是眼脈絡膜轉移癌常見的原因之一，但臨床上卻很少見到；而以眼脈絡膜轉移為初始表現之肺癌則更為罕見。我們報告一位 67 歲的女性肺腺癌病患，以眼脈絡膜轉移為癌症的初始表現。病人接受二個療程的 gemcitabine 和 cisplatin 的治療，但臨床病程仍惡化，化學治療處方因而改為 docetaxel。病人接受四個療程之後疾病達部份緩解。在診斷肺癌十四個月後病人目前病況穩定神智清楚但右眼已盲。*(胸腔醫學 2005; 20: 709-714)*

關鍵詞：脈絡膜轉移，肺癌，腺癌，非小細胞肺癌

# Successful Management of Boerhaave's Syndrome in Three Patients with Severe Comorbid Illness

Chen-Chi Tsai, Kuang-Tai Kuo\*, I-Ching Lai\*\*, Jen-Jyh Lee, Han-Yu Huang

Boerhaave's syndrome is a highly lethal esophageal disease. Mortality rates vary from 8% to 60%. Late diagnosis or misdiagnosis occurs in more than 50% of patients because of the non-specific presentation. Primary repair is considered only appropriate for patients diagnosed within 24 hours after esophageal perforation. Beyond this golden period, patients usually face poor results. Although there have been some cases that were reported to be treated successfully with conservative therapy, no discussion about the underlying diseases of those patients was presented. Herein, we report the cases of 2 cirrhotic patients and 1 uremic patient, all with delayed presentations of Boerhaave's syndrome who survived with intensive conservative management. Our conservative therapy consisted of intrathoracic drainage, adequate antibiotics, the decreasing of gastric acid secretion by H<sub>2</sub> blockers or proton pump inhibitors, and early enteral alimentation by duodenal tube feeding. However, successful conservative therapy can only be possible in those with minimal symptoms and signs of sepsis, and without septic shock. (*Thorac Med* 2005; 20: 715-721)

Key words: Boerhaave's syndrome, severe comorbid illness, conservative therapy

## 成功治療三位 Boerhaave 氏症候群合併嚴重內科疾病之經驗

蔡鎮吉 郭光泰\* 賴奕菁\*\* 李仁智 黃寒裕

Boerhaave 氏症候群是一高致命性食道疾病，其死亡率從 8% 到 60% 不等。由於此症所呈現之身體症狀並不明確，而使得晚期診斷或誤診的機會超過 50%。食道穿孔發生後 24 小時內，才能考慮做初級的修補。錯過此開刀之黃金時期，病患的預後將不樂觀。已經有幾篇的個案報告指出，保守療法在這類的病人身上仍然可行。然而，於文獻回顧並沒有任何一篇論及病患原本的身體疾病。因此，我們報告兩個肝硬化、一個尿毒症，且延遲就醫之 Boerhaave 氏症候群的病患，成功地以保守療法挽救其生命。我們的保守性療法包括：胸管引流，適當的抗生素，降胃酸治療，及儘早以十二指腸管灌營養治療。我們的結論是：延遲診斷的 Boerhaave 氏症候群患者，即使合併預後不佳的內科疾病，仍可能以保守療法成功挽救。先決條件是病患的敗血症症狀要輕，尚未到敗血性休克。(胸腔醫學 2005; 20: 715-721)

關鍵詞：Boerhaave 氏症候群，嚴重內科疾病，保守性療法