Diagnostic Significance of Pleural Fluid Lactate Concentrations

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An early diagnosis of empyema is required in order to administer antimicrobial therapy and institute early drainage of the pleural effusion to prevent loculation. The determination of lactate in body fluids has been used mainly for the detection of bacterial infection. The purpose of our study was to investigate the validity of diagnosing of exudates from transudates, and empyema from other exudative diseases, by the determination of pleural fluid lactate and serum lactate.

Ninety-three consecutive samples of pleural fluid from eighty-seven patients were obtained by thoracocentesis and investigated before giving any antimicrobial therapy. Pleural fluid lactate (PFL) and venous blood lactate (BL) were drawn and measured simultaneously. The difference between PFL and BL (PFL-BL) was calculated for each sample. The patients were grouped into five categories based on the final diagnosis: empyema, tuberculous pleurisy, malignant pleural effusion, parapneumonic effusion, and transudative pleural effusion.

Fourteen samples were transudative pleural effusions and seventy-nine samples were exudative pleural effusions. The PFL-BL difference for transudates and exudates (mean ± SD) were 1.47 ± 1.75 and 5.75 ± 10.52, respectively. There was no statistically significant difference between transudates and exudates ($P > 0.1$).

The mean PFL (± SD) for empyema and other exudative pleural effusions were 39.55 ± 23.26 and 4.64 ± 2.04, respectively. There was a significant difference between empyema and other exudative pleural effusions ($P < 0.015$). The mean PFL-BL differences (± SD) for empyema and exudative pleural effusion were 35.60 ± 22.60, and 3.29 ± 1.99, respectively. There was a statistically significant difference between empyema and the other exudates ($P < 0.015$). The mean values (± SD) of BL for empyema and other exudates were 3.95 ± 0.88, and 1.34 ± 0.72, respectively. There was no statistically significant difference between the two groups ($P > 0.1$).

In conclusion, PFL and PFL-BL differences have no diagnostic value in differentiating exudates and transudates, but they are helpful in differentiating between empyema and other exudates.
(Thorac Med 2003; 18: 285-292)

Key words: Pleural fluid lactate, blood lactate, lactate difference between pleural fluid and blood

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胸水中乳酸鹽濃度的診斷意義

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為了使用抗生素治療和提早插管引流胸水以避免病情惡化，儘早診斷膿胸是需要的。體液乳酸鹽的測定，主要用來偵測是否細菌感染。

本研究的目的在於評估利用胸水和血液中的乳酸鹽，區分漏出液（Exudate）或滲出液（Transudate），以及膿胸或其他漏出性胸水的準確性。

87 個病人中，在給予抗生素治療前，先用肋膜穿刺法取得 93 個胸水檢體。

同時抽取檢測胸水乳酸鹽（PFL）和靜脈血乳酸鹽（BL），並計算每個檢體之胸水與血液中乳酸鹽的差（PEL-BL）。患者依最終診斷分為五大組：膿胸，結核性肋膜炎，癌性胸水，傍肺炎性胸水以及滲出液。

14 個檢體是滲出液（Transudate），79 個檢體是漏出液（Exudate）；胸水和血液乳酸鹽的差在滲出液和漏出液，分別是 1.47 ± 1.75 和 5.75 ± 10.52；兩者之間並無統計學上的差異（P ＞ 0.1）。

分析膿胸與其他漏出性胸水的案例中：（1）胸水的乳酸鹽的平均值（±標準差），分別是 39.55 ± 23.26 和 4.64 ± 2.03 。兩者間具有統計學上的意義（P ＜ 0.015）。敏感性及特異性各為 85.72%, 100% 。（2）胸水和血液乳酸鹽相差的平均值分別是 35.60 ± 22.60 和 3.29 ± 1.99 。兩者間具有統計學上的意義（P ＜ 0.015）。敏感性及特異性各為 100%, 98.6% 。（3）血液乳酸鹽的平均值，分別是 3.95 ± 0.88 和 1.35 ± 0.27 。二組間無統計學上的差異（P ＞ 0.1）。

結論：胸水乳酸鹽以及胸水和血液乳酸鹽的差，對區分漏出液或滲出液並無診斷上的意義，但有助於膿胸與其他漏出性胸水的鑑別。***(胸腔醫學 2003; 18: 285-292)***

關鍵詞：胸水乳酸鹽，血液乳酸鹽，胸水和血液乳酸鹽的差

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The Relationship of the 6-Minute Walking Distance and Pulmonary Function Test to Maximal Oxygen Consumption in Patients with Coal Workers' Pneumoconiosis

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Background: We investigated the relationship of data from the pulmonary function test and 6-minute walking test (6MWT) to maximal oxygen consumption (VO_2 max) and predicted VO_2 max in patients with pneumoconiosis, with the goal of being able to evaluate the functional status of pneumoconiosis patients with a test, which is less expensive and much safer for the patient.

Methods: This study included 37 patients with pneumoconiosis who had performed the 6-minute walking test, and resting pulmonary function test, and from whom the VO_2 max was obtained from an exercise cardiopulmonary function test. Lineal regression analysis of multiple variables, involving body height (BH), body weight (BW), patient age, DLCO, DLCO/VA, distance walked during the 6MWT, changes in SpO_2 ($\triangle SpO_2$), changes in heart rate ($\triangle$ HR) during the 6MWT, Borg scale, FEV_1, FVC, and FEV_1/FVC, was done.

Results: The distance of the 6MWT was the strongest independent variable to predict VO_2 max, with a correlation coefficient (R) of 0.644 ($p<0.001$). The predicted equation was VO_2 max = 2.488 x distance of the 6MWT - 85.85. The factors of greatest correlation to predict VO_2 max were the distance of the 6MWT, FVC, DLCO, BH, $\triangle SpO_2$, and BW with a R of 0.874 ($p<0.001$). The equation was VO_2 max = 1.484 x distance of the 6MWT + 105.242 x FVC + 9.138 x DLCO + 7.484 x BH + 26.756 x $\triangle SpO_2$ + 3.563 x BW - 1316.316.

Conclusions: The distance of the 6MWT can be used to predict VO_2 max in patients with pneumoconiosis. The addition of the patients' body height and weight, and data from the pulmonary function tests, can increase the accuracy of predicting VO_2 max. ***(Thorac Med 2003; 18: 293-300)***

Key words: 6-minute walking test, exercise cardiopulmonary function test, pneumoconiosis, oxygen consumption

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六分鐘走路肺功能檢查及靜態肺功能檢查與最大氧氣消耗量之間的相關性

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前言：探討靜態肺功能檢查、六分鐘走路肺功能檢查，與最大氧氣消耗量之間的相關性。並評估是否可預測最大氧氣消耗量，如此一來我們就可以用比較不昂貴且安全的檢查，來達到我們所要求的目標。

方法：我們篩選總共 37 位塵肺症病患進行靜態肺功能檢查、六分鐘走路肺功能檢查，同時安排運動心肺功能檢查已獲得最大氧氣消耗量。直線回歸模式分析多個變數，包括身高、體重、年齡、一氧化碳肺擴散容量、一氧化碳肺擴散容量 / 肺泡容積、六分鐘走路肺功能行走距離、週邊血液氧氣飽和度改變百分比、心跳改變百分比、Borg 尺度、第一秒內用力呼氣容量、用力呼氣肺活量、以及第一秒內用力呼氣容量與用力呼氣肺活量的比值。

結果：六分鐘走路肺功能行走距離是最強的獨立變數，用它來預測最大氧氣消耗量，其相關係數是 0.644 。預測公式為（最大氧氣消耗量 = 2.488 ×六分鐘走路肺功能行走距離 - 85.85）。而相關性最大的預測公式是使用六分鐘走路肺功能行走距離、用力呼氣肺活量、一氧化碳肺擴散容量、身高、週邊血液氧氣飽和度改變百分比、以及體重，其相關係數是 0.874 ，公式為（最大氧氣消耗量 = 1.484 ×六分鐘走路肺功能行走距離 + 105.242 ×用力呼氣肺活量 + 9.138 ×一氧化碳肺擴散容量 + 7.484 ×身高 + 26.756 ×週邊血液氧氣飽和度改變百分比 + 3.563 ×體重 - 1316.316）。

結論：六分鐘走路肺功能行走距離可以用來預測塵肺症病患的最大氧氣消耗量。加上身高、體重、和靜態肺功能檢查數據，可以增加預測的準確率。***（胸腔醫學 2003; 18: 293-300）***

關鍵詞：六分鐘走路肺功能檢查，運動心肺功能檢查，塵肺症，氧氣消耗量

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Inducible Nitric Oxide Synthase Was Generally Expressed in Inflammatory, Infectious, and Malignant Lung Diseases

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Nitric oxide synthase (NOS) produces nitric oxide (NO), a mediator of importance in numerous physiologic, inflammatory, and infectious processes in the lung. For further clarification of the complex role of NO in the pathogenesis of infectious, inflammatory, and malignant lung diseases, we explored constitutive NOS (cNOS) and inducible NOS (iNOS) localization using immunohistochemistry. We analyzed human airway and parenchyma specimens obtained from patients with chronic obstructive pulmonary disease (COPD), bronchiectasis, chronic pneumonia, lung abscess, viral pneumonia (cytomegalovirus, CMV), fungal pneumonia (aspergillosis), pulmonary tuberculosis, and primary lung malignancy. Immunostaining with anti-c-NOS identified cNOS antigen in the nerve, endothelium and some alveolar macrophages. Immunostaining with anti-iNOS showed strong labeling of the alveolar macrophages, tissue-associated macrophages, and endothelium; and moderate labeling of the bronchial epithelium, glandular cells, and smooth muscle of the vascular wall. iNOS staining was also detected in bronchial-associated lymphoid tissue (BALT), marginated and tissue polymorphonuclear leukocytes, mesothelial cells, CMV infected cells, and epithelioid cells around the tubercles and chondrocytes. Furthermore, we also identified iNOS expression in squamous cell and small cell carcinomas, and in adenocarcinoma. The circulatory and the marginated and extravasated polymorphonuclear leukocytes have different expressions of iNOS activity. The expressions of iNOS between the circulatory and the tissue-associated lymphocytes and monocytes/macrophages are also quite different. Our results indicate that numerous distinct constitutive compartments within the lungs of patients with inflammatory, infectious, or malignant diseases contain iNOS activity. This study further extends our knowledge of the role of NO in the defense mechanisms and the oncogenetic processes of the lung, and may provide new insights into the pathophysiology of these lung diseases. ***(Thorac Med 2003; 18: 301-314)***

Key words: nitric oxide synthase, chronic obstructive pulmonary disease, pneumonia, lung cancer

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誘發性一氧化氮合成酶的表現廣泛增加於肺臟疾病

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一氧化氮合成酶催化產生一氧化氮媒介了無數的生理、發炎和感染性反應。為了進一步釐清一氧化氮在肺臟發炎、感染和腫瘤病變中的複雜角色，我們利用免疫組織化學染色方法，探索組成性(constitutional)及誘發性(inducible)一氧化氮合成酶在這些組織的表現。我們分析一些人類呼吸道及肺實質疾病，包括慢性阻塞性肺病、支氣管擴張症、慢性肺炎、肺膿瘍、病毒性肺炎、黴菌性肺炎、肺結核和原發性肺癌。抗組成性一氧化氮合成酶(anti-cNOS)之免疫組織染色確定組成性一氧化氮合成酶抗原存在於神經、內皮細胞和一些肺泡巨噬細胞。抗誘發性一氧化氮合成酶(anti-iNOS)免疫組織染色顯示肺泡巨噬細胞、組織巨噬細胞、內皮細胞被強烈標記。氣管上皮細胞、腺細胞、血管平滑肌則呈中度標記。誘發性一氧化氮合成酶染色也呈現於支氣管淋巴組織、組織血管內邊緣及組織中的多核性白血球、間皮細胞、巨細胞病毒感染的細胞、類上皮細胞、以及軟骨細胞。我們也確定誘發性一氧化氮合成酶在肺臟扁平細胞癌、腺癌和小細胞癌的表現。周邊血管循環中與組織血管內邊緣或血管滲出的多核性白血球之誘發性一氧化氮合成酶表現不相同，而且循環中與組織的淋巴球、單核球或巨噬細胞之誘發性一氧化氮合成酶表現也不相同。我們的實驗結果顯示，不論是發炎、感染或腫瘤性肺病變，許多肺臟的組成組織均表現出誘發性一氧化氮合成酶之活性。本研究進一步拓展了吾人對一氧化氮在肺臟免疫防禦機轉及腫瘤生成病理機制的認知和了解。***（胸腔醫學 2003; 18: 301-314）***

關鍵詞：一氧化氮合成酶，慢性阻塞性肺病，肺炎，肺癌

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Nurses Working in Intensive Care Units Had a Higher Risk of Reported Respiratory Symptoms

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Objectives: Health care workers are exposed to hazardous substances. A previous study reported that respiratory therapists had an increased risk of asthma. The object of this study was to confirm the finding that respiratory therapists are associated with asthma in Taiwan.

Methods: We conducted a cross-sectional questionnaire survey comparing respiratory therapists with ICU nurses. The subjects were given a questionnaire in Chinese that included questions on standard respiratory history and symptoms. Subjects who reported physician-diagnosed asthma were considered as having asthma.

Results: In all 151 respiratory therapists (response rate 45%) and 157 ICU nurses (response rate 90%) responded to the questionnaire. Eleven male respiratory therapists were excluded. The respiratory therapists were older (29.6 vs 24.6 years) and had more working experience (5.5 vs 3.1 years) compared to the ICU nurses. Six (3.8%) ICU nurses and two (1.4%) respiratory therapists reported having physician-diagnosed asthma. ICU nurses had a higher rate of reported cough (23% vs 8.6%, $p<0.01$) and wheezing (6% vs 0.7%, $p<0.05$) symptoms than the respiratory therapists. Odds ratios for the risk of respiratory symptoms among ICU nurses compared to respiratory therapists were cough 4.41 (95CI, 1.9-10.1), and wheezing 9.38 (95CI, 1.09-80.6).

Conclusion: We did not find that respiratory therapists were associated with an increased risk of physician-diagnosed asthma in Taiwan. ICU nurses, however, had an increased risk of having frequent cough and wheezing compared to respiratory therapists.

Clinical Implications: Further investigations into the etiologies of excess coughing and wheezing in ICU nurses are needed. ***(Thorac Med 2003; 18: 315-321)***

Key words: respiratory symptoms, asthma, respiratory therapist, ICU nurses

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加護病房護理人員有較高的呼吸道症狀

林芳杰　郭許達　陳培然

目的：醫療工作者常暴露在危險化學品的工作環境中，因此也容易造成呼吸道的症狀及疾病。過去曾有報告指出，從事呼吸治療人員有較高的危險性會導致氣喘。本研究的目的即在探討在台灣的呼吸治療人員是否真的有較高的氣喘比例。

方法：我們使用問卷調查研究來比較呼吸治療人員與加護病房護理人員的呼吸道症狀及氣喘的盛行率。每一個調查對象都給予一份中文的問卷，裡面包括有呼吸道症狀及疾病的資料，如有人回答曾經被醫師診斷為氣喘，才會被認定是真正有氣喘。

結果：總計有 151 位呼吸治療人員（回應率 45%）及 157 位加護病房護理人員（回應率 90%）將問卷調查寄回。統計時將 11 名寄回問卷調查的男性呼吸治療人員排除，不納入最後的結果分析。結果顯示呼吸治療人員明顯比加護病房護理人員較年長（29.6 vs 24.6 歲）及有較長工作經歷（5.5 vs 3.1 年）。其中有 6 位（3.8%）加護病房護理人員及 2 位（1.4%)呼吸治療人員曾經被醫師診斷為氣喘。此外加護病房護理人員比呼吸治療人員有較高的比例會有咳嗽（23% vs 8.6%, $p<0.01$）及喘息聲（6% vs 0.7%, $p<0.05$）。經對數多變項回歸分析來修正其他可能干擾因子後，加護病房護理人員仍比呼吸治療人員有 4.42 倍（95CI, 1.9-10.1）的危險率會有咳嗽的症狀及 9.38 倍的危險率會有喘息聲（95CI, 1.09-80.6）。

結論：我們的問卷調查研究並未發現在台灣的呼吸治療人員比加護病房護理人員有較高的氣喘比例。但是卻發現加護病房護理人員有明顯的咳嗽及喘息聲的比例。所增加的呼吸道症狀，最後是否較容易會導致氣喘或慢性氣管炎的發生，則需前瞻性的研究才有辦法證實。***（胸腔醫學 2003; 18: 315-321）***

關鍵詞：呼吸道症狀，氣喘，呼吸治療師，加護病房護理師

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Impact of Age and Diabetes on the Chest Radiography Presentation of Patients with Pulmonary Tuberculosis

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Background: Many factors can affect the chest radiographs of pulmonary tuberculosis (TB) patients. The aim of this study was to evaluate the impact of age and diabetes on the chest radiographs of these patients.

Methods: We retrospectively reviewed 242 patients with the diagnosis of pulmonary tuberculosis, between January 2001 and June 2002, at Kaohsiung Medical University, Chung-Ho Memorial Hospital. Depending on whether or not the subjects had diabetes mellitus (DM), we separated them into two groups: the DM- TB group and the non DM-TB group. We also separated the subjects based on their age: younger patients (aged 45 or less) and elderly patients (aged 65 or more). Five different chest radiographs, including upper lung field only, lower lung field only, upper and lower lung field, cavitation, and pleural effusion, were analyzed.

Results: A total of 68 patients were included in the DM-TB group. We found that the patients with diabetes had significantly more positive sputum acid-fast bacilli and more cavitary lesions on their chest radiographies. A total of 53 patients were placed in the younger group and 106 patients were included in the elderly group. The elderly patients had significantly more multiple lung-field involvement. The younger patients had a significantly higher ratio of positive acid-fast sputum smear, and more cavitary lesions.

Conclusion: Age and DM can alter the chest radiographic presentation of patients with pulmonary tuberculosis. We suggest that physicians need to have a high degree of suspicion and an awareness of the varied manifestations of tuberculosis, especially in elderly and diabetic patients. ***(Thorac Med 2003; 18: 322-328)***

Key words: pulmonary tuberculosis, age, diabetes mellitus, chest radiography

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年齡與糖尿病對肺結核病人胸部 X 光表徵的影響

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背景：肺結核仍是台灣最嚴重的傳染病之一。胸部 X 光是診斷肺結核重要的工具，然而病人的年齡及潛在疾病常常會影響其胸部 X 光的表現，而潛在疾病中又以糖尿病的影響最大。本研究探討年齡與糖尿病對肺結核病人胸部 X 光表徵的影響。

方法：我們回溯收集從西元 2001 年 1 月至西元 2002 年 6 月間，由高雄醫學大學附設中和紀念醫院診斷為肺結核的病人，總計 242 位。依據糖尿病有無，分為有糖尿病及非糖尿病兩組。年齡小於 45 歲為年輕病人，年齡大於 65 歲為年老病人。根據五種不同胸部 X 光病灶：只有上肺區、只有下肺區、合併上下肺區、開洞及肋膜積水，進行分析。

結果：有 68 位病人合併有糖尿病，174 位病人為非糖尿病組。研究發現在診斷方法中的耐酸性痰液檢查，糖尿病組明顯較高陽性率。在胸部 X 光的比較上，兩組在只有上肺區、只有下肺區及合併上下肺區並無顯著差別，但在空洞病灶方面，糖尿病組顯著較多。此外，有 53 位為年輕病人，106 位為老年病人。本研究發現老年病人顯著有較複雜的多肺葉侵犯，而年輕病人顯著有較高耐酸性痰液陽性率及較多的空洞病灶。

結論：年齡與糖尿病都會改變肺結核病人胸部 X 的表徵，因此我們建議醫療人員應了解肺結核在疾病表現上的多變性，尤其在面對老年人集合並有糖尿病的病人，要有高度的懷疑心。***(胸腔醫學 2003; 18: 322-328)***

關鍵詞：肺結核，年齡，糖尿病

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Safety of the Methacholine Challenge Test in Patients with Severe Airway Obstruction

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Airway hyperresponsiveness (AHR) is defined as an increased sensitivity to broncho-constrictor stimuli. It is regarded as the physiological hallmark of bronchial asthma. The methacholine challenge test has proved to be helpful in the diagnosis of asthma and the evaluation of AHR. The aim of this study was to investigate the safety of the methacholine challenge test among patients with low FEV_1, who posed a substantial risk for deterioration of airway obstruction. We retrospectively investigated 241 asthmatic patients who had an initial FEV_1 less than 1L and who underwent a methacholine challenge test (initial FEV_1: 0.77±0.15L, 38.8±11.6% of predicted value; PC_{20}: 3.1±4.6 mg/ml). Among the 241 asthmatic patients with FEV_1<1L, 108 (44.8%) had full post-challenge reversibility after b2 agonist inhalation. In contrast, only 58 controls with FEV1> 1L (22%) had significant postchallenge reversibility. The degree of post-challenge reversibility in asthmatic patients with FEV_1< 1L was significantly inversely correlated with the initial FEV_1 and the end FEV_1 after a methacholine challenge. There were no major respiratory complications related to the methacholine challenge test. Thus, the methacholine challenge test is relatively safe but potentially dangerous in patients with severe airway obstruction. The patient's condition should be monitored closely during the test, and a bronchodilator should be used to reverse the airway obstruction related to the methacholine challenge. ***(Thorac Med 2003; 18: 329-337)***

Key words: Methacholine challenge, FEV_1, asthma

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激發試驗於嚴重氣道阻塞病人之安全性

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氣道的過度敏感為氣喘的特徵之一，可能會因時間的不同、氣喘發作與否，或是規則性抗發炎藥物的使用而呈現不同的敏感程度。使用 methacholine 來操作激發測試已被證明於診斷上的可靠性。然而，在先前的文獻中，在第一秒吐氣量較低的病人在進行激發試驗時，有可能因 methacholine 惡化氣道阻塞而造成不適，並增加操作時的風險，故這類病患被列為執行此項檢查的禁忌。在我們的研究中，有 241 個氣喘病人其第一秒吐氣量低於 1 公升者進入分析（開始之第一秒吐氣量 0.77 ± 0.15L ，為預估值的 38.8 ± 11.6%；PC_{20}: 3.1 ± 4.6 mg/ml）。經過 methacholineru 激發試驗者，其第一秒吐氣量均會降低，但經乙型支氣管擴張劑治療後，有 45% 病患其第一秒吐氣量相等或大於基礎值。至於氣喘患者其第一秒吐氣量大於一公升者，只有 22% 患者其第一秒吐氣量相等或大於基礎值。在操作激發試驗的過程及追蹤期中並沒有產生併發症。因此，嚴重氣道阻塞的病人不宜視為操作 methacholine 激發試驗的絕對禁忌！但是於安排此項檢查前仍應慎選病人並評估此項檢查對治療的助益性，同時操作過程中、及操作後仍應注意病人狀況，並適度使用支氣管擴張劑以改善激發試驗所造成之氣道問題。***（胸腔醫學 2003; 18: 329-337）***

關鍵詞：激發試驗，第一秒吐氣量，氣喘

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Mediastinal Parathyroid Adenoma — A Case Report

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Mediastinal parathyroid adenoma can cause persistent hyperparathyroidism with hypercalcemia. Accurately locating and removing the adenoma, using an appropriate, is very dufficult. A 52-year-old woman suffered from frequent attacks of renal colic and persistent hypercalcemia. Even after ureteroscopy with electrohydraulic lithotripsy and double J catheter drainage, the renal colic persisted. The laboratory study disclosed abnormally high calcium and parathyroid hormone levels in the blood. A computed tomography (CT) scan of the chest showed a soft tissue nodule located at the aorto-pulmonary window. Technetium-99m-sestamibi scintigraphy demonstrated significantly increased radioactivity before the tracheal carina. The mediastinal parathyroid adenoma was diagnosed and the tumor was removed smoothly with a left-side thoracotomy. After operation, both blood calcium and parathyroid hormone (PTH) levels were back to normal. We present this successfully treated case and discuss how to precisely locate and approach a parathyroid adenoma descending into the mediastium. ***(Thorac Med 2003; 18: 338-343)***

Key words: Parathyroid adenoma, Technetium-99m-sestamibi scintigraphy, Thoracotomy

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縱膈腔副甲狀腺腺瘤病例報告及文獻回顧

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縱膈腔副甲狀腺腺瘤能導致持續性高血鈣，精確定位及以適當方式移除仍然是一個難題。一位五十二歲女性遭受腎絞痛頻頻發作及持續性高血鈣之苦，雖經內視鏡檢、體外震波碎石及導管引流治療後，腎絞痛仍然持續。實驗室檢查顯示高血鈣及高副甲狀腺核爾蒙，胸部電腦斷層掃瞄發現在主動脈 - 肺動脈窗處有一腫瘤，核子醫學掃瞄顯示在氣管分叉前放射線活性有意義的增加。在診斷出縱膈腔副甲狀腺腺瘤後以左側開胸術移除腫瘤，術後血鈣及副甲狀腺賀爾蒙恢復正常。報告此治療成功案例並討論如何精確定位及移除深藏於縱膈腔之副甲狀腺腺瘤。*（胸腔醫學 2003; 18: 338-343）*

關鍵詞：縱膈腔副甲狀腺腺瘤，高血鈣，甲狀腺賀爾蒙

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Pulmonary Clear Cell Tumor — A Case Report

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Pulmonary clear cell tumor is a rare pulmonary neoplasm. The definite diagnosis of a clear cell tumor can be made only by relying on characteristic morphologic features that have a strong resemblance to renal cell carcinoma. Due to uncertain cell origins and a variable clinical presentation, some studies have focused on the immunohistochemistry of clear cell tumors by using a broad panel of polyclonal and monoclonal antibodies. The results of those methods remain uncertain. Clinicians should distinguish benign pulmonary clear cell tumors from pulmonary clear cell carcinoma and metastatic clear cell tumors with an unknown origin because of their different clinical courses and management. We report a 53-year-old man who visited to our chest clinic due to mild cough. The chest X-ray showed a well-defined homogenous mass in the left lower lung field. The pleural sonography and bronchoscopic examination revealed no significant abnormality. This patient was recommended to undergo a video-assisted minithoracotomy in order to reach a definitive diagnosis. The resected tumor microscopic findings showed nodules of tumor cells separated by sinusoidal vessels containing abundant intracytoplasmic glycogen, which was positive for periodic acid-Schiff stain. The immunoreactivity showed protein HMB 45 (+), S-100(-), cytokeratin(-), and NSE(-), which supported the diagnosis. There was no evidence of a renal mass or other abdominal metastasis after a renal sonography and computed tomographic scanning review. ***(Thorac Med 2003; 18: 344-349)***

Key words: benign clear cell tumor of the lung, metastatic renal cell carcinoma

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肺透明細胞瘤—病例報告

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肺透明細胞瘤是一種罕見的腫瘤，目前透明細胞瘤的診斷還是以組織病理學為主，並且類似腎透明細胞癌的肺臟轉移。由於它的細胞來源未知，以及臨床表現兩者各有不同，近年有些學者專注於透明細胞瘤的免疫組織化學反應，但是仍未有明確的結果。

臨床醫師的鑑別診斷應包括診斷轉移性肺透明細胞瘤，良性肺透明細胞瘤和惡性肺透明細胞瘤，因為這些疾病的臨床途徑不同，治療也是不同。我們報告一個 53 歲男性病患，持續兩個月的輕微咳嗽，例行性胸部 X- 光發現在左下肺葉有一 3 × 3 公分大小的腫塊，經初步鑑別診斷，排除動靜脈畸型，建議患者接受外科完全切除，並經過病理診斷是一個肺透明細胞瘤。同時腹部斷層攝影沒有發現任何腫塊或腫瘤，免疫組織學和臨床表現似乎偏向良性肺透明細胞瘤，此病例在臺灣亦屬罕見，同時在手術後我們將它列入長期追蹤的病例。***（胸腔醫學 2003; 18: 344-349）***

關鍵詞：肺透明細胞瘤，腎透明細胞癌

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Sonographic Findings of Round Atelectasis — A Case Report and Review of the Literature

Hua-Ming Chen, Yuh-Min Chen, Reury-Perng Perng

Round atelectasis (RA) is an uncommon entity occasionally encountered in daily practice. The pathogenesis of RA has not been clarified. It is characterized by the invagination of fibrotic visceral pleura into the mass. The clinical importance of this benign malady resides in its resemblance to pulmonary malignancy on the chest radiograph and CT scan. Not well recognized, RA may be easily mistaken as lung cancer, thus leading to unnecessary surgical intervention. Chest sonography, a new modality for chest disease diagnosis, is an available, ideal, and accurate diagnostic tool for peripheral pulmonary lesions such as RA. Herein, we present a case of RA with its characteristic sonographic findings. ***(Thorac Med 2003; 18: 350-355)***

Key words: round atelectasis, pleural invagination, sonography

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圓形肺塌陷之超音波影像—病例報告及文獻回顧

陳華明　陳育民　彭瑞鵬

圓形肺塌陷(round atelectasis)為一並不常見之疾病，其成因仍尚未完全明瞭。圓形肺塌陷之病理特徵在於，可見臟層肋膜內折(invagination)至其內。在胸部 X 光及電腦斷層掃描檢查上，圓形肺塌陷之外型與惡性肺腫瘤極相似。若不細加辨別，極易將圓形肺塌陷誤診為肺癌，而施行不必要之手術。超音波為一方便、易於操作之影像學工具，尤適於諸如圓形肺塌陷等週邊肺疾患之診斷。本文提出一圓形肺塌陷之病例，詳述其超音波檢查之表徵，並對相關文獻作一回顧。*(胸腔醫學 2003; 18: 350-355)*

關鍵詞：圓形肺塌陷，肋膜內折，超音波

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Treatment Experience with Itraconazole in Allergic Bronchopulmonary Aspergillosis — a Case Report

Min-De Hung*, Gwan-Han Shen, Chi-Der Chiang

Allergic bronchopulmonary aspergillosis (ABPA) is a disorder with a hypersensitivity reaction to *Aspergillus* antigens. Typically it is coexistent with long-standing asthma or cystic fibrosis. The patient usually presents with wheezing, expectoration of brown mucus plugs, fever, and pleuritic chest pain. According to Rosenberg et al in 1977, the diagnostic criteria include asthma, blood eosinophilia, chest radiographic infiltrates, *Aspergillus* precipitins, a positive skin prick test to *Aspergillus* antigens, and an increased serum Ig-E level. Traditionally, oral corticosteroids are the mainstay of treatment, either to suppress the immune response and thus alleviate acute exacerbation or to serve as maintenance therapy. Herein, we report a case which was treated successfully with itraconazole along with a low dose of prednisone. After treatment, there was significant resolution of the pulmonary infiltrates as well as a significant decrement in the serum IgE level. Because of this experience, we believe that short-term itraconazole treatment may have an impressive effect on APBA. ***(Thorac Med 2003; 18: 356-361)***

Key words: Allergic bronchopulmonary aspergillosis (ABPA), itraconazole

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Allergic Bronchopulmonary Aspergillosis 使用 Itraconazole 的治療經驗—一病例報告

洪敏德* 沈光漢 江自得

Allergic bronchopulmonary aspergillosis (ABPA)是一種對 Aspergillus 抗原產生過敏反應的疾病。典型地它伴發在慢性氣喘及囊性纖維化的病人身上。病人經常呈現喘鳴，塊狀棕色黏痰，發燒及肋膜性胸痛等症狀。根據 Rosenberg 在 1977 年提出的臨床診斷準則它包括：氣喘，血中嗜伊性紅血球增加，胸部 X 光浸潤，曲黴沈澱素(*aspergillus* precipitin)，陽性曲黴抗原皮膚扎針試驗以及增加血中 IgE 濃度等。傳統上主要的治療是使用口服類固醇來壓抑免疫反應，讓急性惡化緩解或作維持治療。在此，我們提出一個使用 Itraconazole 治療後改善的例子。本例患者在治療後胸部 X 光明顯改善，並且血中總 Ig-E 濃度大幅下降。由於本例的經驗，我相信短期 itraconazole 的治療對 ABPA 可能具有明顯的效果。***(胸腔醫學 2003; 18: 356-361)***

關鍵詞：Allergic bronchopulmonary aspergillosis (ABPA), itraconazole

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Foreign Body Aspiration Complicated with Endobronchial Actinomycosis

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Chin-Nan Lin*, Shiann-Chin Ko

Endobronchial actinomycosis is a rare condition and may mimic a neoplasm, tuberculosis, or pneumonia. The combination of a foreign body and endobronchial actinomycosis is exceedingly rare in reviews. We report a 48-year-old man who suffered from a consolidated lesion in the right lower lobe one year after aspiration of a foreign body. The bronchoscopy revealed polypoid tissues surrounding an aspirated fish bone in the orifice of the right lower lobe bronchus. The pathologic data from the biopsy of the endobronchial polypoid tissues revealed actinomycosis. The patient responded well to bronchoscopic removal of the foreign body and was discharged 2 days later without antibiotic treatment. The subsequent follow-up revealed significant improvement both clinically and radiologically. ***(Thorac Med 2003; 18: 362-367)***

Key words: Foreign body aspiration; endobronchial actinomycosis

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異物吸入併發支氣管內放線菌感染—一病例報告及文獻回顧

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支氣管內放線菌感染是一罕見的疾病，臨床上可能被誤診為腫瘤，肺結核或肺炎。異物吸入併發支氣管內放線菌感染在文獻回顧上更是非常少見。我們報告一個中年男性在異物吸入一年後呈現右下肺實質化。支氣管鏡顯示右下支氣管開口有多發性，息肉狀組織圍繞著一塊吸入的魚骨頭。從支氣管息肉狀組織的切片顯示為放線菌。這病人對我們經支氣管鏡移除異物後反應相當良好，並在兩天後，在沒有使用抗生素的情況下出院。隨後的追蹤發現他在臨床及影像上都有顯著的改善。*(胸腔醫學 2003; 18: 362-367)*

關鍵詞：異物吸入，支氣管內放線菌感染

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Amniotic Fluid Embolism — A Case Report and Review of the Literature

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Liang-Wen Hang, Te-Chun Hsia

Amniotic fluid embolism (AFE) is a rare and very critical obstetrical disease, which involves multiple vital systems and has a high mortality rate. We report a 35-year-old woman complicated with severe dyspnea two hours post-delivery. Cardiopulmonary arrest developed rapidly thereafter. The chest radiography showed a right perihilar infiltration and a retrocardiac alveolar patch in the left lower lung field. The laboratory examination characterized disseminated intravascular coagulopathy. The clinical manifestations and histological findings of lanugo and fetal squamous cells in the central venous blood sample confirmed the diagnosis of amniotic fluid embolism. After emergency resuscitation and supportive care, the patient survived, but still depended on ventilator support due to hypoxic encephalopathy which had occurred before arrival. ***(Thorac Med 2003; 18: 368-372)***

Key words: amniotic fluid embolism (AFE), cardiopulmonary arrest

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羊水栓塞—一病例報告及文獻回顧

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羊水栓塞是一少見且非常危急的產科疾病，它含括了多個重要系統且有高死亡率。我們報告一位三十五歲的婦女，在產後兩個小時併發嚴重喘促。此後，迅速發展成心肺停止。胸部 X 光片表現在右側肺門的浸潤和左側肺野心後肺泡樣斑塊；實驗室檢查表現擴散性血管內凝集病變的特徵。從臨床表現和中央靜脈血的組織發現有胎毛及胎兒扁平細胞，證實羊水栓塞的診斷。在急救及支持性照顧後，病人成功的存活，但因到達前的缺氧性腦病變仍依賴呼吸器支持。***(胸腔醫學 2003; 18: 368-372)***

關鍵詞：羊水栓塞、心肺停止

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Percutaneous Stenting for Malignant Superior Vena Cava Syndrome — A Case Report and Review of the Literature

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Superior vena cava (SVC) syndrome is the clinical expression for the significant narrowing or occlusion of the SVC and its branches. Malignancies (especially lung cancers) are the underlying cause in 80-85% of cases. Radiation therapy and chemotherapy are often used to treat malignant SVC syndrome. However, both result in slow and sometimes incomplete regression of the symptoms. With the refinement of endovascular stents in recent years, the percutaneous insertion of a metallic intravascular stent has improved the outcome and lessened the morbidity of SVC syndrome. We report a 74-year-old woman who had been diagnosed with squamous cell carcinoma of the lung, stage IIIB, 3 months previously, and who declined chemotherapy. She developed SVC syndrome about 2 weeks prior to admission. Her symptoms were not relieved by palliative radiotherapy. Balloon dilatation of the stricture was performed, and a 14 mm metallic stent was placed in the right subclavian vein and SVC. Symptoms improved thereafter, although she had fluctuating right arm swelling about one week later, but this was less severe and extensive than the initial event. ***(Thorac Med 2003; 18: 373-377)***

Key words: superior vena cava (SVC) syndrome, stenting

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使用經皮支架裝置治療惡性上腔靜脈症候群—病例報告及文獻回顧

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上腔靜脈症候群是因為上腔靜脈症及其分枝發生明顯狹窄或阻塞所引起的臨床表現，常見的症狀包括喘、咳嗽、胸痛、臉部及上肢浮腫、發紺、頭痛等，惡性疾病（尤其是肺癌）約佔 80-85% 之病例。惡性上腔靜脈症候群之治療，傳統上是使用放射治療或是化學治療，然而這兩種方式產生的效果通常較慢而且不完全，而手術方式雖然可以有效地緩解症狀，但是須承擔手術的風險，且其長期存活率並不佳。近年來由於血管內支架裝置技術的改進，經皮放入金屬性的血管內支架改善了上腔靜脈症候群的治療，它可以迅速地緩解症狀，而且也逐漸成為治療惡性上腔靜脈症候群的首要選擇。本文中，我們報告一位 74 歲女性病人，因扁平細胞肺癌而引起上腔靜脈症候群，患者拒絕接受化學治療，且對放射治療反應不佳，經進行經皮支架裝置治療後有良好的反應；同時我們並回顧過去以經皮支架裝置治療惡性上腔靜脈症候群之文獻。
（胸腔醫學 2003; 18: 373-377）

關鍵詞：上腔靜脈症候群，經皮支架裝置

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Is Obstructive Sleep Apnea Syndrome the Only Diagnosis in Patients with Excessive Daytime Sleepiness and Snoring?

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Habitual snoring, excessive daytime sleepiness (EDS), and the repeated cessation of breathing during sleep are the characteristic findings in cases of obstructive sleep apnea syndrome (OSAS). However, some other diseases, such as narcolepsy, will present with these symptoms concomitantly. Three cases were reviewed in this article. They all suffered from excessive daytime sleepiness along with some other symptoms. OSAS was diagnosed initially based on the clinical complaints and polysomnographic results. Narcolepsy with simple snoring, OSAS, and OSAS combined with narcolepsy (overlapping syndrome) were diagnosed ultimately in these three cases. Because of the incorrect diagnosis, they were all treated inappropriately, and suffered from the complications of treatment. Clinical features, diagnostic methods, and the possible pitfalls of OSAS and narcolepsy are reviewed and discussed in this article. ***(Thorac Med 2003; 18: 378-384)***

Key words: Excessive daytime sleepiness, polysomnography, obstructive sleep apnea syndrome, narcolepsy

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阻塞型睡眠呼吸中止症候群是嗜睡或打鼾病人的唯一診斷嗎？

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習慣性打鼾，白天嗜睡，以及重覆的睡眠時呼吸暫停是阻塞型睡眠呼吸中止症候群病人的特徵。然而，還有其他一些疾病也會同時表現這些症狀，像是猝睡症。我們整理了過去的三個病例，他們都是白天嗜睡的患者而且合併有其他的睡眠問題。根據臨床症狀以及多重睡眠生理監測儀的檢查結果，他們一開始都被診斷為阻塞型睡眠呼吸中止症候群。但是，最後的診斷分別是猝睡症，阻塞型睡眠呼吸中止症候群以及二者的合併症。因為最初診斷的錯誤，這些病人接受了不適當的治療並且造成了相關的併發症。在這篇文章中，我們回顧了阻塞型睡眠呼吸中止症候群和猝睡症兩者在臨床表現和診斷方式上的異同，並且針對兩個疾病之間可能造成的混淆加以討論。*（胸腔醫學 2003; 18: 378-384）*

關鍵詞：嗜睡，多重睡眠生理監測儀，阻塞型睡眠呼吸中止症候群，猝睡症

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