#### The Outcome of Terminal Cancer Patients Requiring Prolonged Mechanical Ventilation

Chun-Yao Huang\*, Yao-Kuang Wu\*, Chung-Chi Huang\*,\*\*,\*\*\*, Ying-Huang Tsai\*,\*\*\*

**Background:** Approximately 76% of patients with malignancies die because of respiratory failure, excluding pneumonia and pulmonary embolisms, in intensive care centers (ICU). Currently, no published paper has described the outcome of adult cancer patients who require prolonged mechanical ventilation (PMV) (more than 21 days) for respiratory failure. The objective of this study was to describe the outcome of terminal cancer patients requiring PMV.

**Methods:** A retrospective study of 1124 patients who were admitted to our respiratory care center (RCC) from November 1999 to August 2004 was carried out. All terminal cancer patients with respiratory failure requiring prolonged mechanical ventilation were included in the study group. Demographic and clinical variables, such as age, gender, APACHE score at RCC admission, biochemistries, Glascow coma scale, ICU admission day, cancer types, and blood gas result, were obtained from consecutive respiratory failure patients. Information regarding vital status after hospital discharge was also acquired.

**Results:** Our analysis was based on data from 92 adult terminal cancer patients who met the criteria. Twenty-three patients were transferred out of the RCC, including 15 successfully weaned patients and 8 ventilator-dependent patients. In the successfully weaned group, 8 patients expired within 3 months, and the other 7 were discharged from the hospital, but all of them died within 4 months. In the ventilator- dependent group, 1 patient died in the hospital, and 7 were transferred to a local respiratory care ward (RCW). After being admitted to the RCW, 5 of 7 patients expired within 2 months, and only 2 survived more than 2 months. The overall observed in-hospital mortality was 84%, and mean survival time after discharge from the RCC was 70 days. The APACHE II score (p=0.001) and serum BUN (p= 0.0049) were significantly lower in the successfully weaned group, and the Glascow coma scale was higher in this group (p= 0.004). In our analysis, age, gender, cancer type, and ICU admission days were not significant factors influencing the outcome.

**Conclusion:** The overall in-hospital mortality of terminal cancer patients requiring PMV was as high as 84%, and mean survival times after discharge from the RCC were only 70 days. The patients with a lower BUN level and severity of disease had a higher ventilator weaning rate. This result may be of help to physicians and families when discussing whether aggressive or hospice care is more suitable for terminal cancer patients with respiratory failure. (*Thorac Med 2006;* 21: 305-312)

Key words: terminal cancer patients, respiratory failure, prolonged mechanical ventilation

<sup>\*</sup>The Division of Pulmonary and Critical Care Medicine, Department of Internal Medicine, Chang Gung Memorial Hospital, Taoyuan; \*\*The Department of Respiratory Therapy, Chang Gung Memorial Hospital, Taoyuan; \*\*\*The Department of Respiratory Care, Chang Gung University, Taoyuan

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

#### 癌症末期病患需要長期呼吸器之預後

黄俊耀\* 吳燿光\* 黄崇旂\*,\*\*,\*\*\* 蔡熒煌\*,\*\*\*

背景:有將近76% 比率的癌症病患在加護病房因呼吸衰竭死亡。而其呼吸衰竭的原因並非肺炎或是肺栓塞。目前並無論文刊載有關成人癌症病患因呼吸衰竭需要長期使用(超過二十一天)呼吸器之預後。本研究之目的主要在探討及描述末期癌症病患因呼吸衰竭需要長期使用呼吸器之預後。

方法:回溯性的數據收集,從西元1999年11月到2004年8月將近五年,針對1124位住進成人呼吸照護中心的病患加以分析。所有末期癌症之病患,因呼吸衰竭需要長期呼吸器使用者全部進入本研究。連續性的統計數據及變數收集:包括年齡、性別、住進成人呼吸照護中心當時的疾病嚴重度(APACHE score)、生化指數、病患意識昏迷指數(Glascow coma scale)、加護病房留置天數、腫瘤種類、及動脈血氣體分析數據等。轉出成人呼吸照護中心及出院後之生命指數狀況以醫院之病歷記錄和直接電話訪問病患家屬追蹤獲得。

結果:總計92位末期成人癌症之病患符合本研究之條件。有23位病患後來轉出成人呼吸照護中心。其中有15位病患成功脫離呼吸器,有8位病患長期依賴呼吸器。在成功脫離呼吸器這一組之病患,有8位病患在3個月內在院內死亡,其他7位病患順利出院。但是全部都在出院後4個月內死亡。在長期依賴呼吸器這一組之8位病患,有1位病患在院內死亡,其他7位病患順利出院轉至地區呼吸照護病房。在下轉地區呼吸照護病房之7位病患,其中5位病患在2個月內死亡,只有2位病患存活超過2個月。所有92位末期成人癌症病患平均住院死亡率為84%,轉出呼吸照護中心之平均存活天數為70天。在成功脫離呼吸器這一組之病患,其疾病嚴重度(APACHE II score, p=0.001)和血清尿素氮(BUN, p=0.0049)值明顯低於長期依賴呼吸器這一組。病患意識昏迷指數(Glascow coma scale, p=0.004)值明顯高於長期依賴呼吸器這一組。在本研究之分析:年齡、性別、生化指數、加護病房留置天數、腫瘤種類、及動脈血氣體分析數據等並非明顯影響預後之變數因子。

結論:所有末期癌症病患需要長期呼吸器使用者之平均住院死亡率高達84%,轉出呼吸照護中心之平均存活天數只有70天。病患有較低疾病嚴重度、血清尿素氮,和較高意識昏迷指數者,明顯有較高之呼吸器脫離率。本研究之結果,可以提供臨床醫師和病患家屬討論,當末期癌症病患呼吸衰竭時,積極插管治療或者安寧照護是比較合適的。(胸腔醫學2006;21:305-312)

關鍵詞:末期癌症病患,呼吸衰竭,長期依賴呼吸器

<sup>\*</sup>林口長庚醫院 胸腔內科, \*\*林口長庚醫院 呼吸治療科, \*\*\* 長庚大學 呼吸治療學系 索取抽印本請聯絡: 蔡熒煌醫師, 林口長庚醫院 胸腔內科, 桃園縣龜山鄉復興街 5 號

# Comparison of Somnologica 3 Computerized Polysomnographic Systems Analysis and Manual Assessment of Sleep Apnea

Po-Jui Chang, Meng-Heng Hsieh, Yu-Lun Lo, Chun-Yu Lo, Fu-Tsai Chung, Chih-Hsia Kuo, Horng-Chyuan Lin

Sleep disorders are increasingly being recognized by physicians, raising demand at sleep laboratories, and prompting a search for user-friendly methods of data analysis. Computerized polysomnographic systems have become a commonly used tool in sleep laboratories in Taiwan and throughout the world.

This study was designed to compare the accuracy of data analysis using computerized Somnologica 3 systems and manual interpretation. Twenty-three patients with suspected respiratory sleep disorders were referred to our department from outpatient clinics. Each individual underwent a full-night sleep study in our sleep laboratory. Recorded data were simultaneously analyzed using the computerized Somnologica 3 system (Version II software) and interpreted by a pulmonologist thoroughly experienced in polysomnography, using the standard Rechtschaffen and Kales criteria.

When comparing autoscoring and manual analysis, our results revealed that the computerized system produced more substantial errors with respect to the duration of each sleep stage (S1 sleep time:  $34.9 \pm 5.7$  vs.  $74.2 \pm 10.4$  min; S2:  $94.5 \pm 15.1$  vs.  $208.9 \pm 15.8$  min; S4:  $36.4 \pm 5.4$  vs.  $14.5 \pm 4.1$  min; REM:  $26.1 \pm 5.4$  vs.  $55.4 \pm 6.2$  min, respectively; all p < 0.05), thus leading to a reduction not only in estimated total sleep time ( $226.2 \pm 19.9$  vs.  $376.4 \pm 16.4$  min; p < 0.05), but also a decrease in the number of hypopnea/apnea events (AHI  $13.0 \pm 19.5$  vs.  $18.9 \pm 3.6$ , p < 0.05).

Based on the evidence from this study, therefore, we suggest that polysomnographic records autoscored by Somnologica 3 systems are inaccurate and will underestimate the severity of sleep-related disorders. A thoroughly experienced polysomnographer is needed for all data interpretation in clinical practice. (*Thorac Med 2006; 21: 313-320*)

Key words: obstructive sleep apnea syndrome, computerized polysomnographic systems

#### 使用 Somnologica 3 電腦分析睡眠呼吸中止和人工評估的比較

張博瑞 謝孟亨 羅友倫 羅君禹 鍾福財 郭志熙 林鴻銓

睡眠疾患愈來愈為臨床醫師所重視,睡眠實驗室應運而生,且尋找對使用者方便的資料分析方式。電腦化的多重睡眠檢查系統已成為台灣和全世界睡眠實驗室的一個常用工具。

本實驗設計比較使用電腦化的 Somnologica 3 和人工判讀的準確性。 23 位懷疑呼吸睡眠疾患的病人經由門診轉介至本部門,每位都在我們睡眠實驗室接受整晚的睡眠檢查。記錄下來的資料同時以電腦化的 Somnologica 3 系統(版本 II 軟體)及專精於多重睡眠檢查的胸腔科醫師以標準 Rechtschaffen 和 Fales 準則解讀。

我們的結果顯示,比較自動和人工分析,電腦系統判讀在每一期睡眠的時間產生較多的錯誤(S1: 34.9  $\pm$  5.7 vs. 74.2  $\pm$  10.4 分鐘;S2:94.5  $\pm$  15.1 vs. 208.9  $\pm$  15.8 分鐘;S4:36.4  $\pm$  5.4 vs. 14.5  $\pm$  4.1 分鐘;REM:26.1  $\pm$  5.4 vs. 55.4  $\pm$  6.2 分鐘;每一項p 值皆小於 0.05),不只造成全部睡眠時間的低估(226.2  $\pm$  19.9 vs. 376.4  $\pm$  16.4 分鐘;p<0.05),也導致淺呼吸/呼吸暫停事件的次數減少(AHI 13.0  $\pm$  19.5 vs. 18.9  $\pm$  3.6, p<0.05)。

因此,基於此實驗的證據,我們提出以 Somnologic 3 系統自動分析多重睡眠檢查記錄是不夠準確的, 且會低估睡眠相關疾患的嚴重度。在臨床工作上,所有的資料應由有經驗的多發睡眠檢查專家來分析。(胸 腔醫學 2006; 21: 313-320)

關鍵詞:阻塞性睡眠呼吸中止症候群,電腦化多重睡眠檢查系統

林口長庚紀念醫院 胸腔內科

索取抽印本請聯絡:林鴻銓醫師,林口長庚紀念醫院 胸腔內科,桃園縣龜山鄉復興街 5 號

#### Role of Cough Officer Screening in Early Detection of Pulmonary Tuberculosis in Inpatients

Cheng-Hung Tsai, Ching-Hsiung Lin, Chul-Feng Lin\*\*, Chun-Eng Liu\*, Mei-Li Huang\*\*, Jen-Ho Wen, Woei-Horng Chai

**Background:** In order to avoid the transmission of tuberculosis within the hospital, the early detection and treatment of active cases are fundamental tuberculosis control strategies. The aim of this study was to evaluate a computerized protocol, the so-called cough officer screening, for the early detection of pulmonary tuberculosis in inpatients.

**Materials and Methods:** A computerized cough officer screening protocol was used in Changhua Christian Hospital from Oct 2004 to Sep 2005. All inpatients were enrolled and their cough history recorded. The computerized physician order entry system reminded the doctors to survey those patients who had a cough of more than 5 days in duration. Chest radiography, sputum smears, and cultures were prescribed to determine if patients had active pulmonary tuberculosis.

**Results:** A total of 57,745 inpatients were recruited into this study. The cough officer screening system identified 6,971 (12%) patients with cough duration longer than 5 days. Among them, 2,088 (30%) patients had chest radiography and/or sputum acid-fast smear and culture examinations. Eighteen were diagnosed with active pulmonary tuberculosis, and all were admitted to the medical ward. Based on the TB reporting information system, 151 inpatients were diagnosed with pulmonary tuberculosis during this study period, and the case detection rate using cough officer screening was 12% (18/151). The average cost per case finding was NT\$49,865.

**Conclusions:** Cough officer screening is effective in the early detection of active pulmonary tuberculosis in inpatients. Strategies to improve doctors' compliance with this screening system will increase the case finding rate. In terms of cost-effectiveness, the internal medicine department is the most important target for screening. Determining the most appropriate cutoff point for cough duration requires further study. *(Thorac Med 2006; 21: 321-327)* 

Key words: cough officer screening, pulmonary tuberculosis (PTB)

Division of Chest Medicine, Department of Internal Medicine, Changhua Christian Hospital; \*Division of Infectious Disease, Department of Internal Medicine, Changhua Christian Hospital; \*\*Infection Control Committee, Changhua Christian Hospital

Address reprint requests to: Dr. Ching-Hsiung Lin, Changhua Christian Hospital, 135 Nanshiao Road, Changhua, 500, Taiwan

#### 咳嗽偵測機制在住院病人早期發現肺結核的角色

蔡政宏 林慶雄 林瑞鳳\*\* 劉尊榮\* 黄美麗\*\* 溫仁和 蔡偉宏

背景:為避免院內結核病的傳播,早期診斷與治療是必要的結核病防治策略。本篇研究的目的是評估 一套電腦化的咳嗽偵測機制用於早期偵測住院病人是否患有肺結核之可行性。

方法:本院實施一套電腦化的咳嗽偵測機制,從2004年10月到2005年9月,所有住院病人皆納入偵測機制並紀錄咳嗽天數。一旦病人咳嗽5天以上,醫師的電腦醫囑系統會提醒醫師評估這些病人是否需要作肺結核檢查,包括胸部X光、肺結核痰液抹片以及培養。

結果:本篇研究期間共有57,745位住院病人,由咳嗽偵測機制提醒醫師病人已連續咳嗽5天以上的病人數為6,971位(12%),其中有2,088位(30%)有進行胸部X光及痰液檢查。這當中有18位確診為肺結核,且都是內科住院病人。由疾病管制局肺結核通報資訊系統得知,在此研究期間本院共通報151位住院病人確診肺結核個案。本咳嗽偵測機制的TB發現率為12%(18/151),而藉由本機制診斷一位肺結核病患平均需花費為新台幣49,865元。

結論:咳嗽偵測機制用於早期肺結核之偵測是有其效益的,致力增加醫師對此機制的實行將會提升TB發現率。就經濟效益而言,內科住院病人是本機制實施之最重要族群。到底住院病人最適當的咳嗽天數以開始啟動本機制是最有效益的仍需更進一步的研究。(胸腔醫學 2006; 21: 321-327)

關鍵詞:咳嗽偵測機制,肺結核

#### Treatment and Outcome of Traumatic Tracheobronchial Injuries

Ching-Yang Wu, Yun-Hen Liu, Yi-Cheng Wu, Ming-Ju Hsieh, Po-Jen Ko, Yen Chu, Hui-Ping Liu

**Background:** Traumatic tracheobronchial injuries are rare, but have been increasing in incidence in recent years. We summarize and analyze the presentations, management, and outcome of tracheobronchial injuries through a presentation of our experience and a review of the literature.

**Patients and methods:** From October 2001 to June 2005, we managed 11 patients with tracheobronchial injuries due to both blunting and penetrating etiologies. Clinical presentations, diagnostic modalities, management, and complications were reviewed retrospectively.

**Results:** Eleven patients with traumatic tracheobronchial injuries were identified: 6 were male and 5 were female, with a median age of 43.9 years (range, 9~85 years). Physical findings were closely related to the lesion site, and subcutaneous emphysema (6/11) was the most common clinical finding. All of our patients underwent a further survey of associated injuries after vital signs had been stabilized. High incidences of associated injuries were noted in both groups; however, there were no esophageal or great vessel injuries in our study. All patients received surgical treatment and recovered well, except 2 patients with anastomotic granulations in the serial follow-up.

**Conclusion:** Early diagnosis and early management is crucial for traumatic tracheobronchial injury. The morbidity and mortality of tracheobronchial injury is influenced by associated injuries. Bronchoscopy can provide detailed information on airway injury and lead surgeons to choose the proper method. We performed debridement and mobilization of the airway prior to primary repair with absorbable suture. Intensive chest care and adequate inhalation therapy is important for airway toilet. Extubation should be performed as soon as possible to avoid positive-pressure ventilation injury. (*Thorac Med 2006; 21: 328-336*)

Key words: traumatic tracheobronchial injuries, airway trauma

Division of Thoracic & Cardiovascular Surgery, Chang Gung Memorial Hospital, Chang Gung University Address reprint requests to: Dr. Yun-Hen Liu, Division of Thoracic & Cardiovascular Surgery, Chang Gung Memorial Hospital, 5 Fushing Street, Kweishan, Taoyuan, Taiwan 333, R.O.C.

#### 外傷性氣道損傷的治療與預後

吳青陽 劉永恆 吳怡成 謝明儒 柯博仁 朱彦 劉會平

背景:外傷性氣道損傷在臨床上雖是少見但近年來發生率有上升的趨勢。為了進一步瞭解氣道損傷的 相關臨床處理,我們針對歷史文獻及本院實例作回溯性的分析並嘗試對氣道損傷的臨床處理流程作系統性 的歸納。

方法:自2001 十月到2005 六月我們共處理十一位外傷性氣道損傷的病患。我們針對外傷性氣道損傷的臨床症狀表現、診斷方式、治療方式以及可能的併發症作回溯性的研究。

結果:在十一位外傷性氣道損傷的病患中,有六位是男性,有五位是女性;其平均年齡為 43.9 歲 (9~85 歲)。其臨床症狀表現與氣道受損的為置有密切關係。

最常見的重狀就是皮下氣腫。在病人生命徵象穩定之後,我們才針對可能相關的損傷作更一步的檢查。 我們發現不論是鈍傷或是穿刺傷所引起的氣道損傷都有相當高的比率會伴隨其他損傷。所有病人都接受外 科手術治療而且術後恢復良好,但有兩個病人在術後追蹤在吻合端出現肉芽組織增生。

結論:早期診斷以及早期處理對外傷性氣道損傷是很重要的。氣道損傷的致病變(morbidity)以及致死率(mortality)會因不同相關損傷而有所影響。若高度懷疑氣道損傷,在作更進一步檢查之前必須維持氣道通暢。在維持氣道通暢後才可以針對相關損傷所進一步的檢查。支氣管鏡可以提供更多更詳細的氣道損傷狀況提供外科醫師作適當的術前規劃。我們針對氣道損傷作適度的清創以及用可吸收線修補缺損。胸腔姿勢引流(intensive chest care)以及適當的呼吸治療(inhalation therapy)在氣道清潔(airway toilet)上是很重要的。術後應儘早拔管以及盡量避免正壓機械呼吸(positive-pressure ventilation)以免影響修補處的癒合。(胸腔醫學 2006; 21: 328-336)

關鍵詞:外傷性氣道損傷、氣道外傷

### Pulmonary *Mycobacterium Avium* Complex Infection in a Middle-age Woman with Bronchiectasis

Li-Chiao Kuo, Wei-Juin Su\*, Reury-Perng Perng\*

Mycobacterium avium complex (MAC) is the most frequent pathogen causing nontuberculous mycobacterial pulmonary infection. Herein, we report a 55-year-old non-smoking female who had been diagnosed with bronchiectasis previously. She had also had small discrete nodules running a very slow, progressive course for at least 3 years, and was eventually diagnosed with MAC lung disease. In a patient with bronchiectatic imaging findings, especially with associated nodular lesions, pulmonary MAC infection may be considered as a possible etiology. (Thorac Med 2006; 21: 337-342)

Key words: Mycobacterium avium complex, nontuberculous mycobacteria, bronchiectasis

#### 鳥型分枝桿菌肺部感染在一位中年女性支氣管擴張症病例

郭麗巧 蘇維鈞\* 彭瑞鵬\*

本篇報告一例鳥型分枝桿菌之肺部感染。病人為一位五十五歲女性,因咳血到門診求診,胸部影像學檢查發現病患有支氣管擴張症合併肺部小結節。痰液細菌培養初步發現為分枝桿菌,後來經鑑定為鳥型分枝桿菌感染。我們比較病患以前的胸部 X 光片發現肺部浸潤有更惡化的現象,於是開始使用藥物治療。鳥型分枝桿菌是非典型分枝桿菌在肺部感染中最常見的菌株。影像學上若表現為支氣管擴張症合併肺部小結節者,則應考慮病患是否感染非典型分枝桿菌,特別是鳥型分枝桿菌的感染。(胸腔醫學 2006; 21: 337-342)

關鍵詞:鳥型分枝桿菌,非典型結核分枝桿菌,支氣管擴張症

### Irinotecan-related Pulmonary Toxicity — A Case Report

Geeng-Bin Chen\*, Ching-Yi Lee\*,\*\*, Kuo-Shuen Chen\*\*\*, Tzu-Chin Wu\*, Ming-Fang Wu\*,\*\*\*\*

Irinotecan is a widely used chemotherapeutic agent for colorectal, gastric, lung, and esophageal cancer. We present the case a 55-year-old man with advanced esophageal cancer who developed progressive interstitial lung infiltrates and who suffered respiratory failure following 3 courses of irinotecan. Progressive pulmonary insufficiency and death were also reported in the initial Japanese studies, despite the institution of empiric steroid therapy for a syndrome similar to that which our patient experienced. As the clinical indications for the use of irinotecan are expanding, we would like to emphasize that irinotecan-associated pulmonary toxicity is a potentially serious adverse effect. Patients with pre-existing pulmonary disease may be at higher risk for this complication, and clinicians should be alert to this possibility. *(Thorac Med 2006; 21: 343-348)* 

Key words: irinotecan, esophageal cancer, pulmonary toxicity, pneumonitis, acute respiratory distress syndrome

#### 化學治療相關的肺毒性-病例報告

陳耿彬\* 李勁毅\*,\*\* 陳國勳\*\*\* 吳子卿\* 吳銘芳\*,\*\*\*\*

Irinotecan 是一個廣泛應用於大腸直腸、胃、肺及食道惡性腫瘤的化學治療藥物。我們報告一位 55 歲晚期食道癌男性病人,在接受三個 irinotecan 療程後,產生進行性肺部浸潤和呼吸衰竭。在日本最初的研究,雖然經驗性使用類固醇,病人仍然因進行性肺部浸潤和呼吸衰竭而死亡。由於 irinotecan 臨床使用適應症增加,我們描述 irinotecan 相關肺毒性。有肺部疾病的病人可能會有較高的危險。醫師應對這種可能性保持警覺。(胸腔醫學 2006; 21: 343-348)

關鍵詞:irinotecan,食道癌,肺毒性,肺炎,急性呼吸窘迫症候群

#### Successful Weaning from Invasive Ventilation in Lateonset Pompe's Disease — A Case Report

Chiu-Ping Kuo, Chang-Yi Lin, Chien-Liang Wu

Pompe's disease is an autosomal recessive inheritable disorder involving a deficiency of the lysosomal enzyme acid alpha-glucosidase (GAA). The incidence is 1 in 40,000 births. It predominately affects the heart, skeletal, and respiratory muscles. The clinical spectrum ranges from a rapidly progressive infantile form leading to death within the first year of life to a slowly progressive late-onset form of the disease that affects mobility and respiratory function. Both types are generally characterized by progressive muscle weakness and breathing difficulty, but the severity of the disease can vary widely depending on the age of onset and the extent of organ involvement. Patients with the late-onset form who become symptomatic in childhood are more severely affected and typically die by the second or third decade of life. As the disease progresses, patients lose mobility, or become wheelchair bound or bedridden. Respiratory muscle involvement is common, may occur early in the course of the disease, and is the most frequent cause of mortality. We present the case of a 31-year-old woman who was diagnosed with late-onset Pompe's disease 5 years previously, and who developed pneumonia with acute respiratory failure. She was successfully weaned from the ventilator after intensive respiratory muscle training. (*Thorac Med 2006; 21: 349-354*)

Key words: pompe's disease, ventilator weaning

#### 晚發型龐貝氏患者成功脫離呼吸器一病例報告

#### 郭秋萍 林長怡 吳健樑

龐貝氏症是一種罕見的遺傳疾病,主要影響的是心肌、骨骼肌及呼吸肌的功能,依發生的早晚,可分為早發型及晚發型。早發型通常進展快速,大多數患者在一歲前死亡;而晚發型進展較緩,逐漸影響到日常活動與呼吸功能。我們報告此病例是一位31歲女性,在5年前被診斷是晚發型龐貝氏症,此次因肺炎合併呼吸衰竭而被插管使用呼吸器。經過漸進式的吸氣阻力及增加肌肉的耐力訓練,再加上營養補給,終於成功脫離呼吸器。

雖然在疾病的自然進程中,大多數龐貝氏患者最終會面臨呼吸惡化而縮短壽命,但是在他們因肺部感染導致急性呼吸衰竭時,適度的呼吸肌訓練,加上物理治療及營養補充,來協助其脫離呼吸器,也許需要投入更長的時間與更多的人力,但仍是值得且必須一試的。(胸腔醫學 2006; 21: 349-354)

關鍵詞:龐貝氏症,脫離呼吸器

台北馬偕紀念醫院 胸腔內科

索取抽印本請聯絡:郭秋萍醫師,台北馬偕紀念醫院 胸腔內科,台北市中山北路二段 92 號

#### Tracheobronchial Mucoepidermoid Carcinoma in a 17year-old Girl: A Case Report and Review of the Literature

Chien-Te Li, Ching-Hsiung Lin, Shang-Yun Ho\*, Huei-Mei Chang\*\*, Ching-Yuan Cheng\*\*\*

Tracheobronchial mucoepidermoid carcinoma is rare. It is classified as a carcinoma of the salivary gland type in lung cancer, and comprises only 0.1-0.2% of primary lung cancers. The tumor is classified as either a low- or high-grade malignancy. The low-grade growth can slowly appear in any age group, and is readily cured by excision. The high-grade tumor behaves aggressively, infiltrates widely in the salivary gland, and produces lymph node and distant metastases. Mucoepidermoid carcinomas account for about 21% of the malignant tumors of the parotid gland and 10% of those of the sublingual gland. They are the most common malignant tumor of the parotid.

We report the case of a 17-year-old girl, a high school student previously in good health and without systemic disease, who suffered from non-productive cough off and on for 8 months. Initially, she was treated at a local clinic as having a common cold, until chest tightness and dyspnea on exertion developed, and then she visited our OPD. The chest radiograph revealed a total collapse of the left lung parenchyma. The chest computer tomography examination demonstrated a contrast medium-enhanced and hypervascular irregular tumor obstructing the left main bronchus. Fibroflexible bronchoscopy revealed a tumor near the carina, coated with whitish debris, and protruding from the left main bronchus with lumen total occlusion. Several transbronchial biopsies were performed, but yielded no definite diagnosis. We consulted the chest surgeon, and a rigid bronchoscopy was performed; the frozen tissue of the excised biopsy taken during the operation revealed only a suspected endocrine tumor, possibly a carcinoid tumor. Finally, a left pneumonectomy, including lymph node dissection was done, and the pathology reported mucoepidermoid carcinoma, low grade.

A literature review revealed that low-grade tracheobronchial carcinoma can be cured by surgical excision. No other metastasis was detected in this patient, and she recovered well with no symptoms after surgical treatment. At the end of a 1-year follow up and short-term pulmonary rehabilitation, she was well and without residual symptoms. (*Thorac Med 2006; 21: 355-361*)

Key words: mucoepidermoid carcinoma, tracheobronchial tree

#### 發生在 17 歲女孩的氣管支氣管惡性黏液類上皮癌 一病例報告

李建德 林慶雄 何上芸\* 張惠媚\*\* 鄭清源\*\*\*

發生在氣管、支氣管惡性黏液類上皮癌相當罕見,被歸類為唾液腺型態腫瘤,佔原發性肺癌的0.1~0.2%,其中又分為低度及高度惡性程度。低惡性度生長緩慢,好發於任何年齡層,可以全切除治癒。高惡性度生長較快,可浸潤於唾液腺內並且淋巴或遠處轉移。惡性黏液上皮癌佔腮腺惡性腫瘤的21%,為最常見的腮腺惡性腫瘤,佔舌下腺惡性腫瘤的10%。

我們報告一位17歲健康的高中女生,因斷續乾咳8個月,在診所當感冒治療無法治癒,接著因有胸悶及活動性呼吸困難的症狀求診,胸部X光顯示不明原因左肺完全塌陷,進一步胸部電腦斷層掃瞄檢查顯示左支氣管內有一不規則腫瘤。經軟式支氣管鏡檢查病理切片仍無法診斷出病因,因而會診外科至手術室接受硬式支氣管鏡檢查,冷凍病理切片證實為低度惡性黏液類上皮癌,最後接受左肺完全切除及淋巴節擴清手術。

手術後病患身體恢復良好,並且持續追蹤至今一年,沒有復發或轉移的現象,我們在此回顧以前的病例報告,顯示低度惡性黏液類上皮癌可以因完全手術切除而治癒。(胸腔醫學 2006; 21: 355-361)

關鍵詞:惡性黏液類上皮癌,氣管支氣管

# Symptomatic Mediastinal Bronchogenic Cyst Mimicking Esophageal Lesion in a Patient with Chronic Cough — A Case Report and Literature Review

Gang-Yu Shen, Kuo-Hwa Chiang, Yao Fong\*, Jiunn-Min Shieh

We present a rare case with a presentation of symptomatic bronchogenic cyst mimicking an esophageal lesion in a patient with chronic cough. The patient later suffered from hematemesis. The CXR revealed a middle mediastinal mass with an air-fluid level. The majority of adult patients with bronchogenic cyst are asymptomatic. In this case, the cyst was inflammatory and compressed surrounding organs such as the esophagus and bronchus.

At first, an attempt was made to use video-assisted thoracoscopy to remove the cystic lesion, but this failed. Finally, a right-side thoracotomy was used to excise the cystic lesion, due to its firm adhesion and inflammatory change. We review the related literature and discussed the clinical presentation and management. (*Thorac Med 2006; 21: 362-368*)

Key words: middle mediastinal mass, bronchogenic cyst

<sup>\*</sup>Division of Thoracic Surgery, Department of Surgery, Chi Mei Medical Center, Tainan, Taiwan Address reprint requests to: Dr. Kuo-Hwa Chiang, Division of Chest Medicine, Department of Internal Medicine, Chi Mei Foundation Medical Center, 901, Chung Hua Road, Yung Kang City, 710 Tainan, Taiwan, R.O. C

#### 一慢性咳嗽成人症狀性縱膈腔支氣管源性囊腫模擬食道 病變——病例報告及文獻回顧

沈耿裕 江國華 馮瑤\* 謝俊民

我們報告一例,罕見慢性咳嗽成人症狀性縱膈腔支氣管源性囊腫模擬食道病變病例。後來伴有吐血發生,此時 X 光顯示中縱膈腔質塊伴含有氣液平面。大部分支氣管源性囊腫成人是無症狀。我們這例支氣管源性囊腫有發炎性且壓迫鄰近食道及支氣管。起初影像輔助式胸腔手術試圖取出囊腫卻失敗。最後用右側胸廓切開術,完全切除了,因穩固沾粘及發炎變化的囊腫。我們回顧了相關文獻,討論支氣囊腫臨床表現及治療方法。(胸腔醫學 2006; 21: 362-368)

關鍵詞:中縱膈腔質塊,支氣管源性囊腫

### Wegener's Granulomatosis Presenting as Breast Masses in a Patient with Sjogren's Syndrome

Chun-Yu Lo, Chih-Wei Wang, Yueh-Fu Fang, Meng-Heng Hsieh, Po-Jui Chang, Fu-Tsai Chung, Chih-Hsia Kuo, Horng-Chyuan Lin

Wegener's granulomatosis is a necrotizing vasculitis. The etiology is not known. Although it may involve any organ, Wegener's granulomatosis predominantly involves the upper and lower respiratory tracts together with glomerulonephritis. Herein, we report the case of a 55-year-old woman with Sjogren's syndrome and Wegener's granulomatosis which unusually presented as breast masses. Her breast and pulmonary lesions were successfully treated with high-dose corticosteroid and cyclophosphamide. *(Thorac Med 2006; 21: 369-375)* 

Key words: wegener's granulomatosis, breast, sjogren's syndrome, anti-neutrophil cytoplasmic antibody

#### 韋格納氏內芽腫及舍格蘭氏症候群併乳房腫塊:病例報告

羅君禹 王志偉 枋岳甫 謝孟亨 鍾福財 張博瑞 郭志熙 林鴻銓

韋格納氏肉芽腫是一種壞死性血管炎。其病名尚不明。雖然此病也可能影響到其他器官,但主要仍以上下呼吸道及腎絲珠腎炎為主。此處我們提出一個55歲罹患韋格納氏肉芽腫及舍格蘭氏症候群的女性,其特殊臨床表現為乳房腫塊。她的乳房及肺部病灶在使用高劑量類固醇及環磷酰胺後成功控制。(胸腔醫學2006; 21: 369-375)

關鍵詞:韋格納氏肉芽腫,乳房,舍格蘭氏症候群,抗嗜中性球細胞質抗體

林口長庚紀念醫院 內科部胸腔科

索取抽印本請聯絡:林鴻銓醫師,林口長庚紀念醫院 內科部胸腔科,333桃園縣龜山鄉復興街5號

# Complicated Hemothorax after Administration of Aspirin, Dipyridamole and Nadroparine for Brain Infarction — A Case Report

Chien-Ming Chu, Huang-Pin Wu, Wen-Bin Shieh\*, Chung-Ching Hua

A 75-year-old man arrived at the Keelung Chang-Gung Hospital emergency department due to a choking episode. CPR was successfully performed. A chest radiography done afterward revealed pneumonia located in the left lung, with no evidence of rib fracture. The patient remained unconscious for 7 days after our administration of CPR. The attending neurologist diagnosed a brain infarction, for which aspirin, dipyridamole and nadroparine were prescribed. Progressive ecchymosis on the left forearm and hemothorax in the left chest developed 6 days after administration of ASA and LMWH, resulting in a 21.6% decrease in hematocrit. The hemothorax required tube thoracostomy and a blood transfusion. Aspirin, dipyridamole and nadroparine were discontinued and the hemothorax did not recur. The possibility of complicated hemothorax must be considered in patients for whom low molecular weight heparin, aspirin, and dipyridamole are concurrently prescribed. *(Thorac Med 2006; 21: 376-381)* 

Key words: hemothorax, nadroparine

Division of Pulmonary Medicine, Department of Internal Medicine, Chang-Gung Memorial Hospital, Keelung, Taiwan, R.O.C.; \*Department of Internal Medicine and Department of Respiratory Care, Medical College, Chang Gung University, Taoyuan, Taiwan

Address reprint requests to: Dr. Chung-Ching Hua, Division of Pulmonary Medicine, Department of Internal Medicine, Chang-Gung Memorial Hospital, 222, Mai-Chin Road, Keelung 204, Taiwan, R.O.C.

### 心肺復甦術及以 Aspirin、 Dipyridamole 、 Nadroparine 治療腦梗塞之後所造成的延遲性血胸一病例報告

朱建民 吳黃平 謝文斌\* 花仲涇

一位七十五歲男性病患因會到而被送到基隆長庚醫院急診室。在施行心肺復甦術後,此病患成功被救回。接下來所拍攝的胸部 X 光片顯示除左側肺炎外,並無肋骨骨折。在施行心肺復甦術後,此病患七天仍未清醒。神經內科醫師診斷為腦梗塞,於是我們給予 Aspirin 、 Dipyridamole 、 Nadroparine 治療。六天後,左前臂出現瘀斑,產生左側血胸,紅血球比容計下降到 21.6% ,需要胸管引流及輸血。抗凝血藥物立刻被停止使用,而血胸也不再發生。對於合併使用 Aspirin 、 Dipyridamole 、 Nadroparine 的病患,必須考慮併發血胸的可能性。(胸腔醫學 2006; 21: 376-381)

關鍵詞:血胸, nadroparine

基隆長庚紀念醫院 胸腔內科,\*長庚大學醫學院 內科暨呼吸照護學系 索取抽印本請聯絡:花仲涇醫師,基隆長庚紀念醫院 胸腔內科,基隆市麥金路 222 號

### Squamous Papilloma and Papillomatosis of the Airway — A Report of 3 Cases

Kang-Cheng Su, Chong-Chen Lu, Reury-Perng Perng

Squamous papillomatosis of the airway is an uncommon disease. One of its common characteristic features is the frequent recurrence and extension of the warty growth of the lesions. Squamous papilloma is rare. It may occur in the upper to lower airway, and is usually seen in male adults who smoke. Complete resection of the lesions is the key to preventing their spread and recurrence. Airway obstruction and malignant transformation are the most severe complications with frequent recurrence. We report 3 cases with airway involvement. Case 1, a 45-year-old female, was diagnosed to have a solitary squamous papilloma in the trachea. She underwent complete resection of the tumor, and has enjoyed an event-free life in the 14 months following treatment, up to this writing. Case 2, a 16-year-old girl, and Case 3, a 52-year-old male, had suffered from recurrent laryngeal papillomatosis since childhood, and underwent tracheostomy to keep the airway patent, within 1 and 2 years, respectively, after the onset of the disease. Case 3 developed squamous cell carcinoma 48 years after the onset of the disease. We discuss the cases and also review the relevant literature. (*Thorac Med 2006; 21: 382-391*)

Key words: squamous papillomatosis, recurrent respiratory papillomatosis, solitary squamous papilloma, human papillomavirus

Department of Chest Medicine, Taipei-Veterans General Hospital, Taipei, Taiwan, R.O.C. Address reprint requests to: Dr. Chong-Chen Lu, Department of Chest Medicine, Taipei-Veterans General Hospital, 201, Sec.2, Shih-Pai Road, Taipei City 112, Taiwan, R.O.C.

#### 呼吸道鱗狀上皮乳突瘤一病例報告

蘇剛正 盧崇正 彭瑞鵬

多發性鱗狀上皮乳突瘤症在上呼吸道是一種常見於小孩的呼吸道良性腫瘤,好患於喉部,其病原為人類乳突狀病毒家族。此病的常見特徵之一就是疣狀生長的病兆常會頻繁的復發以及往外擴散。而單一之鱗狀上皮乳突瘤則罕見,從上呼吸道至下呼吸道皆有可能發生,抽菸為主要誘發因子,好發於抽菸之成人男性,只有少數病例與人類乳突狀病毒感染相關。手術將病灶處完全切除是預防擴散及復發的重要關鍵。如果病灶一直復發,最嚴重的後遺症就是造成呼吸道阻塞及病灶轉變為惡性。我們報告三個病例,一個為發生於氣管之單一乳突瘤,兩個為喉部復發性乳突瘤症合併上呼吸道阻塞,其中一位在發病 48 年後發生惡性轉變。同時我們回顧文獻並提出討論。(胸腔醫學 2006; 21: 382-391)

關鍵詞:鱗狀上皮乳突瘤,復發性呼吸道乳頭狀瘤症,人類乳頭狀病毒