Inhalation of Nitric Oxide in Acute Respiratory Distress Syndrome

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Inhalation of nitric oxide (INO) selectively vasodilates ventilated lung regions with increased vascular tone. The oxygenation of nonventilated regions often improves due to a reduction in relative blood flow. Most effects of NO are mediated by cyclic GMP (cGMP) resulting from the activation of adenylate cyclase by NO. Selective pulmonary vasodilation by INO in acute respiratory distress syndrome (ARDS) reduced pulmonary artery pressure (PAP) with increased PaO_2/FiO_2 as the shunt decreased, lowered right ventricle end-diastolic volume (RVEDV) and right ventricle end-systolic volume (RVESV), and increased the right ventricle ejection fraction (RVEF), but the mean artery pressure (MAP) and cardiac index (CI) did not change. With INO, there was a rapid improvement in PaO_2/FiO_2, and this effect was immediately lost on discontinuation. INO may reduce hydrostatic forces in pulmonary capillaries by decreasing pulmonary venous tone. INO may also reduce pulmonary capillary permeability by inhibiting oxidant injury, and INO acts as a free radical scavenger and attenuates oxidative damage. Management of ARDS was not standardized between groups, and survival benefits to small subgroups were lost within large groups of heterogenous ARDS patients. Improvement in gas exchange was variable and may not be meaningful. A favorable response is related to baseline pulmonary vascular tone, alveolar recruitment, high initial venous admixture, increased cardiac output (CO), and ABO blood type. The combination of INO with other agents that increase pulmonary vascular tone or prolong or accentuate the effect of INO may lead to better results than INO. INO may improve new modalities, such as high frequency ventilation and partial liquid ventilation (PLV), to ventilate ARDS patients.
(Thorac Med 2003; 18: 385-391)

Key words: acute respiratory distress syndrome, nitric oxide, shunt

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成人呼吸窘迫症候群患者吸入一氧化氮

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一氧化氮吸入選擇性擴張具高血管張力的可通氣肺部。非通氣肺部的氧合作用常因為相對血流減少而改善。一氧化氮的大部分效應是經由激發腺嘌呤環酵素所產生的 CGMP 所媒介。成人呼吸窘迫症候群病患吸入一氧化氮（選擇性肺部血管擴張劑），減少肺部動脈血壓及增加氧合作用，因為分流減少，減少右心室舒張末期和收縮末期容積，增加右心室收縮分率，但平均全身血壓及心臟指數並不改變。一氧化氮吸入能夠迅速增加氧合作用，一旦停止使用，這個效應馬上消失。一氧化氮吸入能夠因為減少肺部靜脈血管張力，而減少肺部微血管的靜水壓力。一氧化氮吸入能夠因為抑制氧化傷害，而減少肺部微血管的通透性，一氧化氮吸入能夠扮演自由基清除者，而減少氧化傷害。成人呼吸窘迫症候群病患的處理並不一致，少數特殊病患的生存，不容易在多數異質病患發現。氣體交換的改善並不一致，可能也不具意義。良好反應常和基礎肺部血管張力、肺泡容積增加、初期分流增加、心輸出量增加、和 ABO 血型有關。一氧化氮吸入結合增加肺部血管張力或增加一氧化氮吸入效應的方法，可能得到比一氧化氮吸入更好的結果。一氧化氮吸入可能改善成人呼吸窘迫症候群病患通氣的新方案，例如高頻通氣和液體通氣。***（胸腔醫學 2003; 18: 385-391）***

關鍵詞：成人呼吸窘迫症候群，一氧化氮吸入，分流

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Ultrasonographic Hemidiaphragmatic Weakness in Acute Respiratory Failure: Impact on Extubation Outcome

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Background: The impact of hemidiaphragmatic weakness on the extubation outcome is unclear.

Methods: We performed ultrasonographic evaluations of the hemidiaphragms of patients with acute respiratory failure treated in the medical ICU. The patients were intubated and mechanically ventilated. At the beginning of a spontaneous breathing trial before extubation, the movements of the liver and spleen, which represented the hemidiaphragmatic movements, as well as conventional weaning parameters, were measured. Clinical data, radiographic findings, weaning parameters, and ultrasonographic findings were analyzed.

Results: During a study period of six months, 58 patients completed ultrasonographic study. Among them, 14 (24%) patients had unilateral hemidiaphragmatic weakness and 3 (5%) had bilateral weakness. The mean values of liver and spleen displacement did not correlate well with P_{Imax} and V_{Tspon} (R square = 0.19 and 0.16, respectively). In patients with unilateral hemidiaphragmatic weakness, 67% showed radiographic evidence of hemidiaphragmatic elevation, and only 17% showed abdominal paradoxical movements. The extubation failure rate for all patients was 41%. We found that bilateral hemidiaphragmatic weakness, but not unilateral hemidiaphragmatic weakness, is associated with a poor extubation outcome.

Conclusion: Unilateral hemidiaphragmatic weakness does not have significant impact on the extubation outcome of patients with acute respiratory failure. Ultrasonographic measurements of liver and spleen displacement during spontaneous breathing is a feasible method for evaluating hemidiaphragmatic movement. ***(Thorac Med 2003; 18: 392-401)***

Key words: Liver and spleen movements, Hemidiaphragmatic weakness, Extubation outcome, Ultrasonography

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在急性呼吸衰竭之病患，以超音波評估單側橫膈膜肌無力之情形：分析其對拔管預後之影響

江榮人　鄭之勛　楊泮池

背景：單側橫膈膜肌無力對於呼吸衰竭病人拔管失敗率的影響目前仍不明。

方法：本研究以超音波對內科加護病房內急性呼吸衰竭之病患評估其橫膈膜肌收縮之情形，病患均接受氣管內插管及呼吸器輔助呼吸。以肝臟及脾臟的移動代表橫膈膜的移動，我們測量其於病患自主性呼吸時移動的情形，並測量傳統的呼吸器脫離指標，並將病患之臨床資料、影像學表現、傳統呼吸器脫離指標及超音波測量結果納入研究分析。

結果：在六個月期間，共有58位病患被完整地收案，其中，14位病患（24%）為單側橫膈膜肌無力；3位病患（5%）為雙側橫膈膜肌無力。肝臟和脾臟之移動平均值和吸氣最大壓力值（P_{Imax}）及自主性呼吸潮氣量（V_{Tspon}）的相關性不佳。在所有的單側橫膈膜肌無力病患中，僅67%病患在影像上顯示單側橫膈升高，而只有17%的病患的理學檢查發現有腹部矛盾性呼吸的情形。所有的病患中，拔除氣管內插管脫離呼吸器的失敗率為41%。本研究發現，雙側橫膈膜肌無力與拔管失敗率有相關，但單側橫膈膜肌無力和拔管失敗率並沒有統計學上的相關性。

結論：在我們的研究結果中，單側橫膈膜肌無力對急性呼吸衰竭病患之拔管失敗率無決定性的影響。以超音波測量肝臟及脾臟於自然呼吸下的移動來評估橫膈肌收縮是實用可行的方法。***（胸腔醫學 2003; 18: 392-401）***

關鍵詞：肝臟及脾臟移動、單側橫膈膜肌無力、拔管預後、超音波

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Analysis of Bronchoscopic Findings in Patients Suspected of Having Upper Airway Obstruction

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Background: A great variety of the conditions affecting the upper airway from the naso-pharynx to the tracheal carina can cause upper airway obstruction (UAO). It is important to make an early diagnosis of UAO, because it may lead to severe respiratory problems or respiratory failure. The purpose of this study is to explore the bronchoscopic findings in patients suspected of having upper airway obstruction.

Materials and Methods: We retrospectively analyzed a series of 108 patients with suspected UAO who had undergone bronchoscopic examination from February 1998 to March 2003 at Kaohsiung Chang Gung Memorial Hospital. The medical records of these patients were subsequently reviewed.

Results: The overall positive rate of the bronchoscopic findings exceeded 80%. The most frequent symptom or sign was dyspnea, followed by stridor. The most common obstruction location was the trachea, followed by the vocal cord. The most common etiology was tracheal stenosis as a complication of translaryngeal intubation or tracheostomy (50.3%). However, no relationship among gender, age, percentage of stenosis, indication for intubation, type of stenosis, and length of time between intubation and bronchoscopy was noted. We also found other etiologies of UAO, such as a neoplasm causing vocal cord paralysis.

Conclusions: We need frequently to remind ourselves of the possibility of UAO in every patient complaining of dyspnea. Chest roentgenograms of good quality interpreted with a high degree of suspicion, particularly when the patient has the risk of UAO, will lead to earlier diagnosis.
(Thorac Med 2003; 18: 402-408)

Key words: upper airway obstruction, bronchoscopy, stridor

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疑有上呼吸道阻塞病患之支氣管鏡檢查結果分析

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前言：很多侵犯鼻咽至氣管隆凸間呼吸道的狀況會造成上呼吸道阻塞。及早診斷出上呼吸道阻塞是很重要地，因為它可能會導致嚴重的呼吸問題甚至呼吸衰竭。本文目的在探討於疑有上呼吸道阻塞病患之支氣管鏡檢查結果分析。

材料與方法：我們回溯性分析自從 1998 年 2 月到 2003 年 3 月間，在高雄長庚紀念醫院因為疑似有上呼吸道阻塞之病患而來接受支氣管鏡檢查之檢查結果，一共有 108 位病患。並且由病歷中分析其相關資料。

結果：支氣管鏡檢查有所發現者超過八成。最常見之症狀或徵兆為呼吸困難，其次為喘鳴。最常見之阻塞部位在氣管，其次在聲帶。最常見之病因是因為曾經接受氣管內插管，或氣管造口術之氣管狹窄後遺症（佔 50.3%）。然而，在年齡、性別、氣管狹窄之比率、接受氣管內插管之原因、氣管狹窄之形狀、接受氣管內插管和接受支氣管鏡檢查之時距上並無相關性存在。我們也注意到其他造成上呼吸道阻塞的病因，例如因為腫瘤而導致聲帶麻痺等等。

結論：對於抱怨會喘的病患，我們應該常常保持警覺性，看看病患是否有上呼吸道阻塞。當病患有上呼吸道阻塞的可能性時，品質良好的胸部X光並且仔細判讀可以幫助提早診斷。***(胸腔醫學 2003; 18: 402-408)***

關鍵詞：上呼吸道阻塞，支氣管鏡術，喘鳴

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Experience with Pigtail Tube Drainage Treatment for Spontaneous Pneumothorax With and Without a Water Seal

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We report our experience with pigtail tube drainage in the treatment of spontaneous pneumothorax, including the use of the pigtail with a one-way-valve bag only and with the water-sealed bottle system, and compare this to the traditional chest tube thoracotomy. One hundred and seventy patients were included and analyzed. One hundred and three patients were treated with the pigtail tube (82 patients were treated with a pigtail tube connected to a one-way-valve bag, and 21 with an underwater seal), and 67 patients were treated with the traditional chest tube. The extubation time, mean hospital stay, evacuation rate, and total cost were similar, without significant statistical difference. In the chest tube group (success rate, 78%), fifteen patients underwent surgical intervention due to delayed resolution, hemopneumothorax, and personal considerations; and in the pigtail group (success rate, 70%), thirty-one patients underwent other procedures for pneumothorax, including chest tube insertion and surgical intervention. This verifies our initial suspicion that the pigtail drainage system is effective but not superior to the chest tube system. Between the two subgroups using the pigtail drainage system (one with a one-way-valve bag and one with an underwater-sealed bottle), the extubation time, mean hospital stay, and evacuation rate were similar, but the total cost was higher in the underwater seal group. Therefore, when considering ambulatory ability and good patient compliance, pigtail tube drainage with a one-way-valve bag system can be considered the initial treatment of choice for spontaneous pneumothorax. ***(Thorac Med 2003; 18: 409-418)***

Key words: chest tube, pigtail, spontaneous pneumothorax

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自發性氣胸以豬尾巴管治療包括單向閥門引流袋及水下引流之處理經驗

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在此我們報告以豬尾巴管治療治療原發性自發性氣胸之經驗，包括以豬尾巴管連接單向閥門引流袋及連接水下引流瓶系統，並與傳統胸管引流術作比較。從 1997 年 1 月到 2002 年 9 月，我們分析了 170 位原發性自發性氣胸之病人，其中 103 人接受豬尾巴管引流治療（82 位病人接受豬尾巴管連接單向閥門引流袋治療，21 位接受以豬尾巴管連接水下引流瓶系統），其餘 67 位接受傳統胸管引流術治療。在拔管時間、住院日、吸收速度、及住院費用比較上接近，並無顯著差異。以傳統胸管引流之成功率為 78%，15 位病人因吸收效果不佳、發生血胸或個人因素後續接受手術治療；而以豬尾巴管治療之成功率為 70%，有 31 位病人亦因相同原因後續接受其他治療包括以胸管引流或手術治療。在豬尾巴管連接單向閥門引流袋治療及連接水下引流瓶系統之間的比較上：水下引流瓶組在拔管時間、住院日、吸收速度未呈現明顯優勢，而住院費用反而較高。以豬尾巴管治療原發性自發性氣胸是明顯有效，但並未優於傳統胸管引流術，這與我們起初的假設符合，但加上考慮簡易技術施行、病人行動方便性、較小的傷口及病人舒適性，以豬尾巴管連接單向閥門引流袋可以考慮當作原發性自發性氣胸的第一線治療。***（胸腔醫學 2003; 18: 409-418）***

關鍵詞：氣胸，胸管，豬尾巴管

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High-Frequency Oscillatory Ventilation in Adult Patients With Acute Respiratory Distress Syndrome Plus Air-Leak Syndrome

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Objective: There have been a limited number of studies on the improvement of gas exchange in adult patients with acute respiratory distress syndrome (ARDS) through the use of high-frequency oscillatory ventilation (HFOV). The aim of this study was to evaluate the efficacy of HFOV as a rescue therapy in adult patients with ARDS complicated by air-leak syndrome.

Method: From January 1999 to August 2002, 17 adult ARDS patients with air leakage were diagnosed in the medical intensive care unit (ICU). Four patients underwent HFOV due to refractory hypoxemia and/or hypercapnia under conventional ventilation (CV). The other 13 patients continued CV support. The changes in gas exchange and ICU mortality were analyzed. All of the data are expressed as mean ± SEM.

Results: In all subjects, positive end-expiratory pressure and peak inspiratory pressure were significantly lower one day after air leakage (p=0.005 and p=0.033, respectively). $PaCO_2$ and PaO_2/FiO_2 (oxygenation index, OI) showed insignificant change 3 days after air leakage. In the HFOV group, the mean duration from air-leakage to the initiation of HFOV was 10.8 ± 4.3 days. The percentages of change in OI and $PaCO_2$ on the third day of HFOV use were 69.7 ± 56.3%, and -13.7 ± 7.1%, respectively, compared to pre-HFOV use. Two HFOV patients (50%) from the ICU survived. Twelve of 13 CV patients (92.3%) had significant deterioration in gas exchange before mortality, and expired in the course of their stay in the ICU, with a mean of 16.5 ± 3.5 days after air leakage.

Conclusion: The study suggests that HFOV may be used as a rescue ventilatory modality when conventional ventilation cannot maintain adequate gas exchange in patients with ARDS with air-leak syndrome. ***(Thorac Med 2003; 18: 419-426)***

Key words: High-frequency oscillatory ventilation, acute respiratory distress syndrome, barotrauma, pneumothorax, air leakage

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高頻振盪呼吸器在成人急性呼吸窘迫症併發肺部漏氣之應用

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簡介：根據目前的研究發現高頻振盪呼吸器用於治療罹患急性呼吸窘迫症的成人病患，可以改善肺部氣體交換，這篇研究的目的在於評估高頻振盪呼吸器用在罹患急性呼吸窘迫症的成人病患併發肺部漏氣之效果。

方法：自 1999 年一月至 2002 年八月，一共有 17 位成年病人罹患急性呼吸窘迫症併發肺部漏氣，其中四人因為使用傳統呼吸器並無法維持適當的氣體交換，而改用高頻振盪呼吸器，其餘 13 人持續使用傳統呼吸器，動脈血氧分析的變化及加護病房的死亡率加以紀錄及分析。

結果：在肺部漏氣之後，呼氣末正壓壓力有顯著的下降，但血液的二氧化碳分壓及氧氣指數（PaO_2/FiO_2）並沒有受到肺部漏氣的影響。在改用高頻振盪呼吸器後，病患血液的二氧化碳分壓及氧氣指數（PaO_2/FiO_2）有改善的趨勢。在兩組病人的死亡率而言，使用高頻振盪呼吸器的是 50%，而使用傳統呼吸器的是 92.3%。

結論：當成人急性呼吸窘迫症併發肺部漏氣，同時傳統呼吸器無法維持適當的氣體交換時，高頻振盪呼吸器似乎是一種可以嘗試的一種治療方法。***（胸腔醫學 2003; 18: 419-426）***

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Primary Pulmonary Lymphoma — A Case Report

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Primary pulmonary lymphoma is a rare lung disease. The most common histological subtype is the well-differentiated B-cell tumor with a low-grade lymphoproliferative process. This appears to arise from bronchus-associated lymphoid tissue (BALT). We report a patient with primary pulmonary lymphoma, with the presentation of nonproductive cough and body weight loss. The chest radiograph showed left lingular consolidation. Transbronchial biopsy revealed lymphocytic interstitial pneumonitis. Open lung biopsy with immuno-histochemistrical stains confirmed the diagnosis of a marginal zone B-cell lymphoma. There was no evidence of involvement of the bone marrow, stomach, or other organs. After 3 courses of chemotherapy with cyclophosphamide, vincristine and prednisolone (COP), the patient's symptoms greatly improved. This primary lung lymphoma presented with diagnostic and therapeutic problems, but was not associated with a similar grave prognosis as found in non-Hodgkin's lymphomas of other sites. ***(Thorac Med 2003; 18: 427-432)***

Key words: primary pulmonary lymphoma, lymphocytic interstitial pneumonitis, chemotherapy

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原發性肺淋巴瘤—病例報告

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原發性肺淋巴瘤是一種罕見的肺部疾病，其中最常見的組織學型態為分化良好的B細胞腫瘤併有低程度淋巴增生，可能來自支氣管相關的淋巴組織。我們報告一例以乾咳、體重減輕為最初表現的原發性肺淋巴瘤男性病患，其胸部X光檢查呈現左舌葉實質化，經支氣管鏡生檢的病理報告是淋巴球間質肺炎，開胸手術取得的組織切片用特殊染色證實這是一例B細胞淋巴瘤。經過一系列檢查後，未發現侵犯到骨髓、胃及其它器官的證據。這個病患接受三次化學藥物治療後，原先的症狀很顯著的改善。原發性肺淋巴瘤在診斷與治療方面仍有許多問題尚待進一步研究，不過和其它部位的非何杰金氏淋巴瘤比起來，預後沒有那麼差。*(胸腔醫學 2003; 18: 427-432)*

關鍵詞：原發性肺淋巴瘤，淋巴球間質肺炎，化學藥物治療

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Catamenial Pneumothorax Caused By Diaphragmatic Endometriosis

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Catamenial pneumothorax is a rare disease. The etiology and pathogenesis of this syndrome has remained enigmatic. Many hypotheses have been proposed including anatomical, physiological, and metastatic models. Each hypothesis has been criticized because of a lack of a unifying source for each report in the literature. We report a 39-year-old woman presenting with monthly right thoracic pain occurring before menstruation. Thoracic endometriosis was confirmed histologically after a thoracotomy with biopsy. ***(Thorac Med 2003; 18: 433-436)***

Key words: catamenial pneumothorax, endometriosis

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因橫膈子宮內膜異位症所造成之月經性氣胸

黃俊雄　程永隆　李世俊　于承平*

月經性氣胸是一個臨床上相當少見的疾病，不論在好發年齡，性別，體型，以及主要發生在右側等特性均與一般之自發性氣胸有所不同。迄今在英文文獻報告上僅有一百多例。造成月經性氣胸的原因及致病機轉至今仍是難以理解，目前有許多假說被學者們所提出，包括有：解剖學上模式，生理學的模式，以及轉移的模式。每一種假說均有其理論基礎，但沒有一種假說能解釋所有病人的情形。所以至今仍無定論。

本篇文章我們介紹一個病例為 39 歲女性每次月經來時常合併右側胸痛，經開刀處理及病理切片後，證實為胸腔之子宮內膜異位症所引發之自發性氣胸。經治療後至今未再復發。同時希望藉由本篇文章之討論能引起更多臨床醫師的注意，以期能揭開月經性氣胸之神秘面紗。***(胸腔醫學 2003; 18: 433-436)***

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Rectus Sheath Hematoma, a Rare Complication of Asthma — A Case Report

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Hematoma of the rectus sheath is a rare complication of asthma. We describe a case of rectus sheath hematoma caused by severe coughing during an exacerbation of asthma. This 65-year-old male patient had been a victim of asthma for more than 8 years. He suffered an acute attack of asthma and was treated at a local hospital five days before this admission. Two days later, a sudden onset of severe cough followed by abdominal pain occurred. The physical examination found an ecchymosis measuring 10x12 cm in size at the periumbilical area of the abdomen. Computed tomography of the abdomen revealed a well-defined soft tissue mass with contrast media enhancement in the left rectus sheath, consistent with rectus sheath hematoma. The aspirate from an ultrasound-guided diagnostic tapping also showed the blood clot. The patient received bronchodilators, corticosteroids, antitussive agents, and local heat packing for this abdominal wall lesion. The clinical condition of the patient improved gradually and he was discharged 2 weeks after admission. Failure to suspect the presence of a rectus sheath hematoma as a cause of acute abdominal pain may result in unnecessary invasive diagnostic studies or laparotomy. ***(Thorac Med 2003; 18: 437-441)***

Key words: asthma, rectus sheath hematoma

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氣喘併發腹直肌血腫—病例報告

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腹直肌血腫是氣喘病的一種罕見的併發症。我們報告一老年男性因氣喘發作而嚴重咳嗽導致腹直肌血腫之病例。一名年齡六十五歲之病人患有間歇性呼吸困難及夜間咳嗽，被診斷有氣喘病八年，在外院接受氣管擴張劑與類固醇之治療。在住院前五日，氣喘發作時併有嚴重咳嗽而住院接受治療，兩天後因急性腹痛而轉至本院。理學檢查發現腹部有一 10 × 12 公分大之紫斑。我們安排腹部電腦斷層檢查，結果發現在施打顯影劑後，左側腹直肌有顯影情形，與腹直肌血腫相符。我們亦利用超音波導引在腹部病灶處抽出少量血塊，這更進一步幫我們確定診斷。之後病患接受止咳藥物、氣管擴張劑與類固醇以及在腹部病灶給予熱敷等內科治療，病患氣喘狀況改善且腹部病灶縮小，兩週後病患出院。***(胸腔醫學 2003; 18: 437-441)***

關鍵詞：氣喘病，腹直肌血腫

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Acute Respiratory Distress Syndrome due to *Chlamydia pneumoniae* Infection In A Healthy Young Adult — A Case Report and Literature Review

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Chlamydia pneumoniae is one of the common pathogens in community-acquired pneumonia (CAP). The clinical presentation is usually mild or even unrecognized. Severe CAP due to *C. pneumoniae* is usually found in the elderly or in patients with underlying diseases. Herein, we report a previously healthy young adult, who developed severe CAP with rapid progression to acute respiratory distress syndrome (ARDS) due to *C. pneumoniae* infection. With aggressive treatment, the patient recovered well without residual pulmonary function impairment. If a patient presents with ARDS without a clear-cut etiology, *C. pneumoniae* infection should be included in the differential diagnosis, even in the healthy young adult. ***(Thorac Med 2003; 18: 442-448)***

Key words: *C. pneumoniae*, community-acquired pneumonia, acute respiratory distress syndrome

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Chlamydia pneumoniae 感染所引起之急性呼吸窘迫症候群—病例報告及文獻回顧

惠　群　詹明澄　吳杰亮　曾瑞壯*　張瓊文**　江自得

C. pneumoniae 是社區型肺炎常見的病原菌之一，大部份的病人病情都很輕微甚至沒有症狀，而因為 *C. pneumoniae* 感染造成嚴重社區型肺炎的病人多是老年人或合併有其他疾病。我們報告一位健康年輕成人，因為 *C. pneumoniae* 感染造成急性呼吸窘迫症候群，經積極治療復元狀況良好，沒有肺功能障礙。如果病人罹患不明原因的急性呼吸窘迫症候群，即使是年輕成人，*C. pneumoniae* 感染都應該要列入鑑別診斷。***(胸腔醫學 2003; 18: 442-448)***

關鍵詞：*Chlamydia pneumoniae* ，社區型肺炎，急性呼吸窘迫症候群

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Severe Critical Illness Polyneuropathy Resulting in Tetraplegia: A Complication of Sepsis and Multiple Organ Dysfunction Syndrome — A Case Report

Ming-Jhieh Chang, Yao-Kuang Wu, Meng-Chih Lin, Ying-Huang Tsai

Sepsis is a major infection-induced syndrome that promotes the failure of various organs such as the lung, heart, brain, liver, gastrointestinal tract, and kidney. In addition, sepsis can cause damage to or dysfunction of the peripheral nerves and skeletal muscles, leading to conditions called critical illness polyneuropathy (CIP) and critical illness myopathy (CIM). CIP is an acute, diffuse neuropathy due to axonal dysfunction appearing in critically ill patients with sepsis or multiple organ dysfunction syndromes. We report a 75-year-old male with pneumonia, sepsis, and heart and respiratory failure. He developed paralysis in the four extremities with flaccid muscle 5 days after admission to the intensive care unit (ICU), and delayed weaning once the sepsis was under control. Meticulous examinations had been performed to look for the cause of the tetraplegia before electrodiagnosis confirmed critical illness polyneuropathy. Before the weaning trial, the maximal inspiratory pressure (MIP) was -10 cmH_2O. After 2 months of aggressive pulmonary rehabilitation exercise and sepsis treatment, the MIP reached -38 cmH_2O. His muscle power recovered slowly but steadily. Nocturnal use of a positive airway pressure ventilator was still needed 3 months after discharge. We conclude that CIP should be suspected when a patient presents with decreased peripheral muscle power or difficulty weaning after controlling the underlying critical condition in the ICU. A confirmed diagnosis and rehabilitation training are necessary for these patients. ***(Thorac Med 2003; 18: 449-454)***

Key words: sepsis, critical illness polyneuropathy, multiple organ dysfunction syndrome

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嚴重的重症疾病併多發性神經病變導致四肢癱瘓：敗血症及多重器官失調症候群之併發症—病例報告

張明哲　吳燿光　林孟志　蔡煥煌

敗血症主要是由於感染引發之症候群，它會促進各不同器官的衰竭，如肺臟、心臟、腦部、肝臟、腸胃道及腎臟。此外，敗血症也會使週邊神經和骨骼肌受到損傷或功能異常而導致重症疾病併多發性神經病變及重症疾病併肌肉病變。重症疾病併多發性神經病變是指在敗血症或多重器官失調症候群的重症病人，所併發的急性瀰漫性軸突功能異常。我們在此報告一個患肺炎、敗血症及心臟和肺臟衰竭的 75 歲男性病人。在入加護病房住院第五天時發現四肢癱瘓及肌肉無力而且當敗血症已控制後卻仍然難以脫離呼吸器。為了找尋四肢癱瘓的原因我們做了詳盡的檢查，神經電氣生理學檢查確診為重症疾病併多發性神經病變。在嘗試脫離呼吸器之前的最大吸氣壓力為負 10 公分水柱。經過兩個月積極的肺部復原運動及治療敗血症，最大吸氣壓力到達負 38 公分水柱。病患的肌力緩慢而穩定的恢復。在出院後三個月，夜間仍需正壓呼吸器的使用。結論：當病患在加護病房的病危狀況受到控制後若仍有週邊肌力減弱及難以脫離呼吸器，此時我們應懷疑是否為重症疾病併多發性神經病變。確定診斷以及進行復健訓練對這些病人是必須的。***（胸腔醫學 2003; 18: 449-454）***

關鍵詞：敗血症，重症疾病併多發性神經病變，多重器官失調症候群

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Primary Lymphoepithelioma-Like Carcinoma of the Lung Associated With Hypertrophic Osteoarthropathy — A Case Report

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Lymphoepithelioma-like carcinoma of the lung, an Epstein-Barr virus (EBV) -associated undifferentiated carcinoma, is a rare entity of pulmonary malignancy, and only a few cases have been reported in the literature. Herein, we report a 42-year-old man who was admitted to our hospital with the chief complaint of symmetrical pain, swelling, and hyperemia of the knees, elbows, and wrists, associated with clubbing of the toes and fingers. The chest roentgenogram and computed tomography (CT) of the thorax revealed a soft tissue mass in the upper lobe of the right lung. Radiographs of the joints and long bones and a ^{99m}Tc MDP whole body bone scan revealed hypertrophic osteoarthropathy. The patient underwent surgical resection of the primary pulmonary lesion. From the histological characteristics and positive signals for EBV-encoded RNA-1(EBER-1) found by *in situ* hybridization, the diagnosis of lymphoepithelioma-like carcinoma of the lung was made. After the operation, he received adjuvant chemotherapy and radiotherapy. A follow-up examination nine months later showed the patient to be free of joint symptoms and without evidence of relapse or metastasis. ***(Thorac Med 2003; 18: 455-460)***

Key words: Primary lymphoepithelioma-like carcinoma (LELC) of the lung, hypertrophic osteoarthropathy (HOA)

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肺原發淋巴上皮瘤樣癌合併肥大性骨關節病變之一病例報告

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肺原發淋巴上皮瘤樣癌是一個 EB 病毒相關的未分化癌，它占肺癌的極少部分，只有一些病例曾見諸於文獻。在此我們報告一位 42 歲男性病患主訴雙側膝部，肘部及腕部紅腫疼痛合併手指及腳指杵狀變形而住進我們醫院治療。胸部 X 光及胸部電腦斷層掃描發現在右上肺部中有一顆軟組織腫瘤，關節及長骨的 X 光和 ^{99m}Tc MDP 骨骼掃描攝影顯示肥大性骨關節病變。他接受肺原發病變區域的外科切除手術，根據組織特徵及原位染交 EBER-1 陽性訊號，確定診斷為肺淋巴上皮瘤樣癌。在手術之後，他繼之接受輔助性化學藥物及放射治療，九個月後的追蹤檢查顯示這位病人並無關節症狀，而且沒有復發或轉移的證據。 ***（胸腔醫學 2003; 18: 455-460）***

關鍵詞：肺原發淋巴上皮瘤樣癌，肥大性骨關節病變

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A Huge CervicomeDiastinal Hemangioma Enveloping the Right Subclavian Vessels and Extending into the Intraspinal Canal — A Case Report

Chien-Chung Lin, Lili Cheng**, Yueh-Fon Tsai*, E-Jian Lee*, Wu-Wei Lai*

Benign hemangiomas account for less than 0.5% of mediastinal masses. While a preoperative diagnosis is difficult using noninvasive means, an MRI study proved useful for suggesting the correct diagnosis.

We report a 27-year-old patient with a huge cervicomediastinal mass (25X15X15 cm) with compression of the entire right lung, extending into the spinal canal and the neck, and enveloping the right subclavian vessels. Total excision of the tumor was done by a neurosurgeon and chest surgeon, using both posterior and anterior approaches.

A hemangioma, even though very rare, may present as a mass in the neck, and should be considered in the differential diagnosis of neck and mediastinal masses. ***(Thorac Med 2003; 18: 461-466)***

Key words: cervicomediastinal mass, hemangioma, intraspinal canal extension

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縱膈腔血管瘤合併頸部及脊椎侵犯—病例報告

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良性血管瘤只佔縱膈腔腫瘤中百分之 0.5 ，因為表現並無特異性且由非侵襲性的檢查不易診斷出來，開刀前往往無法確定診斷。我們報告一位 27 歲血管瘤的病人，手術時發現：整個血管瘤約 25 × 15 × 15 公分，侵犯到脊椎及頸部並壓迫大血管及整個右肺。在胸腔外科及神經外科合作下，整個腫瘤仍可完全取出。

在縱膈腔腫瘤中血管瘤雖然極為罕見，仍須列入鑑別診斷之一。***（胸腔醫學 2003; 18: 461-466）***

關鍵詞：縱膈腔腫瘤，血管瘤，脊椎侵犯

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