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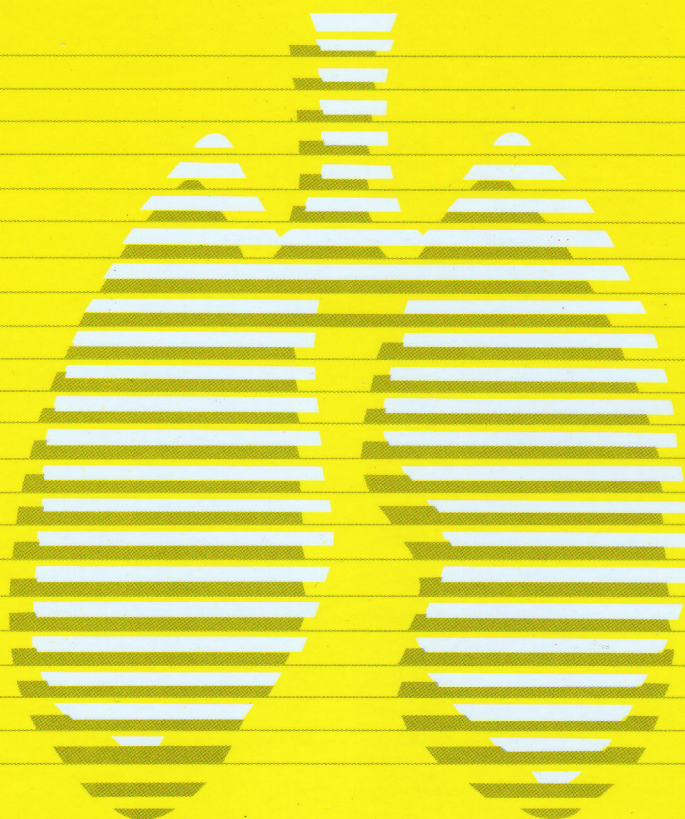
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Effect of N-acetylcysteine on Acid Aspiration Followed by Ventilator-Induced Acute Lung Injury in a Rat Model

Hung-Tze Tay*, Khee-Siang Chan*, Chin-Ming Chen*,**

Introduction: To examine the pharmacological effects of N-acetylcysteine (NAC) in a 2-hit rat model of acid aspiration-induced inflammation followed by ventilator-induced lung injury (VILI).

Methods: Rats received intra-tracheal instillation of hydrochloric acid as a first hit to induce systemic inflammation. For the second hit, they were randomized to receive mechanical ventilation (MV) using 1 of 2 strategies: a high tidal volume (TV) of 15 mL/kg and zero positive end-expiratory pressure (PEEP), or a protective strategy of a low TV of 6 mL/kg and a PEEP of 5 cm H₂O. Rats in both groups were exposed to a fraction of inspired oxygen (FiO₂) level of 40% during the 4-hour experimental period. Intravenous bolus of NAC (150 mg/kg) or placebo was administered 30 minutes before the different MV strategies. The following variables were measured: blood gases, lung mechanics (static compliance and respiratory elastance), lung edema, extended lung destruction (lung injury scores and lung histology), neutrophil recruitment in the lung and cytokine/chemokine production.

Results: Hemodynamics including blood pressure and heart rates did not differ between groups at baseline and during the study period. Compared to the placebo-treated rats, those administered NAC presented attenuated lung injury, as evidenced by improved oxygenation, preserved lung mechanics and diminished lung destruction and inflammation.

Conclusion: Using the 2-hit rat model, NAC administration was found to improve the physiologic and biologic profiles of rats in this experimental VILI model. (*Thorac Med* 2017; 32: 245-258)

Key words: acid aspiration, inflammation, N-acetylcysteine, ventilator-induced lung injury

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乙醯半胱胺酸在大白鼠模式下對酸吸入後伴隨呼吸器引發之急性肺損傷的作用

鄭鴻志 * 陳奇祥 * 陳欽明 **, **

前言：檢視乙醯半胱胺酸在酸吸入造成之肺發炎後伴隨呼吸器引發之肺損傷的動物模式下之藥理作用。

方法：大白鼠先接受氣管內注射鹽酸造成全身性發炎的一度傷害，之後再隨機接受兩種不同的呼吸器模式以造成二度傷害，包括 15 毫升 / 公斤之高潮氣容積合併零吐氣末正壓造成呼吸器引發肺損傷，或是 6 毫升 / 公斤之低潮氣容積合併 5 公分水柱吐氣末正壓之保護性呼吸器模式。實驗期間皆供應 40% 氧氣濃度及 4 個小時呼吸器使用。在實驗開始前 30 分鐘，先從靜脈投予乙醯半胱胺酸（150 毫克 / 公斤）或是林格式液（對照組）。過程中監測以下參數：動脈血、肺靜態順應性、呼吸系統彈性、肺水腫、瀰漫性肺傷害嚴重度（肺傷害分數及肺組織病變）、肺泡內嗜中性白血球數及細胞激素 / 化學激素濃度。

結果：實驗開始及過程中各組老鼠之血壓及心跳無顯著差異。跟對照組相比，注射乙醯半胱胺酸能夠減輕大白鼠之肺損傷，包括改善氧合、改善肺靜態順應性及呼吸系統彈性、減輕肺破壞、以及減少全身性發炎。

結論：根據本實驗，乙醯半胱胺酸注射可以改善大白鼠肺損傷模式下之生理及生物參數。（*胸腔醫學* 2017; 32: 245-258）

關鍵詞：胃酸吸入，發炎，乙醯半胱胺酸，呼吸器引發肺損傷

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Pulmonary Benign Metastasizing Leiomyoma: A Case Presentation and Review of the Literature

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Uterine leiomyoma is a common benign tumor in women of reproductive age. In rare cases, distant metastasis can develop months to years after gynecological procedures. Metastasis to the lung, or pulmonary benign metastasizing leiomyoma (PBML), is the most common type. Patients are usually asymptomatic and the tumor is found incidentally on routine chest x-ray. The typical radiological presentation is multiple pulmonary nodules. Management includes observation, surgery, or hormonal manipulation. There is increasing evidence of partial regression of PBML with the use of hormone therapy. We report the case of a 46-year-old woman who presented with diffuse lung cysts complicated by pneumothorax. In this case, a decreasing cyst size and number were observed after only 3 months of hormone therapy. (*Thorac Med* 2017; 32: 259-265)

Key words: pulmonary benign metastasizing leiomyoma, pneumothorax, hormone therapy

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肺部良性轉移性平滑肌瘤－病例報告與文獻回顧

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子宮肌瘤是生育年齡女性最常見的良性腫瘤，然而接受子宮肌瘤切除手術的病患在數月或數年後卻可能罕見地出現遠端轉移；轉移至肺部最常見，此時稱為肺部良性轉移性平滑肌瘤。大部分病患都無症狀，直到意外在影像上發現肺結節才被診斷。治療的選項有追蹤、手術切除、以及荷爾蒙治療，荷爾蒙治療有越來越多成功的案例。我們報告一位 46 歲的女性病人，罕見的以肺囊腫併發氣胸來表現。本病患接受 3 個月荷爾蒙治療後，肺囊腫隨即變小與數量變少。(*胸腔醫學* 2017; 32: 259-265)

關鍵詞：肺部良性轉移性平滑肌瘤，氣胸，荷爾蒙治療

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***Candida* Pneumonia Diagnosed by Bronchoalveolar Lavage: A Case Report**

Wei-Hsin Hung, Kuang-Yao Yang*,**

Fungal pneumonia is difficult to diagnose in immunocompetent patients. Here, we report a case involving a male patient with no immunocompromised risk factors except old age, who was diagnosed with *Candida* pneumonia by bronchoalveolar lavage (BAL). Cytological examination of the BAL fluid showed that more than 2% of the recovered cells contained polymorphonuclear neutrophils and intracellular organisms. The final culture of the BAL fluid yielded *Candida albicans* without any bacterial growth. Fluconazole was then prescribed, but the patient suffered from acute respiratory distress syndrome and septic shock. The patient ultimately died, in spite of being in intensive care with mechanical ventilator support. (***Thorac Med* 2017; 32: 266-271**)

Key words: *Candida* pneumonia, fungal pneumonia, bronchoalveolar lavage, leukocyte phagocytosis, intracellular microorganisms

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透過肺泡灌洗術診斷念珠菌肺炎一病例報告

洪緯欣 陽光耀^{*,**}

真菌性肺炎在免疫力正常的病人很難診斷。本病人為一無免疫功能低下危險因子的老年男性，用支氣管沖洗術診斷真菌肺炎。細胞學可發現多型嗜中性白血球中細胞內微生物的比例大於 2%，真菌培養最後顯示為白色念珠菌感染，沒有培養出其他細菌。抗黴菌藥物使用之後，此病人最後仍因急性呼吸窘迫徵候群和嚴重敗血症而死亡。(*胸腔醫學* 2017; 32: 266-271)

關鍵詞：念珠菌肺炎，真菌肺炎，支氣管肺泡灌洗術，白血球吞噬作用，細胞內微生物

IgG4-Related Disease with Pleural Involvement Presenting as Progressive Dyspnea

Pei-Yu Lin, Shih-Chi Ku

Immunoglobulin G4 (IgG4)-related disease is a recognized fibroinflammatory condition. In its pathology, we can see lymphoplasmacytic infiltration, storiform fibrosis and IgG4-positive plasma cells. The disease can involve multiple organ systems, including the lung. In this article, we reported the case of a patient with an initial presentation of hydronephrosis and retroperitoneal mass. The computed tomography-guided biopsy revealed IgG4-related disease. The patient then began to receive weekly dexamethasone treatment (4 mg/week). The mass size decreased gradually, with the disease stabilizing during follow-up. However, a new onset of left pleural effusion developed after 7 years of a stable condition. The pleural fluid analysis revealed lymphocyte-predominant exudate, and the pleural biopsy showed clustered plasma cells and lymphocytes. These plasma cells were mostly IgG4-positive (more than 50 per high-power field). The serum IgG4 level also elevated to 2,490 mg/dL. IgG4-related disease with pleural involvement was diagnosed. The pleural effusion almost totally subsided 1 month after increasing the dose of Predonine to 15 mg/day. (*Thorac Med* 2017; 32: 272-278)

Key words: IgG4-related disease, retroperitoneal mass, pleural effusion

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IgG4 相關疾病以肋膜侵犯和呼吸喘表現

林珮瑜 古世基

IgG4 相關疾病的致病機轉雖未完全確定，但目前一致認為它和自體免疫相關，全身的器官都有可能被侵犯，IgG4 相關疾病的肺部病例報告相對較少，並不像其對於胰臟或者唾液腺的案例多。本文我們報告一位八十六歲的男性，一開始以腎水腫、後腹腔腫塊來表現，病人經電腦斷層導引切片證實為 IgG4 相關疾病，血液中 IgG4 數值也上升，腫塊在類固醇治療後逐漸變小，然而卻在治療穩定時，病人出現新的肋膜積液，肋膜積液分析顯示為淋巴球為主的滲出液，其餘細胞學檢查和培養皆為陰性，病人最後接受肋膜切片才發現一樣是 IgG4 相關疾病導致。(*胸腔醫學* 2017; 32: 272-278)

關鍵詞：IgG4 相關肺部疾病，肋膜積液，肋膜切片

Endobronchial Ultrasound Imaging of Castleman's Disease: Two Case Reports

Yung-Hsuan Chen, Chao-Chi Ho

Castleman's disease (CD) is a rare lymphoproliferative disorder that usually involves the mediastinum. The diagnosis of CD is usually established by excisional lymph node biopsy. Based on the histological features, the disease can be classified into 3 types: hyaline-vascular, plasma cell type, and mixed type. We report the cases of 2 patients with CD, both of whom underwent endobronchial ultrasound (EBUS) and surgical biopsy. In the first case, EBUS showed a hilar mass with hypervascularity, and the final diagnosis was hyaline-vascular-type CD. In the second case, EBUS showed lymphadenopathy at group 11R with hypovascularity, and the final diagnosis was plasma cell-type CD. For those CD patients with an initial presentation of mediastinal lymphadenopathy, pre-operative EBUS imaging might provide more information on the lesion. Moreover, EBUS-guided transbronchial needle aspiration could even enable sampling of tissue cores for histological diagnosis. (*Thorac Med* 2017; 32: 279-285)

Key words: Castleman's disease, endobronchial ultrasound, hilar mass, mediastinal lymphadenopathy

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Castleman 氏病的支氣管內視鏡超音波影像－案例報告

陳永瑄 何肇基

Castleman 氏病是一種罕見且經常侵犯縱膈腔的淋巴增生性疾病，其診斷常藉由手術來執行淋巴結切片。此病可依據組織學特色分成以下三種類型：透明血管型、漿細胞型、及混和型。我們提出討論的兩位 Castleman 氏病個案皆有接受支氣管內視鏡超音波檢查及淋巴結切片手術。第一位個案的支氣管內視鏡超音波檢查發現有一富血管性之肺門腫塊，其最後診斷為透明血管型 Castleman 氏病；第二位則是經支氣管內視鏡超音波檢查發現有 11R 的淋巴結腫大且較不具有血管分布，其最後診斷為漿細胞型 Castleman 氏病。術前支氣管內視鏡超音波檢查的影像或許可提供給臨床人員更多關於病灶的資訊。當病灶可執行經支氣管內視鏡超音波指引細針抽吸時，有機會取得足夠的檢體以得到組織學診斷。(*胸腔醫學* 2017; 32: 279-285)

關鍵詞：Castleman 氏病，氣管內視鏡超音波，肺門腫塊，縱膈腔淋巴結腫大

Special Histological Type of Synchronous Primary Lung Cancer

Hui-Ju Ho*, Wei-Heng Hung**, Bing-Yen Wang **, ***, ****

A 62-year-old man visited our outpatient department due to a 2.0-cm pulmonary nodule with irregular margins in the left perihilar region that was found on chest x-ray at another institution; however, the patient had experienced no discomfort. This case was a special histological type of synchronous primary lung cancer with adenosquamous carcinoma at the left lower lobe and mixed small cell carcinoma and squamous cell carcinoma at the right lower lobe. Our experience with this case highlights the importance of distinguishing between multiple primary lung cancer and distant lung metastasis. (*Thorac Med* 2017; 32: 286-290)

Key words: synchronous, lung cancer, small cell carcinoma, squamous cell carcinoma, adenosquamous carcinoma

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同時性原發性肺癌的特殊病理發現病例報告

何蕙如 * 洪維亨 ** 王秉彥 **, ***, ****

同時性原發性肺癌的定義須符合：同時發生且為分別獨立的、不同病理型態的惡性肺上皮增生或相同病理型態但在不同區域（對側肺、不同肺或不同肺段）的癌症；另外還同時須符合下列三點：1. 源自原發性肺癌，2. 在共同的淋巴區域沒有惡性細胞，3. 在診斷的同時沒有遠端的轉移。

在這個病例報告我們提出了一位在左側肺門有兩公分的肺結節而沒有任何臨床症狀的 62 歲男性，在最終的手術取得標本確認為左下肺葉腺鱗狀細胞癌及右下肺葉混合小細胞及鱗狀細胞癌，在此報導中則凸顯出分辨不同的病理細胞型態對於診斷原發性或轉移性肺癌的重要性。（*胸腔醫學* 2017; 32: 286-290）

關鍵詞：同時性原發性肺癌，小細胞癌，鱗狀細胞癌，腺鱗狀細胞癌

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