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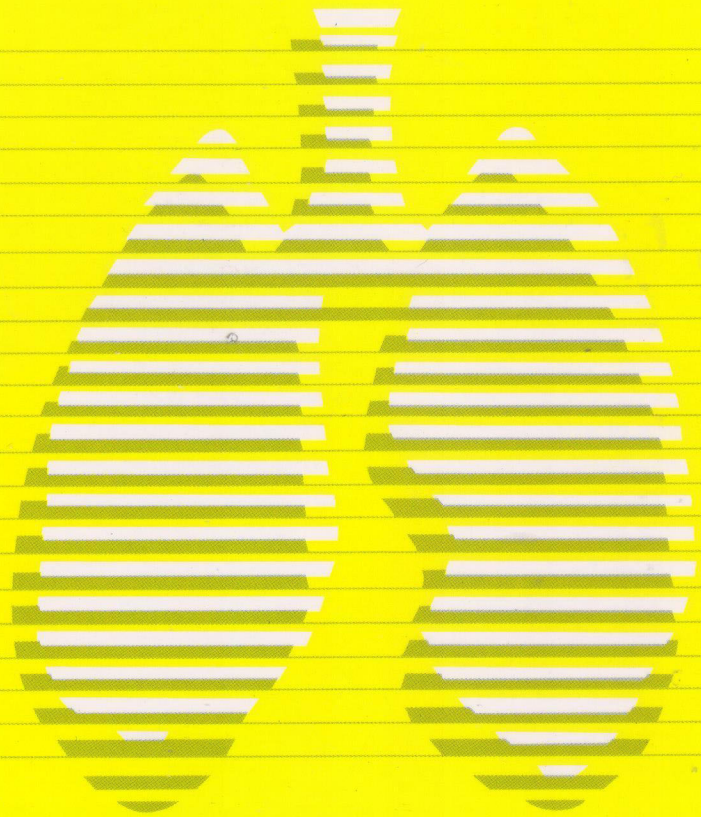

台灣胸腔暨重症加護醫學會

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RIFLE Classification Did Not Have Satisfactory Predictive Value for Septic Patients with High Severity Scores

Chih-Yu Huang, Heng-Jung Hsu*, Yu-Chih Liu, Chung-Ching Hua, Huang-Ping Wu

Background: Predicting the outcome of patients with severe sepsis is important. The RIFLE classification has been evaluated for its ability to predict mortality. The aim of this study was to compare the predictive value of 3 scoring systems: the Acute Physiology and Chronic Health Evaluation (APACHE) II score, the Multiple Organ Dysfunction Score (MODS), and the Risk, Injury, Failure, Loss of kidney function, and End-stage kidney disease (RIFLE) classification.

Patients and methods: Seventy-one severe septic patients admitted to intensive care units (ICU) directly from the emergency department were enrolled into this study. The APACHE II score, MODS, and RIFLE classification were calculated within 24 hours after admission. Areas under the receiver operating characteristic (ROC) curves were computed in order to analyze the discriminatory power of these 3 scoring systems.

Results: The value of the APACHE II score and the MODS in the non-survivors was statistically significantly higher than that in the survivors. The RIFLE classification showed no significant difference between survivors and non-survivors. Areas under the ROC curves were 0.801, 0.715, and 0.602, respectively, for the APACHE II score, the MODS, and the RIFLE classification. The APACHE II score and the MODS were better tools for outcome prediction, compared with the RIFLE classification. The discriminatory power of the RIFLE classification did not have significance (p = 0.226) for outcome prediction in severe septic patients.

Conclusions: The APACHE II score and the MODS were useful tools in patients with severe sepsis. The RIFLE classification did not show satisfactory power in predicting 28-day mortality in more severe septic patients. ***(Thorac Med 2010; 25: 230-237)***

Key words: severe sepsis, mortality, RIFLE, APACHE II, MODS

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在高嚴重程度分數的嚴重敗血症病人身上使用 RIFLE classification 沒有令人滿意的預測價值

黃志宇　許恆榮*　劉育志　花仲涇　吳黃平

前言：預測嚴重敗血症病人的結果是重要的。RIFLE classification已經被拿來評估預測病人死亡的能力。本研究的目標是使用3個評分系統包括APACHE (Acute Physiology and Chronic Health Evaluation) II score、MODS (Multiple Organ Dysfunction Score)、及RIFLE (Risk, Injury, Failure, Loss of kidney function, and End-stage kidney disease) classification來比較其預測結果的價值。

方法：這個研究收集了71個從急診部門直接住到加護病房的嚴重敗血症病人。他們的APACHE II score、MODS、及RIFLE classification在住院後的24小時內就計算好。我們也估算了ROC (receiver operating characteristic) 的曲線下面積來分析這3個評分系統的辨識能力。

結果：非存活者的APACHE II score及MODS的數值皆顯著高於存活者的平均分數，但RIFLE classification在非存活者及存活者之間並沒有統計上的差異。APACHE II score、MODS、及RIFLE classification的ROC曲線下面積分別是0.801、0.715及、0.602。APACHE II score及MODS比起RIFLE classification而言，是用來預測結果比較好的工具。RIFLE classification的辨識能力在預測嚴重敗血症病人的結果上並沒有顯著意義 ($p = 0.226$)。

結論：APACHE II score及MODS對於嚴重敗血症病人而言是有用的工具。而RIFLE classification使用在相對嚴重的敗血症病人來預測28天的死亡率並沒有令人滿意的預測能力。*(胸腔醫學 **2010; 25: 230-237**)*

關鍵詞：嚴重敗血症，死亡率，RIFLE，APACHE II，MODS

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Coexisting Invasive Pulmonary Aspergillosis and Active Tuberculosis in a Patient with End-stage Renal Disease

Da-Wei Wu*, Chih-Jen Yang*,**, Ying-Ming Tsai*, Jhi-Jhu Huang*,***, Ming-Shyan Huang*,**, Tung-Heng Wang*,***

Invasive pulmonary aspergillosis is 1 of the most aggressive fungal infections, often occurring in patients with a severely immunocompromised status. Taiwan has a high prevalence rate of end-stage renal disease (ESRD), and is an endemic area for tuberculosis (TB). Coexisting TB and invasive pulmonary aspergillosis, however, has not been reported in Taiwan.

A 77-year-old female with ESRD had received regular hemodialysis for 1 and a half years. She presented with a high fever, cough, and pain in her left forearm at the arteriovenous shunt site for 3 days. The initial chest radiograph revealed opacity in the entire left lung. Thoracocentesis obtained exudative pleural effusion. Sputum acid-fast stain was positive, and anti-tuberculous therapy was started. Sputum culture also grew *Mycobacterium tuberculosis* later. Fever persisted despite anti-tuberculous therapy.

Subsequent chest radiograph and computed tomography (CT) showed multiple opacities. CT-guided lung biopsy showed hyphae and conidia. Lung biopsy culture revealed *Aspergillus fumigatus*. Despite anti-fungal therapy, the patient died of septic shock and multiple-organ failure. We discussed the predisposing factors, diagnosis and treatment of invasive pulmonary aspergillosis, and the possibility of coexistent TB and invasive aspergillosis in patients with ESRD in Taiwan. ***(Thorac Med 2010; 25: 238-244)***

Key words: invasive aspergillosis, pulmonary tuberculosis, end-stage renal disease

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一位末期腎衰竭血液透析病患同時合併感染侵入性肺麴菌病及活動性結核病

吳大緯* 楊志仁*,** 蔡英明* 黃吉志*,*** 黃明賢*,** 王東衡*,***

侵入性肺麴菌病是最具侵略性的黴菌感染之一，常發生於嚴重免疫功能不全的病患，如嚴重持續嗜中性球數目減少、使用類固醇、血液幹細胞及其它器官移植患者，但在血液透析的病人亦容易得到黴菌感染。台灣之末期腎臟病盛行率很高，同時也是肺結核盛行區，故有可能在血液透析病人發生侵入性肺麴菌病合併肺結核感染。

一名77歲老婦人接受血液透析至今已一年半，因為發高燒、咳嗽及左上臂瘻管局部疼痛至本院求診。最初胸部X光片顯示左側肺葉實質化，同時併發大量滲出性胸水，痰液抗酸性染色亦呈現陽性，因而開始使用抗肺結核藥物，稍後痰液結核菌培養亦證實肺結核感染。

然而即使在抗結核病藥物使用下，病患仍然持續發燒。後續的胸部X光片及電腦斷層都發現肺部多處實質化陰影及雙側毛玻璃狀變化，電腦斷層導引下肺部切片組織學顯示麴菌存在，檢體培養證實薰煙麴菌 (*Aspergillus fumigatus*) 感染。先後用過各種抗黴菌藥物如Voriconazole、Amphotericin B及Caspofungin皆無效，病患仍因為敗血性休克惡化而辭世。這可能是國內第一例報導血液透析病患同時感染侵入性肺麴菌病及活動性肺結核病。早期診斷及治療對病患存活是極為重要的關鍵。***(胸腔醫學 2010; 25: 238-244)***

關鍵詞：侵入性肺麴菌病，肺結核，末期腎衰竭

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Complete Resection of a Huge Pleural Solitary Fibrous Tumor 30 Years after Initial Presentation

Mong-Wei Lin, Hsao-Hsun Hsu, Yung-Chie Lee

Solitary fibrous tumor of the pleura is a mesenchymal neoplasm that involves the pleura. Because the tumors do not show conventional radiological signs of malignancy and some of them are asymptomatic, a preoperative diagnosis can be difficult and referral for surgery is often delayed. We described a 67-year-old female with a huge pleural solitary fibrous tumor. The tumor was first noted 30 years ago, with a biopsy result that revealed no malignancy. She had been regularly followed up for 10 years, but then was lost. The tumor occupied the whole left pleural cavity with compression of the heart and contralateral lung, and was completely excised through 2 separate thoracotomies. No recurrence was noted after a 1-year follow-up. ***(Thorac Med 2010; 25: 245-250)***

Key words: solitary fibrous tumor, pleural tumor

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巨大肋膜腔單發性纖維瘤之三十年病程及完整手術切除

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肋膜腔單發性纖維瘤是一種間葉細胞起源的肋膜腫瘤。這類腫瘤常常沒有症狀，影像學檢查常為良性表現，因此較難在手術前診斷，接受手術治療的時間也因而常常延誤。本文描述一位巨大肋膜腔單發性纖維瘤病人，這位六十七歲的女性病人三十年前即發現左側的肺部腫瘤，因切片結果顯示沒有惡性細胞，追蹤十年以後即沒有再回診。三十年後再來到急診處時，腫瘤已佔滿整個左側胸腔，壓迫到心臟及對側的肺葉，並導致呼吸衰竭。這個巨大的肋膜腔單發性纖維瘤順利地經由側面胸廓切開術式完整切除。追蹤一年後沒有復發的情形。*(胸腔醫學* ***2010; 25: 245-250****)*

關鍵詞：單發性纖維瘤，肋膜腫瘤

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Fulminating Pneumococcal Pneumonia with Acute Respiratory Distress Syndrome in a Healthy Young Patient Following Pandemic (H1N1) 2009 Influenza

Tung-Yang Wu*,**, Wann-Cherng Perng**, Kao-Yao Chang*, Chien-Wen Chen**

Secondary bacterial pneumonia developing after (H1N1) 2009 influenza infection was an important cause of influenza-associated death. We report the case of a 23-year-old previously healthy soldier who was initially diagnosed with influenza A infection. Three days later, the disease progressed, pneumonia developed in the left upper and lower lobes, and respiratory failure was imminent, despite oseltamivir therapy. The diagnosis of secondary pneumococcal pneumonia after 2009 H1N1 infection was made on the basis of positive results for 2009 H1N1 influenza in the real-time reverse-transcriptase polymerase chain reaction performed on a nasal swab, and in the urinary pneumococcal antigen test. The patient was successfully treated using oxygen mask supplementation and antiviral and antibiotic therapies. In immunocompetent patients with confirmed influenza A infection, secondary bacterial infection should be considered when respiratory symptoms progress, even after standard management. The rapid progression of community-acquired pneumonia accompanied with respiratory distress syndrome is a potentially fatal complication occurring secondary to (H1N1) 2009 influenza infection. ***(Thorac Med 2010; 25: 251-257)***

Key words: pandemic (H1N1) 2009 infection, pneumococcal pneumonia, respiratory failure

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一個感染2009新型流感的健康年輕病患併發猛暴性的鏈球菌肺炎伴隨急性呼吸窘迫症候群的案例報告

吳東陽*,** 彭萬誠** 張高耀* 陳健文**

在2009新型流感感染期間併發續發性的細菌性肺炎是一個導致新型流感死亡的重要原因。在此我們報告一位23歲的健康軍人，一開始診斷出A型流感的感染，經投予抗病毒藥物治療，三天之後仍併發持續惡化的大葉性肺炎伴隨瀕臨插管的呼吸衰竭，最後經由陽性的2009新型流感聚合連鎖反應分析（PCR）及尿液肺炎球菌抗原篩檢證實為2009新型流感的感染併發續發性的鏈球菌肺炎，之後成功地以氧氣面罩供應氧氣、加上抗病毒藥物合併適當的抗生素治療解決其問題。由此提醒我們，在一個免疫功能健全的病患身上，若證實有A型流感的感染並接受標準的抗病毒藥物治療之後，仍發現呼吸道症狀有持續惡化的情形時，要考慮是否有續發性的細菌感染，因為在感染2009新型流感之後續發快速惡化的社區性肺炎伴隨呼吸窘迫症狀是一個潛在致命的併發症。*(胸腔醫學* ***2010; 25: 251-257)***

關鍵詞：2009新型流感，鏈球菌肺炎，呼吸衰竭

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Pulmonary Amyloidosis Presenting as a Solitary Pulmonary Nodule in a Patient with Sjogren's Syndrome

Chia-Cheng Liu*, Po-Kuei Hsu*,**,***, Hsin-Ju Lin****, Wen-Hu Hsu*,***,*****

A 41-year-old woman was admitted with a 10-month history of generalized skin itch, dry eye and dry mouth. Sjogren's syndrome was diagnosed. However, a solitary pulmonary nodule was incidentally found on routine chest radiography on admission. Computed tomography showed the lesion to be well-defined, homogenous and 1.3 cm in size. To ascertain the pulmonary pathology, wedge resection of the right lower lobe was performed. Microscopically, the lesion exhibited eosinophilic amorphous substance deposition, which showed green birefringence when stained with Congo red. Pulmonary amyloidosis with Sjogren's syndrome is rare and most cases present as multiple nodules or diffuse reticulonodular infiltrates. Solitary nodular pulmonary amyloidosis with Sjogren's syndrome is a very rare condition and may mimic pulmonary neoplasm. Surgical resection of the pulmonary nodule not only confirms the diagnosis, but also excludes the existence of malignancy. ***(Thorac Med 2010; 25: 258-262)***

Key words: pulmonary amyloidosis, Sjogren's syndrome

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在修格連氏症候群病人上以單一肺結節表現的類澱粉沉積症

劉佳政*　徐博奎*,**,***　林心如****　許文虎*,***,*****

一位41歲女性以十個月之久的皮膚癢，口乾及眼乾表現，診斷為修格連氏症候群後，胸部X光發現一孤立性肺結節，胸部電腦斷層顯示一邊緣規則且均質，大小約1.3公分的病灶，為排除惡性腫瘤，病人接受局部肺切除。顯微鏡下顯現嗜伊紅性不規則物質沉積，剛果紅染色下有綠色雙折射現象。肺部類澱粉沉積合併修格連氏症候群實屬罕見，且大多案例以多發性結節或廣泛性網目斑點狀浸潤，以孤立性肺結節表現的肺部類澱粉沉積合併修格連氏症候群是非常少見，且影像學常可能類似癌症表現，手術切除非但可確定診斷亦可排除癌症可能。*(胸腔醫學* ***2010; 25: 258-262)***

關鍵詞：肺部類澱粉沉積，修格連氏症候群

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Successful Repair of Complete Traumatic Tracheo-bronchial Disruption with Extra-corporeal Membrane Oxygenation Support

Ka-I Leong, Pei-Ming Huang, Wen-Je Ko*, Yung-Chie Lee

Complete tracheo-bronchial disruption following blunt chest trauma is rare. The prognosis is poor, with almost 80% of patients dying at the scene of injury. Successful treatment requires a high level of alertness and early surgical repair. At the same time, providing adequate oxygenation and maintaining stable hemodynamics are frequently difficult in these types of airway injuries. We reported the case of a 47-year-old man with an anterior chest wall crush injury who was given extra-corporeal membrane oxygenation (ECMO) support in the management of a completely transected right main bronchus and ruptured trachea following blunt chest trauma. Post-operative bronchoscopic examination showed good healing with no stricture, and the patient was asymptomatic 18 months after surgery. ECMO is used for oxygen supplementation during reconstruction in many traumatic lung injury and pediatric tracheal stenosis patients. Good survival and outcomes have been noted in the medical literature. Systemic tissue oxygenation and cardio-pulmonary support can be maintained during the peri- and post-operative period via the extra-corporeal circuit to minimize lung barotrauma from prolonged high positive pressure. In our case, ECMO was successfully used in a patient with bronchial transection to provide adequate oxygen supplementation and tissue perfusion before and after surgery. ***(Thorac Med 2010; 25: 263-267)***

Key words: tracheo-bronchial disruption, extra-corporeal membrane oxygenation

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在葉克膜支持下創傷性氣管完全分離的成功修補：病例報告

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胸部挫傷而造成的氣管完全分離的病例是不常見但致死率高，大約80%以上的病人在事發現場已死亡。因此，救援過程中心肺的維持與足夠氧氣的提供對此類病人的生存率是十分重要。本病例是一個47歲男性，在工作時被重型機器壓倒。於急診處，病人呼吸急促，右側大量氣胸並置入胸管。支氣管鏡顯示右側主氣管斷裂故進行氣管插管並進行單肺呼吸。由於病人血氧分壓沒能有效維持，在手術前放置了葉克膜以提供足夠的氧氣及穩定心肺的功能。病人利用右側開胸手術以進行氣管縫合，術後病人復原情況理想，術後兩天移除葉克膜。現病人在門診持續追蹤，沒有明顯的呼吸困難，肺功能也在正常值內。葉克膜多應用在創傷性肺部，以減少因正壓呼吸而引起的傷害以及兒童氣管狹窄重建手術，不管在術中或術後都可提供全身組織的氧氣及心肺的支持。*(胸腔醫學* ***2010; 25: 263-267)***

關鍵詞：支氣管分離，葉克膜

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Systemic Air Embolism Following Computed Tomography-Guided Transthoracic Needle Biopsy – A Case Report

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Percutaneous transthoracic needle biopsy is a common procedure for diagnosing pulmonary and mediastinal lesions. The procedure has many potential complications, ranging from simple pneumothorax or self-limiting hemoptysis to life-threatening pulmonary hemorrhage and air embolism [1]. Introducing gas into the circulation is a major iatrogenic problem which could result in serious morbidity and even death. Among the complications of percutaneous transthoracic needle biopsy, systemic air embolism is life-threatening but extremely rare, with an incidence rate of 0.02% to 0.4%. We reported a case of massive systemic air embolism following computed tomography-guided needle biopsy of a pulmonary lesion. After initial resuscitation, the patient received on-site hyperbaric oxygen therapy and demonstrated no residual clinical sequelae from this complication. Pulmonologists should be aware of this rare complication of systemic air embolism. Prompt recognition and immediate hyperbaric oxygen therapy after initial supportive measures are essential to improve the odds of clinical recovery.
(Thorac Med 2010; 25: 268-274)

Key words: air embolism, CT-guided biopsy, hyperbaric oxygen therapy

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電腦斷層導引肺部細針切片引起之全身性空氣栓塞症：一病例報告

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經皮細針胸腔穿刺切片經常用來診斷肺部及縱膈腔疾病，這項檢查可能造成一些併發症，諸如：單純性氣胸、自限性咳血、致命性肺出血及空氣栓塞症。將空氣導入心血管循環系統是一個危險的醫源性傷害，可造成嚴重病症甚至死亡，在所有經皮細針胸腔穿刺切片檢查中，它的發生率介於0.02%到0.4%間。在此我們報告一位患者接受電腦斷層導引切片後，經電腦斷層證實，併發大量全身性空氣栓塞症，初步給予氧氣並穩定生命徵象後，患者接受立即的高壓氧治療，追蹤後並無發生空氣栓塞症相關的後遺症。對於全身性空氣栓塞這個少見的併發症，胸腔醫師必須熟悉且注意，能夠及時診斷並給予高壓氧治療。*(胸腔醫學* ***2010; 25: 268-274)***

關鍵詞：空氣栓塞症，電腦斷層導引切片，高壓氧

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Thoracoscopic Diagnosis of Right-sided Bochdalek Hernia in an Adult with Traumatic Injury

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A 49-year-old woman was injured in a motor vehicle accident. Rupture of the right diaphragm and liver herniation were suspected from the chest radiography and computed tomographic scan. However, due to the lack of a definite diagnosis, a diagnostic thoracoscopy was performed which revealed a right-sided Bochdalek hernia with partial liver herniation. A normally developed liver and no herniation of the abdominal viscera were also noted. The patient had an uneventful recovery after the operation and maintained regular follow-up after discharge. Right-sided Bochdalek hernia in an adult could be mimicked by traumatic diaphragm rupture. The diagnosis can be confirmed by means of minimally invasive thoracoscopy which is a good diagnostic tool. ***(Thorac Med 2010; 25: 275-278)***

Key words: Bochdalek hernia, diaphragm rupture, thoracoscopy

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胸腔鏡診斷右側橫膈疝氣疑似創傷性橫膈破裂——病例報告

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49歲女性病患，因車禍而來急診就診。胸部X光影像及胸部電腦斷層影像疑似橫膈破裂及肝疝氣。因無法確定診斷，病人接受了診斷性胸腔鏡手術。手術發現右側橫膈Bochdalek疝氣及部分肝臟疝氣，沒有發現其他腹部器官疝氣。術後病人恢復良好，目前持續追蹤中。成人右側橫膈Bochdalek疝氣疑似創傷性橫膈疝氣由微創性胸腔鏡是很好的診斷工具。*(胸腔醫學* ***2010; 25: 275-278)***

關鍵詞：橫膈Bochdalek疝氣，橫膈破裂，胸腔鏡

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Prostate Cancer with Mediastinal Lymph Node Metastasis Diagnosed by Transbronchial Needle Aspiration: A Case Report

Kuei-Pin Chung, Chao-Chi Ho, Chong-Jen Yu

Prostate cancer metastases usually involve the skeletal system or regional lymph nodes. Mediastinal lymph node metastases are rare in prostate cancer, and may develop at presentation or during treatment. Before the introduction of endobronchial ultrasonography, invasive procedures such as mediastinoscopy or thoracoscopy were required for the definite diagnosis. With the application of convex probe endobronchial ultrasonography-guided transbronchial needle aspiration (EBUS-TBNA), the etiology of mediastinal lymphadenopathy can be confirmed and more invasive methods avoided. We described a 67-year-old man with prostate cancer who subsequently developed mediastinal lymph node metastases and pulmonary lymphangitis carcinomatosis during the treatment course. The diagnosis of mediastinal lymph node metastases was confirmed by EBUS-TBNA. We concluded that mediastinal lymph node metastases could develop in prostate cancer and could be confirmed by EBUS-TBNA. ***(Thorac Med 2010; 25: 279-285)***

Key words: prostate cancer, mediastinal lymphadenopathy, endobronchial ultrasonography, transbronchial needle aspiration

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經支氣管細針抽吸診斷攝護腺癌併縱膈腔淋巴腺轉移：病例報告

鐘桂彬　何肇基　余忠仁

攝護腺癌可以造成骨轉移或是局部淋巴腺轉移。縱膈腔淋巴腺轉移於攝護腺癌較為罕見，其可以在初診斷時或是治療後發生。在經支氣管鏡超音波尚未發展的年代，縱膈腔淋巴腺轉移需要倚賴侵襲性的術式，例如：縱膈腔鏡、胸腔鏡、或是開胸手術。經支氣管鏡超音波併細針抽吸的應用可以提供縱膈腔淋巴腺腫大良好的診斷資訊。我們在此報告一個67歲的男性攝護腺癌病人，於治療中發生縱膈腔淋巴腺轉移以及肺部癌性淋巴管炎，並由經支氣管鏡超音波併細針抽吸的使用確立診斷。對於攝護腺癌併縱膈腔淋巴腺腫大，攝護腺癌轉移需要納入鑑斷的考慮。其診斷可以利用經支氣管鏡超音波併細針抽吸加以確認，而避免侵襲性較高的診斷術式。*(胸腔醫學* ***2010; 25: 279-285)***

關鍵詞：攝護腺癌，縱膈腔淋巴腺腫大，經支氣管鏡超音波，經支氣管細針抽吸

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