

中文題目：一簡單實用之臨床模式預測急性喘之病患有無肺栓塞

英文題目：A Simplified Clinical Model to Predict Pulmonary Embolism in Patients with Acute Dyspnea

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摘要

前言：肺栓塞是一表現多樣且容易致命之疾病。若有一簡單實用之臨床模式可早期預測在急性喘的病患有無肺栓塞，對臨床醫師應有莫大幫助。

材料及方法：我們收集了 56 位肺栓塞及 92 位無肺栓塞的病患。他們均以急性喘為表現。急診第一線之醫師評估並紀錄臨床表現，包括症狀、表徵、心電圖、胸部 X 光、及動脈血檢查。經比較兩組病患之數據後，我們將 p 值有顯著意義的臨床因子，組成一前試驗模式。可能性小於 30%者為低度可能、介於 30%與 70%者為中度可能、高於 70%者為高度可能。再收集另外 40 位以急性喘為表現之病患來試驗此前試驗模式。

結果：臨床因子中是正向可能肺栓塞獨立因子者計有：女性、單側腳腫、高肺泡動脈氧壓差、清淨的胸部 X 光、及心電圖有右心室過勞徵象；負向可能肺栓塞獨立因子者計有：咳嗽、胸悶、及呼吸有雜音。此前試驗模式有高達 94.1%之正預測值及 94.4%之負預測值。經 40 位病患測試，仍有高達 92.9%之正預測值及 91.3%之負預測值。

結論：針對急性喘病患有無肺栓塞之族群，我們設立了一簡單且不需次專科醫師即可獲得之前試驗模式，並經試驗仍有高正預測值及負預測值。

A Simplified Clinical Model to Predict Pulmonary Embolism in Patients with Acute Dyspnea

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Summary

Objectives: Developing a simple clinical model for predicting pulmonary embolism (PE) in patients with acute dyspnea in the emergency room.

Patients and measurements: We enrolled 56 patients diagnosed with PE, and 92 consecutive patients without PE, all of whom presented with acute dyspnea in the emergency room. Primary emergency-room physicians assessed the initial evaluation and interpretation of various laboratory findings. Some significantly independent predictors of PE were identified and integrated into a clinical model of pretest probability: low ($< 30\%$), intermediate ($\geq 30\%$, $\leq 70\%$), and high ($> 70\%$). After setting up the model, another 40 patients (16 with PE, 24 without PE) were tested using the pretest model.

Results: Clinical variables associated with increased likelihood of PE were being female and having unilateral low-leg edema, a high alveolar-arterial oxygen gradient, a clear chest roentgenogram, and electrocardiographic findings of right ventricular strain. Variables associated with decreased likelihood of PE were cough, chest tightness, and unclear breathing. Our clinical model predicted that 95% of patients with PE had a high or low probability of PE. The positive predictive value for high probability was 94.1% and the negative predictive value for low probability was 94.4%. In the tested group, the positive predictive value for high probability was 92.9%. The negative predictive value for low probability was 91.3%.

Conclusions: This simple and easily available prediction model was useful in estimating the pretest probability of PE in the setting of acute dyspnea.

Key words: pulmonary embolism; acute dyspnea; pretest probability