There Are No Excuses for Not Performing Spirometry in Acute Asthmatics in the Emergency Department Setting

To the Editor:

I read with great interest the article in CHEST by Silverman and colleagues1 (January 2007). I think that it is a very important article because is the first attempt to assess the performance of spirometry in an acute care setting. Thus, it is well established that the severity of airflow obstruction cannot be accurately judged by means of symptoms and physical examination.2–4 On presentation, after the initial treatment, and at subsequent frequent intervals, the measurement of lung function as FEV1 or peak expiratory flow (PEF) provides an objective evaluation of airway obstruction and constitutes an integral part of the assessment of disease severity (static assessment) and the response to therapy (dynamic assessment) in any patient > 5 years of age. In spite of this evidence, acute asthma patients are assessed inappropriately. One prospective study5 reported the measurement of PEF in only 30% of patients. Reasons for the lack of more intensive use of PEF or FEV1 in the emergency department (ED) setting are not clear, although factors that may impact include the idea that patients are incapable to perform spirometry because they are acutely ill and severely obstructed. However, Silverman and colleagues5 demonstrate conclusively that most adult patients seen for severe asthma exacerbations in an ED can successfully perform criteria-specific acceptable and reproducible spirometry maneuvers. All patients were able to blow for at least 1 s in at least one effort for all time points. Finally, the study also supports the concept that inexperienced investigators can be quickly trained to meet minimal performance standards. In summary, there are no excuses for not perform spirometry in acute asthmatics in the ED setting.

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Dr. Rodrigo has received fees for speaking for Boehringer Ingelheim, GlaxoSmithKline, and AstraZeneca, and honoraria as consultant from CYDEX Inc. and Discovery Laboratories. Reproduction of this article is prohibited without written permission from the American College of Chest Physicians (www.chestjournal.org/misc/reprints.shtml). Correspondence to: Gustavo J. Rodrigo, MD, Departamento de Emergencia, Hospital Central de las Fuerzas Armadas. Av. 8 de Octubre 3620, Montevideo 11600, Uruguay; e-mail: garodrig@uinete.com.uy

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Risk Factors for Extubation Success in Patients Following Failure of a Spontaneous Breathing Trial

To the Editor:

An interesting article considered “Risk factors for extubation failure in patients following a successful spontaneous breathing trial” (December 2006)6 without considering extubation success rates in those who do not pass a spontaneous breathing trial! Granted, a successful spontaneous breathing trial bodes well for extubation, but what about patients with neuromuscular disease who are continuously ventilator dependent using noninvasive intermittent positive pressure ventilation (NIV) before pneumonia and acute respiratory failure develop? While only three of the reintubated patients in this article1 had neuromuscular disease, they could not have been continuously NIV dependent if they passed a spontaneous breathing trial. We have extubated > 300 such patients who could not have passed a spontaneous breathing trial even in the months before intubation.2 Indeed, our extubation success rates exceed 85% even in infants and small children with Werdnig-Hoffmann disease who cannot breathe at all spontaneously, cannot cooperate with assisted coughing, and who have insufficient bulbar-innervated muscle function for chewing, swallowing, or any verbal output.3,4 The key is to extubate such patients once the lungs are healthy and to extubate them to full NIV (not low-span bilevel positive airway pressure) and use of assisted coughing as needed. While this critical care article1 is valuable, it perpetuates the false notion that patients with primarily respiratory muscle failure can, and should, be evaluated and managed in the same manner as patients with intrinsic lung/airways disease. While it can be routine to extubate patients with no functioning inspiratory or expiratory muscle function as long as bulbar-innervated muscles retain some function, in this case this can obviously not be predictable by a “spontaneous breathing trial.”

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