

Chung and Lee classify TB into seven subtypes<sup>3</sup>: caseating (12%–43%), edematous-hyperemic (14%–44%), fibrostenotic (6%–10.5%), tumoral (10.5%–30%)<sup>3–5</sup> granular, ulcerative, and non-specific bronchitis type. The first four have a poorer prognosis, because of associated bronchial stenosis.<sup>3</sup> These types seem to represent different stages of the same disease, starting with granulomas and submucosal inflammatory lesions that progress to masses, fibrosis and airway stenosis.<sup>4,5</sup> The tumoral subtype has endobronchial masses, with a hemorrhagic surface and a necrotic outer layer, simulating squamous carcinoma. Risk factors for residual bronchial stenosis are age over 45 years, fibrostenotic type, and late diagnosis.<sup>2,5</sup> Treatment includes endoscopic dilation, mechanical resection, or stenting combined with corticosteroids. The latter seems to be effective in the early stages and the caseating/tumoral forms,<sup>4</sup> so for this reason they were used in our patient, who achieved total recovery.

In the presence of fever and endobronchial lesions or pulmonary mass, consideration of TB at diagnosis is mandatory, especially in immigrants during the early years after arrival.

### **Severe Asthma Exacerbation in an Intermediate Respiratory Care Unit: Fact or Controversy?\***

### **Agudización grave de asma en una unidad de cuidados respiratorios intermedios: ¿realidad o controversia?**

To the Editor:

The development of respiratory intermediate care units (RICUs) has allowed for better care of patients with acute respiratory failure (ARF) of diverse etiology.<sup>1</sup> RICUs are beneficial for patients requiring noninvasive ventilation (NIV). In the case of severe asthma exacerbations (SAE), the use of NIV remains controversial.<sup>2</sup>

We read with interest the original study by Núñez et al.<sup>3</sup> analyzing the progress of patients with SAE at an RICU. This important contribution highlights the importance of these units. However, in our opinion, there are some aspects of this study that need to be clarified.

A. In the selection of patients, the date of diagnosis, reversibility of bronchial obstruction, family history, and other features supporting diagnosis are unknown. Among SAE patients admitted to RICU, 37% were active smokers or former smokers. Furthermore, of the ten patients receiving NIV, five were obese and three had kyphoscoliosis.

This gives rise to the following questions: How many patients had asthma? How many had COPD and not asthma? NIV can be effective, even in patients with COPD and pneumonia (the most frequent finding in RICU patients). This leads us to wonder whether the patients with kyphoscoliosis and obesity had chronic hypotension and whether they could have benefited from NIV.

B. Regarding the definition of SAE, according to the GINA guidelines, patients with severe asthma flare-up can have a peak flow of <60% of the known or theoretical maximum value, or else <100 l/min and/or PaO<sub>2</sub> < 60 mmHg.<sup>4</sup> The average peak flow in RICU patients is substantially greater, so airflow limitation might not be the most influential factor in the blood-gas deterioration. The physical examination parameters suggested by the GINA guidelines – alertness, use of accessory muscles, respiratory and heart rate, etc. – have not been reported.

### **References**

- Informe sobre la situación de la tuberculosis. Red Nacional de Vigilancia Epidemiológica. España, 2007. Centro Nacional de Epidemiología. 18 de marzo de 2009. Available from: [http://genmico.unizar.es/PDF/TB\\_informe%202007\\_CNE.pdf](http://genmico.unizar.es/PDF/TB_informe%202007_CNE.pdf) [accessed 18.10.11].
- Ip MS, So SY, Lam WK, Mok CK. Endobronchial tuberculosis revisited. *Chest*. 1986;89:727–30.
- Chung HS, Lee JH. Bronchoscopic assessment of the evolution of endobronchial tuberculosis. *Chest*. 2000;117:385–92.
- Yanardag H, Tetikkurt C, Tetikkurt S, Demirci S, Karayel T. Computed tomography and bronchoscopy in endobronchial tuberculosis. *Can Respir J*. 2003;10:445–8.
- Um SW, Yoon YS, Lee SM, Yim JJ, Yoo CG, Chung HS, et al. Predictors of persistent airway stenosis in patients with endobronchial tuberculosis. *Int J Tuberc Lung Dis*. 2007;11:57–62.

Julen Cadiñanos Loidi, Daniel Abad Pérez,\* Rosa de Miguel Buckley

Servicio de Medicina Interna, Hospital Universitario de la Princesa, Madrid, Spain

\* Corresponding author.

E-mail address: [danielabadperez@hotmail.com](mailto:danielabadperez@hotmail.com) (D. Abad Pérez).

A description of the authors' recommendations on the criteria for RICU admission would be interesting. Might SAE patients benefit from RICU monitoring, whether they receive NIV or not? We believe that if the previous recommendations are met, the answer is yes, and in this way prompt attention can be guaranteed, if necessary.<sup>5</sup>

In any case, this study does not allow conclusions to be drawn on the effect of NIV in patients with SAE, although we accept that this is not its purpose. Studies of NIV in SAE have been carried out in emergency departments. The use of NIV has been associated with an improvement in lung function and respiratory mechanics, but no changes have been observed in hospitalization or intubation rates. These objectives should be included in future studies, and appropriate selection criteria and methodology – mode and ventilation parameters, interface type, hours of ventilation, aerosol methodology, etc. – should be employed.<sup>2</sup>

With regard to economic aspects, we agree that RICUs are cost-effective, but, again, the methodology of this study limits conclusions.

### **References**

- Scala R. Respiratory high-dependency care units for the burden of acute respiratory failure. *Eur J Intern Med*. 2012;23:302–8.
- Lim WJ, Mohammed Akram R, Carson KV, Mysore S, Labiszewski NA, Wedzicha JA, et al. Non-invasive positive pressure ventilation for treatment of respiratory failure due to severe acute exacerbations of asthma. *Cochrane Database Syst Rev*. 2012, <http://dx.doi.org/10.1002/14651858.CD004360.pub4>. Art. No.: CD004360.
- Núñez B, Fiorentino F, Kersul A, Belda S, García S, Gutiérrez C, et al. Characteristics of asthma patients admitted to an intermediate respiratory care unit. *Arch Bronconeumol*. 2013;49:146–50.
- Global initiative for asthma: global strategy for asthma management and prevention. NHLBI/WHO workshop report. Updated 2012. Ref type: data file.
- Torres A, Ferrer M, Blanquer JB, Calle M, Casolí V, Echave JM, et al. Intermediate respiratory intensive care units: definitions and characteristics. *Arch Bronconeumol*. 2005;41:505–12.

Javier Navarro Esteva,<sup>a,\*</sup> Antonio M. Esquinas Rodríguez<sup>b</sup>

<sup>a</sup> Servicio de Neumología, Hospital Universitario de Gran Canaria Dr. Negrín, Las Palmas de Gran Canaria, Spain

<sup>b</sup> Unidad de Cuidados Intensivos, Hospital Morales Meseguer, Murcia, Spain

\* Corresponding author.

E-mail address: [jnesteva7@hotmail.com](mailto:jnesteva7@hotmail.com) (J. Navarro Esteva).

\* Please cite this article as: Navarro Esteva J, Esquinas Rodríguez AM. Agudización grave de asma en una unidad de cuidados respiratorios intermedios: ¿realidad o controversia? *Arch Bronconeumol*. 2014;50:127.