

**Figure 1.** Use of healthcare resources after treatment. Severe exacerbations (requiring treatment with systemic glucocorticoids or double doses of inhaled glucocorticoids), unplanned GP visits, A/E visits, hospitalisations in the post-treatment period. White columns: placebo; grey columns: bronchial thermoplasty. Values are expressed in mean  $\pm$  SEM. \*Posterior probability of superiority = 95.5% †Posterior probability of superiority = 99.9%.

questionnaire compared to the sham bronchoscopy group ( $1.35 \pm 1.1$  versus  $1.16 \pm 1.23$ ) (probability of superiority: 96% of intention to treat and 97.9% of protocol), although it is noteworthy that there was also a placebo effect. Furthermore, the thermoplasty group also presented greater improvement in global quality of life and showed a greater reduction in the rate of serious exacerbations (32%), emergency visits and days lost from work or school (fig. 1). The other secondary variables showed no significant differences between the two groups.

The thermoplasty group showed a greater number of adverse effects during the treatment period, consisting primarily in a

worsening of symptoms or infections of the upper respiratory tract. The majority of these adverse effects were mild, transitory (during the first week) and were resolved with conventional medication.

This study is important since it is the first clinical trial published on thermoplasty that includes a control group that undergoes a "placebo" thermoplasty.

These data concur with previously published trials (with control group, but without a placebo), and together show that bronchial thermoplasty is a reasonably safe procedure in patients with moderate and severe asthma as shown by the improvement in clinical variables such as quality of life or the number of exacerbations, without a clear impact on other variables analysed such as lung function.

We can reflect on whether these results are sufficient to respond positively to the expectations generated by this treatment. In any case, according to the press release on the manufacturer's website ([www.asthmatx.com](http://www.asthmatx.com)) bronchial thermoplasty is currently being evaluated by the US Food and Drug Administration and has received positive feedback from the American Anesthesiology and Respiratory Therapy Devices Advisory Panel.

## References

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## Acute Mediastinitis as a Complication of H1N1 Influenza

### Mediastinitis aguda como complicación de la gripe H1N1

To the Editor:

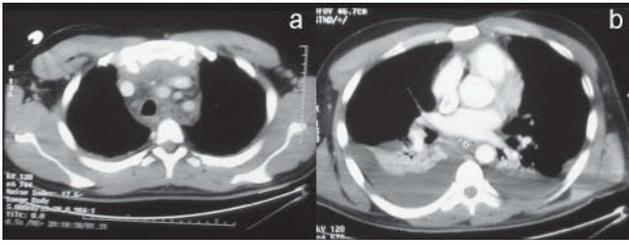
At the end of March and the beginning of April 2009 an infection caused by the H1N1 influenza virus broke out in Mexico.<sup>1</sup> On 11 June 2009 the WHO decided to raise its pandemic alert to the highest level, level 6, indicating the dissemination and transmission of the virus in at least 2 continents.<sup>2</sup> Most of the cases were mild, with a rate of hospitalization of 2-5% and a level of bacterial superinfection of 4%.<sup>3</sup> In the cases of secondary bacterial infection, amongst the most common pathogens we can single out: *Streptococcus pneumoniae*, *Staphylococcus aureus*, gram-negative bacilli and Group A streptococci.<sup>3</sup> Below we present the case of a young patient who, as a complication of an H1N1 influenza infection, developed a *Streptococcus pyogenes* superinfection and mediastinitis.

A 35-year-old male patient with no medical history or toxic habits that were relevant to his pathology came to A&E, having suffered, during the previous week, general malaise, asthenia, myalgias and fever, which had been associated with retrocardiac pain and dyspnoea for a number of hours. When the patient was examined, he was found to be suffering from hypotension (80/58 mmHg), tachycardia (112 bpm) and tachypnea without respiratory effort, and, analytically, the major findings were acute renal failure (creatinine 2.9 mg/dl) and coagulopathy (INR 1.4; aPTT 40 s). The patient was admitted to the

intensive care unit with a diagnosis of septic shock, so treatment with a broad-spectrum empiric antibiotic was initiated. An echocardiogram and cervicothoracic CAT were performed, and a sample of the pharyngeal-tonsillar exudate was taken. Echocardiogram: no significant abnormalities were detected. Cervicothoracic CAT (fig.1a and b): enlargement of both tonsils, multiple pathologically enlarged laterocervical adenopathies, diffuse increase in mediastinal density, this being more marked in the anterior mediastinum, which was suggestive of mediastinitis. Bilateral pleural discharge, small pseudonodular images in the upper left lobe, suggesting alveolar infiltrates. Pharyngeal-tonsillar exudate: PCR positive for H1N1 influenza virus.

In view of the above findings, a decision was made to perform an urgent posterolateral thoracotomy in order to debride and clean the mediastinum. A culture of the pleural and mediastinal liquid proved positive for *Streptococcus pyogenes* so the antibiotic treatment was adjusted. During his stay in the intensive care unit, the patient was haemodynamically stable and showed a decline in his sepsis marker levels, so he was transferred to the ward 18 days later.

Mediastinitis is a pathology with a mortality of about 40%,<sup>4</sup> in which the highest success rates are associated with early diagnosis, immediate antibiotic treatment and urgent surgery with mediastinal debridement and drainage.<sup>5</sup> In patients who have not previously undergone surgery the most common cause of mediastinitis is acute necrotizing mediastinitis (also known as descending necrotizing mediastinitis).<sup>4</sup> This is the first case presented in the literature of mediastinitis caused by *S. pyogenes* as a complication of H1N1



**Figure 1.** Thoracic CAT showing the mediastinum. a) Diffuse increase in mediastinal density, which was more marked in the anterior mediastinum, suggesting mediastinitis. b) Bilateral pleural discharge.

influenza. It is important to be familiar with the possible complications of H1N1 influenza, especially those which are potentially lethal, as the survival of the patient may depend on prompt diagnosis and treatment.

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