Reviewer's report

Title: Perseverant, non-indicated treatment of obese patients for obstructive lung disease

Version: 4 Date: 2 May 2013

Reviewer: Francesco Pistelli

Reviewer's report:

Major Compulsory Revisions

The authors have revised the first version of the manuscript following the comments/suggestions from reviewers and now it is partly improved. Although the present study provides a message that may be interesting for the clinicians, some methodological concerns remain to be addresses.

1. The authors state that the ATS-ERS definition was used to define airways obstruction, but FVC (forced vital capacity) was used instead of VC (slow vital capacity). The choice should be discussed. Indeed, in obese subjects higher VC-FVC differences may be expected.

2. Only 57 patients (37% of the whole study sample) had measurements of lung volumes (i.e. TLC). The measurement of TLC is needed to define a restrictive defect according to ATS-ERS guidelines for lung function tests. In absence of lung volumes, the authors defined a restrictive defect “when FVC was reduced, the FEV1/FVC was simultaneously increased (85-90%) and the flow-volume curve showed a convex pattern”. The lacks of TLC measurements and the (arbitrary?) criterion “FEV1/FVC > 85-90%” used to define a restrictive defect should be discussed as limits of the study. Indeed, in obese patients higher rates of restrictive defects are expected.

3. The authors state that “inconclusive” were defined those tests that could be not classified as restrictive defect or obstructive defect or mixed pattern or normal study. Were those results obtained from acceptable and reproducible maneuvers according to ATS-ERS guidelines for lung function tests?

4. Misdiagnosis of asthma should be further clarified. For example, it might be possible that, at lung function evaluation, some asthmatic obese patients could have a normal lung function test or a restrictive defect without airways obstruction as a consequence of a regular treatment for obstruction. Was a metacholine challenge test performed in all patients labeled as asthmatics to confirm the diagnosis?

Minor essential revisions

1. The lung function equations used to compute airways obstruction or restriction defect according to the ATS-ERS criterion should be reported in the Methods section.
2. Independent variables used in the logistic regression analysis should be listed/specified in the Methods section.

3. Table 3. Add a legend for the abbreviations of: BMI, CHF, DM, HTN.

4. Panel B of the figure 2 is not described in the Results sections (Results section, first paragraph). However, panel B replicates the same results that are reported in figure 1. Thus, it may be eliminated.

5. Table 2 lacks of descriptive statistics for lung volumes.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests