Reviewer’s report

Title: Tension pneumothorax, is this a really life threatening condition?

Version: 1 Date: 30 June 2013

Reviewer: Marios Patronis

Reviewer’s report:

To the Editors,

I have read the article entitled “Tension pneumothorax, is this a really life-threatening condition?” with great interest. It is a comprehensive, retrospective article which concerns a very common aspect of the everyday practice of thoracic surgery.

The article is well-constructed and the concept is described with meticulous attention to detail. The authors are following the basic principles of data reporting. The results are sufficiently substantiated by the presented data. The Achilles heel of the article is the quality of its English because there are some grammar and spelling mistakes, some incidents described with a wrong use of terms, and some sentences which lack clarity. I have highlighted all these issues in the following text.

In the wake of the above, I will not ask for compulsory major revisions, but only for essential revisions. Specifically I have noticed the following:

• The title should perhaps be modified: “Tension pneumothorax, is it really a life-threatening condition?”.

• In the abstract, in the background section, the first phrase could be rephrased: “Tension pneumothorax is a life-threatening occurrence that is infrequently the consequence of spontaneous pneumothorax”.

• In the main article, in the background section, the first sentence of the second paragraph should be: “Tension pneumothorax is characterized by progressive tachycardia, respiratory distress, sweating, hypotension and pallor resulting from hypoxemia, mediastinal shift and reduced venous return. “Hypoxemia is one of the primary pathophysiology mechanisms like mediastinal shift and reduced venous return, not a secondary manifestation like the other aforementioned adaptive symptoms.

• Again in the background section, in the last paragraph (the third one), we should delete the word “and”. So the phrase will be: “The aim of this study is to determine the overall incidence of tension pneumothorax in patients with spontaneous pneumothorax, the risk factors for the development of tension pneumothorax and its impact on the clinical outcome”.

• In the “Material and Methods” section, the last sentence of the first paragraph should be corrected:” ...could not be found including one patient who was...”.
• In the same section, in the fifth paragraph, the last sentence could be modified as follows: “The size of the bullae was defined by the longest diameter of the largest bullae.”.

• In the Results section, second paragraph, first sentence, the word “who” should be omitted. In the same paragraph, third sentence, we should write “history” instead of “histories”. In the fourth paragraph, in the third sentence we have to replace the word “different” with the word “differ”. In the sixth paragraph the first sentence should be: “…the hospital stay was…”.

In the last sentence of the same paragraph, we should write higher instead of high. This study shows that the mortality is not high. But it is higher in the group of tension pneumothorax in comparison with/than that of the group without tension pneumothorax.

• In the Discussion section, first paragraph, last sentence, we should write: “outcome was very”… instead of “outcomes are very…” In the second paragraph, the first sentence should be: “the underlying mechanism of tension pneumothorax is known …”. The existing phrase sounds meaningless.

• In the third paragraph, the third sentence could be modified as follows: “The tension would be higher on the walls of large bullae than on smaller bullae, so making the bullae walls thinner could predispose rupture more easily.”.

• In the sixth paragraph, the second sentence: “Mills and Baisch reported 14 cases…” I don’t think that we need the word “on”. In the third sentence the word “variously” should be replaced by the word “variably”.

• In the seventh paragraph, first sentence, we should write: “…preoperative and postoperative hospital stay was…” The third sentence should be modified as follows: “These findings suggest that tension pneumothorax does not affect the operative outcome (duration of chest tube drainage), but it does influence the hospital stay. Its influence on hospital stay is attributable to the accompanying co morbidity including age, hypertension, COPD and REPE.

The reason I am asking the modification above is that the term “operative outcome” is not well defined at the current set up of the study, and the term “hospital outcome” is completely unclear.

• Ninth paragraph, seventh sentence should be: “…is at risk of sudden…” Also the eighth sentence should be changed as follows:” … until an involvement by the pneumothorax of approximately 47% of the total lung capacity occurs.”

I conclude by saying that generally speaking, it is an article of importance in its field.

Reviewer’s advice:
Accept after essential revisions (which the author can be trusted to make).

Level of interest:
An article of importance in its field.
Quality of written English:
Needs some language corrections before being published. (I have highlighted all of them above)

Statistical review:
Yes. I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests.

With kind regards,

Marios Emm. Patronis
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Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests