Author's response to reviews

Title: A fatal case of recurrent amiodarone-induced thyrotoxicosis after percutaneous tracheostomy

Authors:

Vasilios V Papaioannou (papabil69@vodaphone.net.gr)
Erini E Terzi (terziv@civil.auth.gr)
Christos K Dragoumanis (christosdragoumanis@gmail.com)
Dimitrios D Konstandonis (drkonst@in.gr)
Vasiliki V Theodorou (vassiliki.theodoru@gmail.com)
Ioannis I Pneumatikos (ipnevmat@med.duth.gr)

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Answers to the reviewers

1st Reviewer (Christian Koch)

General: Done

The conclusion has been rephrased in abstract (page 2) and in the main paper (page 9, 10). The key message of this case report has become even clearer as the presence of a concomitant severe illness (amiodarone-induced pulmonary fibrosis) along with thyrotoxicosis difficult to manage, stresses the need for urgent medical and even surgical therapy, even in cases that fail to become euthyroid. In such patients, a minimally invasive procedure (such as a percutaneous tracheotomy) may precipitate a new crisis and should be performed, whenever needed, in parallel with surgery.

Minor comments

2nd Reviewer (Rajesh Bhagat)

General
1. Although English is not the native language of either the main author or his colleagues, we made great effort in ameliorating grammar and general editing of the manuscript. We still believe that the key messages of this case report have become more clear, thanks (between other causes) to a better use of English language.

2. Discussion, which has been put under a separate heading, has been increased by approximately 2.5 pages. The references have been increased from 13 to 21. A more detailed discussion of pathophysiology, diagnosis and treatment alternatives of AIT
has been included whereas questions regarding management of the reported case have been answered on a more solid scientific way.

**Minor comments**

1. Done. The phrase ‘weaning from mechanical ventilation’ historically refers to the deliberate and slow process of withdrawing of ventilatory support. Liberation from mechanical ventilation was used in order to signify the particular removing of the patient from the ventilator. According to the reviewer’s suggestion, this phrase has been excluded from the paper.

2 & 3. The patient, with a recently diagnosed pulmonary fibrosis associated with chronic amiodarone treatment, during his first days in ICU was ventilated mainly with pressure regulated volume control mode and he needed increased ventilatory support, due to the significantly decreased respiratory compliance and augmented metabolic rate (from thyrotoxicosis) in order to achieve effective ventilation. He never suffered from ARDS, pulmonary infection or sepsis. In pages 8-9, a detailed discussion about amiodarone-induced pulmonary toxicity has been added, along with details concerning the increased mortality of this complication. As it is outlined in page 4, neuromuscular blockers were only occasionally needed, in order to ameliorate patient-ventilator synchrony (increased resistance, decreased compliance). However, we believe that the high dose of administered corticosteroids, along with primary pulmonary disease and concomitant cardiovascular compromise (history of coronary disease and moderate ventricular dysfunction) were mainly responsible for weaning failure.

4. In pages 6-8, an in-depth discussion about the different types of AIT, along with their diagnostic and therapeutic controversies has been added. We think that our case had an even higher mortality because of pulmonary fibrosis, which makes even more
difficult the management of such a patient. This issue has been discussed in pages 9, 10 (conclusions) and also in the abstract (page 2).