AOT ANNALS OF THYROID
AN OPEN ACCESS JOURNAL PUBLISHING RESEARCH IN ALL ASPECTS OF THYROID DISEASE

Peer Review File

Article information: https://dx.doi.org/10.21037/aot-21-18

Reviewer Comments

Major concerns

Comment 1: Authors mention beta-blocker was contraindicated due to acute heart failure. However in this patient whose heart failure was due to thyrotoxicosis, propranolol should not have been contraindicated and it would rather be beneficial for this patient to decrease peripheral conversion of T4-T3. Authors should discuss this more in detail in the discussion section with appropriate citations

Reply 1: Our patient had dilated cardiomyopathy with reduced ejection fraction (42%) due to severe untreated thyrotoxicosis. This condition together with atrial fibrillation led to low-cardiac output heart failure, different from typical high-output heart failure in prevalent thyrotoxicosis. Of which the hyperadrenergic state plays the compensatory role in maintaining the cardiac output, so the administration of beta-blocker may halt this compensation and lead to hemodynamic instability.

Changes in the text: We have added some data and citations as advised in the discussion section. (page 8-9 line 152-157)

Comment 2: What was the vitamin D level at the time of admission. This could have been one of the precipitating factors for patient's hungry bone syndrome, considering this patient to be malnourished with low BMI

Reply 2: The 25 (OH) vitamin D level in our patient was 8.5 ng/dL which could have been one of the precipitating factors for hungry bone syndrome in this patient as we have already described in the discussion part (Page 11 line 204-208).

Changes in the text: We have added this information in Table 1: Laboratory data on admission (Page 15 line 301).

Comment 3: What formulation and dose of thyroid medications was patient taking prior to admission.

Reply 3: The patient's son brought us the levothyroxine tablets of which the patient was taking as diet pills for a 4-month duration. Unfortunately, he did not know the accurate dosage.

Changes in the text: We have added this information in the case presentation; clinical history section (Page 5 line 76-78).

Comment 4: The treatment should be discussed more in detail. E.g. type/dose/ frequency/duration of steroid used.

Reply 4: Intravenous dexamethasone 4 mg every 12 hours was initiated at the emergency department as soon as the diagnosis of thyroid storm was made aiming to decrease the peripheral conversion of thyroxine. The dexamethasone was discontinued on the fourth day of admission after achieving the near-normal free thyroid hormone levels and the patient gained her self-consciousness.

Changes in the text: We have added this information in the case presentation; management of thyroid crisis section (Page 6 line 103-105, Page 7 line 113-114).

Comment 5: Timeline of when patient was admitted to the hospital, transferred to ICU, and developed cardiorenal syndrome should be discussed more in detail

Reply 5: The patient was directly transferred from the emergency department to ICU at the date of admission. The cardiogenic shock developed in 72 hours and cardiorenal syndrome occurred subsequently. The emergent continuous renal replacement therapy was initiated on the 7th day of admission.

Changes in the text: We have added the thorough timeline outlining the clinical course and management of thyrotoxicosis factitia with thyroid storm, which was complicated by cardiogenic shock and cardiorenal syndrome in case presentation; management of thyroid crisis section (Page 6 line 103-115).

<u>Minor concerns</u>

Comment 1: Include a table to reflect the lab results on admission.

Reply 1: We have added a Table of the laboratory on admission as advised.

Changes in the text: We have added the laboratory investigation on admission in Table 1 (Page 15 line 301).

Comment 2: The case presentation **section** can be modified significantly for improving readability.

Reply 2: We have segmented the case presentation section into subdivisions as advised.

Changes in the text: We have modified our case presentation section as advised (Page 4-8 line 64, 79, 87, 102, 116).

Comment 3: The figure legend should be modified for better readability. Authors may consider "Trends of calcium level, phosphorus level and management during the course of hospital stay.

Reply 3: We have changed the figure legend for Figure 1 as advised.

Changes in the text: We have changed the figure legend as advised (Page 14 line 294-295).

Comment 4: There are several grammatical error and hence I would strongly recommend linguistic revision of this paper by an expert.

Reply 3: We have had the linguistic revision by the native English speaker.

Changes in the text: We have acknowledged his name in the Acknowledgment section as advised (Page 12 line 222).