

Dear Editor,

Thank you for carefully reviewing our manuscript previously titled :  
Diagnosis and treatment of postoperative secondary aggravation of  
obstructive sleep apnea-hypopnea syndrome and hypoxemia in a patient  
with carotid body tumor: Case report (Manuscript NO.: 57945) for possible  
publication in the World Journal of Clinical Cases. We are grateful to you and  
your reviewers for their constructive critique. We have revised the  
manuscript, highlighting our revisions in red. and have attached  
point-by-point responses detailing how we have revised the manuscript in  
response to the reviewers' comments below.

Thank you for your consideration and further review of our manuscript.  
Please do not hesitate to contact us with any further questions or  
recommendations.

Yours Sincerely,

Xiaoguang He

Reviewer Comments:

Reviewer #1: [Specific Comments]

1) Title: "Diagnosis and treatment of postoperative secondary aggravation of obstructive sleep apnea-hypopnea syndrome and hypoxemia in a patient with carotid body tumor: Case report" they should add "A" case report.

**Response:** Now the title has been revised accordingly as "Postoperative secondary aggravation of obstructive sleep apnea-hypopnea syndrome and hypoxemia with bilateral carotid body tumor: A case report".

2) CASE SUMMARY should be written in descriptive narratives in the logic flow.

**Response:** CASE SUMMARY had been rewritten

3) CONCLUSION is too vague. The authors should write specifics in the case.

**Response:** CONCLUSION had revised (aggravation of OSAHS and hypoxemia possibly caused by the postoperative complications after bilateral CBTs, diagnosis of PSG and CPAP treatment is useful for this patient.)

4) The core tip should be different from Abstract and complimentary to Abstract, not repetitive.

**Response:** The core tip had been rewritten: The analysis and summary of a patient who had postoperative secondary aggravation of obstructive sleep apnea-hypopnea syndrome (OSAHS) and hypoxia after bilateral CBTs surgical. Our study suggested that CPAP treatment after manual pressure titration under PSG monitoring was effective in treating the primary or secondary OSAHS.

5) They need to elaborate more on diagnostics and treatment -too vague for such "20%–30% of patients with CBT have a family history of genetic diseases [2]."

**Response:** We rearranged the clinical data, and did some revisions;

6) Clinical data should be shown rather in Tables than in the verbalized text. Plus, the authors illustrated in a flow chart with descriptions on the side to explain the reasoning.

**Response:** Patient present shown in Table 1, and did illustrated in a flow chart (figure 3) to explain the physiopathologic mechanism.

7) "After bilateral CBT surgery, carotid body chemoreceptor was damaged, and the body's sensitivity to changes in blood oxygen concentration decreased." Any laboratory data of biochemistry are available to support? Also, "In this patient, due to the damage of the carotid body chemoreceptor and nerves after CBT surgery, CPAP treatment needs accurate and stable EPAP and IPAP pressure." Which lacks the supporting data for "the carotid body chemoreceptor and nerves."

**Response:** We did more illustration (figure 3): The carotid body is innervated by the anterior segment of the sympathetic nerve, the glossopharynx, and the vagus nerve. When the carotid body detects decreasing levels of oxygen (hypoxia), increasing levels of carbon dioxide (hypercapnia), and decreasing pH (acidosis), it increases respiratory rate, tidal volume, heart rate, and blood pressure together with vasoconstriction [7] After bilateral CBT surgery, due to the injury of nerves and carotid body, the body's sensitivity to timely feedback to regulate respiratory movement was decreased, which destroyed the rhythm and timeliness of the body's autonomous respiration, thus leading to the time extension of apnea, which aggravated nocturnal hypoxemia and CO<sub>2</sub> retention.

8) "Using PSG-monitored manual pressure titration, the patient had [a] nighttime sleep, breathing, and hypoxia accurately and dynamically, and the real-time adjustment of ventilator treatment pressure and timely oxygen therapy could be realized. "(Figure 2. a: PSG result of stage wake; b: PSG result of stage REM; c: manual pressure titration before oxygen therapy; d:

manual pressure titration after oxygen therapy” and Fig. 3 – both should be integrated with the accompanying treatment flow charts.

**Response:** We deleted the Figure 2a and 2b.and the integrated Figure 2c、 2d and Fig. 3 to a new figure 3.

9) All Figures should come with more descriptive legends, with sufficient details for the reader to get the picture without reading the body of the text. For example, the arrowheads for what?

**Response:** All Figures had come with more descriptive legends, with sufficient details.

10) Grammar errors: e.g., 1 “A 39-year-old male, Han nationality, [the] (add) patient reportedly had a headache, earache.” E.g., 2 “On [the](deleted) postoperative day 1, his extended tongue,” E.g., 3 “the results of [the] pulmonary function test and magnetic resonance imaging (MRI) of the head.” E.g., 4 “follow-up medications and the use of [a] ventilator were recommended.” E.g., 5: “Oral administration of psychotropic and antihypertensive drugs and ventilator treatment [were] (use was) continued, with the same therapeutic regime as that 3 months ago.

**Response:** 10) Grammar errors have been revised one by one.

Reviewer #2:

**Specific Comments to Authors:** The manuscript entitled “Diagnosis and treatment of postoperative secondary aggravation of obstructive sleep apnea-hypopnea syndrome and hypoxemia in a patient with carotid body tumor: Case report” has useful information for readers who are interested in this field. I think it could be considered for publication with minor revision.

**Response:** The title has been revised accordingly as "Postoperative secondary aggravation of obstructive sleep apnea-hypopnea syndrome and hypoxemia with bilateral carotid body tumor: A case report".

1. The authors discussed the reasons why the patient had the secondary aggravation of OSAHS and hypoxemia after CBT surgery. However, his BMI was more than 30. Did he have a smoking history? Were there any possibilities these factors affected that?

**Response:** The patient's BMI was more than 30, but there is no significant change in body weight occurred before and after the surgery. And there is no alcohol and tobacco history

2. If blood catecholamine was examined for this patient preoperatively or postoperatively, please show the data.

**Response:** we did not examined blood catecholamine

3. p.7 line 3, "the whole-night sleepthe microarousal index" → "the whole-night sleep the microarousal index"

4. p.6 line 14, "the body and root of the tongue" → "the oral tongue and the base of the tongue" p.10 line the last line, "the root of the tongue" → "the base of the tongue"

**Response:** The grammar errors have been revised

5. Please describe the amount of blood loss and operation time. Did you perform preoperative embolization for this tumor?

**Response:** The patient did the surgery in another hospital, we have not any detailed data of operation.

