

## Peer Review File

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### Reviewer A

This case report interesting and appealing, and I suggest accepting this paper.  
This is a case report on an acute increase in thyroid cyst during a cesarean section.  
Manuscript is written following CARE reporting checklist, that is welcomed.  
Figures and tables clear and mostly accurate represent the case.  
Citations are appropriate.  
Language is mostly clear and understandable.  
⇒ Thank you for taking your valuable time to review our manuscript.

### Reviewer B

This well-documented case report elucidates the potential hazards and complications associated with thyroid cysts in pregnant women. The authors observed a sudden expansion of a thyroid cyst during a Cesarean section, potentially triggered by an increase in blood and intrathoracic pressure during the delivery process. This rare complication is potentially life-threatening when it compromises the airway in such a rapid manner. It would be beneficial for all anesthesiologists to be aware of this kind of rare but potential complication. This report uniquely links pregnancy to this condition, considering the scarcity of similar documented cases.

⇒ Thank you for taking the time to review our manuscript and for your valuable comments.

The intriguing question that arises is whether such complications could occur in the absence of pregnancy, as the authors hypothesize that the rapid cyst enlargement was a result of elevated blood and intrathoracic pressure. Did this event just happen coincidentally during the Cesarean section? Are there any similar case reports (rapid expansion of thyroid cyst, compromising the airway) in the absence of pregnancy?

⇒ In this case, positive pressure ventilation and abdominal compression for the delivery of the baby increased the intrathoracic pressure, and the increased thyroid vascularity due to pregnancy seems to have contributed to the rapid increase in the size of the preexisting cyst. If this patient had not received general anesthesia for caesarean section, the thyroid cyst might not have increased rapidly.

As the reviewer pointed out, even in the absence of pregnancy, spontaneous intrathyroidal hemorrhage or infection can cause rapid increases in thyroid and cyst size. Basak et al. reported that spontaneous intrathyroidal hemorrhage has caused sudden airway obstruction requiring emergent endotracheal intubation in 57-year-old female patient (10). Nebiker et al. demonstrated that hemorrhage into thyroid cyst during bacteremia caused painful swelling of thyroid cysts and dyspnea in a non-pregnant patient (11). In

addition, Szeto et al. reported that airway compression was caused by hemorrhage in the thyroid cyst after endotracheal intubation in a healthy young man who underwent general anesthesia for elective surgery (12). They reported that the patient mildly coughed during intubation and blood pressure was slightly increased after the intubation (12).

We have added sentences in the discussion section (page 7 – 8, lines 134 – 138) and references (page 11, lines 210 – 213) regarding the reviewer pointed out.

**Changes in the text:** Even in non-pregnant patients, it has been reported that intrathyroidal hemorrhage and infection caused a sudden increase in the size of pre-existing cysts and respiratory symptoms (10, 11). Szeto et al. reported that intrathyroidal hemorrhage and cyst enlargement were occurred after increased blood pressure and mild cough due to endotracheal intubation in a healthy young male undergoing general anesthesia (12).

**Added references**

11. Nebiker CA, Delko T, Zulewski H, Oertli D. Acute thyroid swelling and elevated C reactive protein. *BMJ Case Rep.* 2013:bcr2013200427. doi: 10.1136/bcr-2013-200427. PMID: 23966464.
12. Szeto LD, Hung CT. Haemorrhage of a thyroid cyst as an unusual complication of intubation. *Anaesth Intensive Care.* 2002;30:230-3. doi: 10.1177/0310057X0203000220. PMID: 12002936.