Author's response to reviews

Title: Prevalence and types of thyroid malignancies among thyroid enlarged patients in Gondar, Northwest Ethiopia: a three years institution based retrospective study

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Author's response to reviews: see over
Author’s response to Anjali Mishra

Prevalence and types of thyroid malignancies among thyroid enlarged patients in Gondar, Northwest Ethiopia: a three years institution based retrospective study

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Author’s response the reviewer

Major Compulsory Revisions

1. Background:

Paragraph 3, the statement " A report from ------ may put

Patients at risk for certain serious conditions, such as cardiovascular diseases-------------" is true about thyroid dysfunction but not about thyroid malignancy.

Thank you so much for your excellent comment

We accepted the comment and it is done as per a given comment

2. Methods:

- What was the clinical profile of the patient e.g. .................

As far as retrospective data were used, we couldn’t get the detailed entities concerning with thyroid function test results and the detail clinical profile of the patients

Is your hospital a referral hospital? Were these all referred patients/ selective patient population or patients seen at primary encounter?

The hospital is referral, but, there are no district hospitals close to the hospital. As a result, most of the patients were seen as a primary encounters

- Does the patient population hail from iodine deficient area?
As the data were retrospective, the detail socio demographic information was not obtained. But, the Hospital is found at the area where iodine deficiency is common; particularly the mountainous area around the Hospital has been confirmed to have iodine deficiency. We also, suggested that nearly all of the patients live in those areas which are endemic for iodine deficiency.

- How was nodule size assessed in those not operated by clinical palpation or by help of ultrasonography?

  We appreciate your wonderful comment. We have incorporated the correction in the methodology section of the manuscript. In all cases, enlargement sizes were measured with the aid of clinical palpation in two dimensional ways and the physicians were documented the size as $W \times H$. As a result, from this we calculated the area of the thyroid enlargement first then we reconverted to diameter by assuming area is approximately equivalent to $\pi \left(\frac{d}{2}\right)^2$.

- What system of FNAC reporting is followed e.g. Bethesda or any other.

  No standardized FNAC reporting system has been implemented yet in the hospital

3. Results:

- Out of 846 patients, how many had histological diagnosis? If tissue diagnosis was available only for the Follicular/Hurthle Cell neoplasm and inconclusive category, how could we be sure about the exact prevalence of Malignancy? Because it is well established that the risk of malignancy among benign aspirate varies between 1-3% and similarly among those reported as malignant the false positive could be between 0.5-1 %. Thus unless tissue diagnosis in all the categories of aspirates is available the data regarding prevalence of malignancy wouldn’t be accurate.

  We didn’t get all histological result of the study participant since those who were benign were not referred to biopsy assessment (surgery) as per the usual procedure of the hospital. As a result, we described as a limitation of the study instead.

- What were the indications of surgery in those who were operated?

  Though we didn’t get the exact indication of surgery for each study participants, surgery were made if there is

    Malignancy or suspected for malignancy

    Toxicity

    Cosmetic problem
Inadequate specimen for FNAC repeatedly

- Were all patients euthyroid or some presented with thyroid dysfunction? If so give the break-up and the prevalence of malignancy in different functional categories.

  It was nice comment and we believe that it strengthens the study. But, unfortunately there was no adequate information regarding thyroid functions.

- What was the TNM distribution of malignant tumors and what was the mean tumor size in malignant group?

  It was also very important comment. But, still there is no documentation on such kind of information in the hospital

- 6.5% patients had metastases to thyroid. What was the distribution of primary malignancy in this category (Figure)?

  Among the four cases, two of them were from the oropharengial root and the rest spindle cell carcinomas were from unspecified sources. Now, we have incorporated this to the result section of the manuscript as well.

- 12.9% had undifferentiated carcinoma which should be highlighted in result and abstract as well.

  We appreciated your comment and we corrected as per your comment

4. Discussion

College and Middle sex School of Medicine, Mortimer Street, London

  Thank you for your wonderful comment and we accepted and corrected as per the reviewer’s correction

- The authors didn't discuss about the limitations and future implications of the study. They need to add a para about this.

We have incorporated the limitation of the study at the last paragraph of the discussion section as per the comment of the reviewer

5. References

- List too long and superfluous.

  Thank you for your excellent comment. Now, we have subtracted three unnecessary references that were wrongly referenced.
Minor Essential Revision

Results:

- Provide SD/SE of mean for age.
  
  Accepted as per a given comment

- M:F= one digit after decimal should suffice.
  
  Accepted as per a given comment

- Table 2: expand COR and AOR in footnote.
  
  Accepted as per a given comment

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

  The manuscript has been edited by linguistic professionals and some grammatical errors are corrected.
Author’s response to Anthonia Ogbera

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Major compulsory revisions:

1. The abstract is poorly written and the objective of the Report is poorly outlined.
   Thank you so much for your comment and it is corrected as per the comment

2. The methodology lacks depth.
   Thank you for your comment we have add one paragraph on the methodology section of the manuscript

3. How was the thyroidal size determined? And how were the dimensions of the goiters assessed?

   Thyroid enlargement sizes were measured with the aid of clinical palpation in two dimensional ways and the physicians were documented the size as W×H. As a result, from this we calculated the area of the thyroid enlargement first then we reconverted to diameter by assuming area is approximately equivalent to \( \pi \left( \frac{d}{2} \right)^2 \). The type of enlargement was also classified as diffuse: if the most part of the gland enlarged in a consistent manner, multinodular: if there was more than one nodule by clinical palpation, and solitary if there was a single nodule in either of the thyroid lobules. We have also incorporated this to the methodology section of the manuscript.

4. How were the samples collected for cytology? And did any of the reported cases undergo core biopsies? 5. Were samples obtained under ultrasound guidance?

   Convenient sample collection technique was undergone. No sample was collected with the aid of ultrasound and core biopsy.
5. What were the histological definitions of the types of malignancies?
   Thyroid malignancy is a disease because of cancerous (abnormal) growth of cell that is originated from thyroid gland and type of thyroid malignancies is determined by their microscopic feature.

6. Was there any report on status of thyroid function in these samples?
   It was nice comment and we believe also that it strengths the study. But, unfortunately there was no adequate information regarding thyroid functions.

7. Statistical analyses should be rewritten for clarity. What were the references for the parameters assessed for Odds ratio
   We have analyzed again the statistics for some variables and the correction is incorporated in the table. We have used categories that have low prevalence as a reference, to calculate odds ratio.

9. Table 1 is not necessary and should be summarized in the text
   Corrected as per your comment

10. There are a lot of grammatical errors and limitations of the Report should be clearly documented
    Corrected as per your comment

**Minor Essential Revisions:**

There are errors in the tables

   It is corrected as per given comment

**Quality of written English:** Not suitable for publication unless extensively edited

   The manuscript has been edited by linguistic professionals and some grammatical errors are corrected.