Reviewer's report

Title: "Hypothyroidism screening during first trimester in pregnancy"

Version: 0  Date: 30 Jul 2017

Reviewer: Maria Wolfs

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Two errors:

in the abstract the age range was 16.27 - 32.13 but the mean age was 32.13 so 32.13 cannot be the upper limit of the range AND the mean

Reference #9 typo - autoinmimmunity instead of autoimmunity

Overall an interesting study but likely written before the 2017 ATA Guidelines for Diagnosis and Management of Thyroid Disease in Pregnancy. In these Guidelines, there are suggestions on how to determine population specific reference ranges: Recommendation #1 - Reference range determinations should only include pregnant women with no known thyroid disease, optimal iodine intake, and negative TPOAb status.

The premise of the this article is looking at the incidence of SCH using a TSH cut off above 2.5 vs. above their 97.5th percentile. But a 2.5 mIU/L TSH cutoff is no longer being advocated - therefore the manuscript should be reworked as another population based reference range (see Table 4. Reference Ranges for Thyrotropin and Free Thyroxine During Early Pregnancy Worldwide) rather than comparing the incidence of SCH with 2.5 vs. their 97.5%ile of 4.7.

As well, the Guidelines recommend that the reference range should only include women with NEGATIVE TPOAb status so these should be excluded from the analysis.

The results should include the patient characteristics (only included in the abstract not in the body of the article) and should include parity and other characteristics if known (ideally including iodine status or at least indicating if this area is an iodine deficient or sufficient area based on studies).

In light of V. THYROID AUTO-ANTIBODIES AND PREGNANCY COMPLICATIONS of the Guidelines, the discussion on TPOAb is too cursory - almost an afterthought in the last paragraphs of the discussion. The conclusion that TSH levels were not able to predict TPOAb
status are interesting but do not warrant the conclusion to consider screening all women for TPOAb, especially since there is no evidence outside of RPL that treatment is of any benefit.

Overall, this is an interesting population based study that with the above modifications and re-written to reflect the 2017 guidelines would be of interest in helping other populations develop their Pregnancy Specific Reference Range.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
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Yes

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