Reviewer's report

Title: Testicular histological and immunohistochemical aspects in a post-pubertal patient with 5 alpha-Reductase type 2 Deficiency. Case report and review of the literature in a perspective of evaluation of potential fertility of these patients.

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Reviewer: Mark Sherlock

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Testicular histological and immunohistochemical aspects in a post-pubertal patient with 5 alpha-Reductase type 2 Deficiency. Case report and review of the literature in a perspective of evaluation of potential fertility of these patients.

Vija et al

Dear Editor,

Many thanks for giving me the opportunity to review this manuscript by Vija et al. The authors report the histological appearances and immunohistochemical staining with antimullerian hormone, androgen receptor and 3 beta-HSD in 3 patients, one with 5 alpha reductase type 2 deficiency, one with complete androgen insensitivity syndrome and one described as a control who had a testicular biopsy in the setting of obstructive azospermia.

The paper is well written and explores a very important area in this rare condition, namely spermatogenesis and possibility of future fertility.

Comments

Minor Essential revisions

1. In the abstract and a number of stages during the manuscript the authors use the word confront, do they mean compare?

Major compulsory Revisions

1. There should be more clinical information regarding the 3 patients to aid comparison of FSH/ LH/ Testosterone and DHT etc. Some of this data are included in the supplemental table for the patient with 5 alpha reductase deficiency but should be included for control and CAIS patient also. Also the table should be part of the main text and not supplemental as it is very informative.

2. Is the control patient a valid normal control given his obstructive azospermia – is there any impact on testicular function from obstruction?

3. Were investigators blinded to underlying medical condition for interpretation of the biopsy results?

4. There is a significant amount of discussion regarding immunohistochemical
assessment of AMH however there is little discussion of serum AMH levels in these patients. Serum AMH is elevated in patients with androgen insensitivity syndromes. Could the authors comment on this and if it may have a role as a marker of potential spermatogenesis in these patients given the differences reported in this study?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests