Reviewer’s report

Title: Adrenarche and Pubarche in Girls with Turner Syndrome during Growth-Promoting Therapy with Human Growth Hormone

Version: 0 Date: 03 Nov 2018

Reviewer: Aneta Monika Gawlik

Reviewer's report:

Thank you for asking me to review this paper from Prof. Dörr et al., Erlangen, Germany.

It is a simple in construction and clear retrospective study, in which the authors have studied the course of adrenarche and pubarche in 94 girls with Turner Syndrome during growth-promoting therapy with hGH. As data on adrenarche in TS are inconsistent this analysis seem to be valuable. They confirmed the onset of adrenarche in the girls with TS did not differ from that in healthy girls, however TS had markedly higher DHEAS concentrations, comparable between those with and without spontaneous B2. Nevertheless, the last mentioned subgroup reached the Tanner stages of pubic hair later.

Detailed comments to Authors:

Methods and Results:

1. One can suspect that type of karyotype has the influence on the time of adrenarche/pubarche. This type of analysis is suggested.

2. Authors suggest the role of insulin resistance in earlier adrenarche/pubarche. Both patients' weight (z-score BMI) and GH therapy could be analyzed and discussed in the context of their influence on IR and finally on the age of adrenarche.

3. Later adrenarche/pubarche could be connected with slower advancement of the bone age. Please, add/discuss your data and/or add comments in the Discussion).

Introduction/Discussion

1. The last published study (Hankus et al, Horm Res Paediatr 2018) showed that we can suspect the spontaneous puberty even in higher percent of patients with TS. Please discuss it in the paper.
2. The sentences "We did not find the significant differences in DHEAS levels between the TS girls with spontaneous puberty and POI in the age group of 9-15 years as reported by Martin et al. [19]. On the contrary, the DHEAS levels in TS girls with spontaneous puberty were even slightly higher than in TS girls with POI in our cohort." are not enough clear.

3. How to explain higher DHEAS concentrations in TS patients? How they present in non-treated with GH Turner syndrome patients?

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?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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