Reviewer's report

Title: Multihormonal pituitary adenoma concomitant with Pit-1 and Tpit lineage cells causing acromegaly associated with subclinical Cushing's disease: a case report

Version: 0 Date: 09 Apr 2017

Reviewer: Chris Yedinak

Reviewer's report:

Multihormonal pituitary adenoma concomitant with Pit-1 1 and Tpit lineage cellscausing acromegaly associated with subclinical Cushing's disease: a case report

Very interesting case study demonstrating the coexistence of ACTH positive (GH neg) tumor cells and GH positive cells in a single tumor along with subclinical presentation of Cushing's disease in an acromegalic patient.

This is a fascinating analysis supporting the need for detailed immunohistochemical analysis of pituitary tumors for the determination of appropriate post-operative treatment. This is particularly pertinent given the difficulty identifying these cases clinically at presentation.

Few recommendations for clarity:

Line 121 Awkward description of an elevated 24 hour urine free cortisol level.

Line 122. The low dose Dex suppression - specify overnight testing. 0.5mg may not be adequate to differentiate iatrogenic or etiologies other than pituitary dependent CD

Line 126 To 8mg Dex/CRH testing was cortisol also elevated at 15mins post stim and was this >1.8ug/dl?

Line 137. 'thrice' is not commonly used now. Oct/LAR was this OctLAR(®) or Sandostatin® LAR Depot administered monthly for 3 months?
Line 165. Given treatment with octreotide post op the 'necessity' for treatment may be better expressed as a 'potential' associated with lack of GH or tumor control.

Line 199-206 use a table or a diagram

Line 223 add 'referential' before non-functioning to clarify

Line 239. Can authors speak to Tpit expression in these cells.


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.

Not relevant to this manuscript

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

Acceptable
**Declaration of competing interests**

Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors’ responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal