Reviewer’s report

Title: Aldosterone-producing adrenocortical carcinoma with prominent hepatic metastasis diagnosed by liver biopsy: a case report

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Reviewer: Damian Romero

Reviewer's report:

Ohashi and colleagues present a case report of a patient with an adrenocortical carcinoma and an increased adrenal cortex hormone profile who presents with a metastatic liver cancer. Interestingly the liver metastasis biopsy stained positive for the adrenocortical specific adrenal 4 binding protein/steroidogenic factor 1 (Ad4BP/SF1) and steroidogenic enzymes (P450scc, 3β-HSD, 115 P450c21, P450c17 and DHEA-ST).

This is an interesting case report that may be valuable to physicians and researchers in the field. However, there are some reports that should be addressed.

1. English grammar should be checked. There are many misspelled words (i.e. dexamethazone, sytoplasm, inceased, hepatoceller, etc.) and grammatical errors (i.e. "We here report the first case…", "As for tumor markers, …").

2. Lines 39-42, it is stated "Aldosterone producing adrenocortical carcinoma diagnosed by immunohistochemical staining..." The IHC staining was performed in the liver biopsy and even in that case staining for CYP11B2 was not performed.

3. The authors should make an effort to clarify through the text if the IHC was performed in the liver and/or the adrenal. When finished reading the manuscript, it is clear that the IHC was performed in the liver biopsy and that the adrenal was not available for IHC. However, the reader has to finish reading the manuscript to have this concept clear. It
would be much easier for the reader if this was more clearly stated through the manuscript.

4. Lines 162-164, it is stated "There is no evidence that this tumor produced aldosterone, because we could not apply immunohistochemical staining for CYP11β1 and CYP11β2 in those days." It is not clear if "tumor" refers to liver or adrenal. Furthermore, CYP11B1 and CYP11B2 should be written with "B" and not the Greek betta symbol.

5. Lines 164-166, it is stated "Despite these limitations, however, we report the first case of aldosterone producing ACC diagnosed by immunohistochemical staining for both Ad4BP/SF1 and steroidogenic enzymes in a metastatic tumor." Was the aldosterone secretory activity of the ACC diagnosed by Ad4BP/SF1 and steroidogenic enzymes IHC in the metastatic tumor? Again, manuscript should be improved for clarity.

**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

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