Reviewer's report

Title: Recurrent tertiary hyperparathyroidism due to supernumerary parathyroid glands in a patient receiving long-term hemodialysis: A Case Report

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Reviewer: Brendan Finnerty

Reviewer's report:

This is a case report of a patient with recurrent secondary hyperparathyroidism after initial total parathyroidectomy with autoimplantation into the right thigh, who was managed with a cervical re-exploration with sternotomy.

This case report falls within the scope of the journal, however, while supernumery parathyroid glands as a cause of recurrent disease are a rare occurrence, there are still relatively large series reported in the literature analyzing this disease - thus, I am not sure if a report of one case necessarily adds much to our understanding of this disease process.

Abstract:

- Your conclusion implies a statistical analysis was performed between primary and secondary hPTH patients, but this was a case report.

Title:

- While I recognize this is a matter of debate and semantics, I would argue that this is a patient with autonomous secondary/renal hyperparathyroidism, not tertiary. Traditionally, tertiary disease is typically used to describe hyperparathyroidism after kidney transplantation, which this patient did not have.

Introduction:

- Focus more on secondary / renal hyperparathyroidism, not necessarily tertiary. Perhaps some comments on frequency and expected locations of ectopic or supernumery glands here would be relevant - this has been reported in the literature (specifically with renal hyperparathyroidism patients).
Case:
- This is technically a supernumery gland, correct? Weren't four glands excised during the initial operation?
- Why was the gland autoimplanted into the subcutaneous fat of the thigh? Other more common sites include the brachioradialis muscle of the arm
- Was there any pre-operative management with calcitriol? Many surgeons advocate for this to reduce the risk of post-op hungry bone syndrome.
- So was this intra-thymic or extra-thymic? It is unclear by your description in line 103.
- You report one post-operative PTH level - was this immediate post-op? Were there any further long-term post-op PTH measurements?
- It appears as though this patient may have had Hungry Bone Syndrome post-op - what was the longer-term management and biochemical follow-up data (PTH, Ca, Phos, Magnesium, etc)?

Discussion:
- Good lit review although there are several additional series relevant to this paper you may want to include:
- For cinacalcet, you may want to limit your discussion to secondary/renal literature. Most tertiary studies with cinacalcet are in the setting of kidney transplant, and several series show better outcomes with parathyroidectomy as compared to cinacalcet (https://www.ncbi.nlm.nih.gov/pubmed/30415867)

This manuscript should be revised by an English-grammatical service - there are several errors that need attention (e.g. "till now" line 74).
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.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

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:

Not suitable for publication unless extensively edited

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