Author's response to reviews

Title: Hypoparathyroidism after Roux-en-Y gastric bypass - a challenge for clinical management: a case report

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Author's response to reviews: see over
We wish to thank the reviewers and the editor for their excellent comments/constructive criticisms on our manuscript. We do believe that taking them into account the paper has improved a lot. Any change made on the text and also our answers here are highlighted in yellow.

Referee 1
Comments to authors:

Need to document that pancreatic insufficiency is known to occur post gastric bypass. Also relatively low dose of pancreatic enzyme replacement used but good clinical response. Interesting real world solution to what I expect will be an increasing cohort of patients undergoing RYGB surgery for management of obesity and related disorders. Also did this patient have co-existing diabetes mellitus, or other pre-existing conditions?

We appreciate your careful review. A brief discussion of pancreatic insufficiency was added to the text, as a possible complication of a gastric bypass. Comorbidities presented by the patient prior to bariatric surgery were also cited.

Referee 2
Comments to authors:

Please shorten the article: very lengthy

We have tried to shorten the discussion and the case report. The first paragraph on discussion was entirely excluded. The total counting of the manuscript seems some more words but you should consider that there are new sentences added in Funding and Acknowledgments, which were both requested by the editor.

BMI (body mass index) at various points in time have not been mentioned.

We decided to not mention BMI at various points in time because we do believe that our aim was not on weight loss but on the difficult of managing hypoparathyroidism in a bariatric patient. We decided to do this way just to let the case report more objective. BMI was mentioned at the beginning and at the end of the manuscript.

Corrected serum calcium levels not mentioned
The majority of the cited calcium levels in the manuscript was already depicted in the corrected format, using serum albumin concentration to find this corrected level. We have included a sentence to explain the reader in the table 1.

Why was intravenous calcium chloride not tried?

Intravenous calcium was used but only during inpatient care (post-operatively and during patient’s admission at an emergency room) but during her outpatient care at our unit it was not used. Everything was already mentioned on the text.

This complication is due to a surgical blunder not recognised at the time of total thyroidectomy: Why was parathyroid implantation not tried at the time of surgery itself and why was patient discharged without any definitive treatment in the first instance?

As it is mentioned in the text, patient’s follow-up at our unit of outpatients care began only after surgical procedures (bariatric and thyroid surgery). The first clinical therapeutic choices were performed by someone else decision (the surgeons). We do not know why parathyroid implantation was not performed during surgery or even why those physicians who forwarded the patient to our unit did not increase the dosage of calcium, changed to citrate, and so on. We should highlight that we only had contact with the patient after two months of the second thyroid surgery.

CORRECTIONS

1) Pl specify funding details: All details of the grants received and how it helped in this case

These data were added in manuscript.

2) Abstract: pl do not use the term Total Lobectomy. Pl mention BMI of patient at various points of care

We have removed this term from the text. We have mentioned the evolution of BMI only at the main points. The reasons were already explained above.

3) Introduction: Thyroid cancer is a possibility in cases of thyroid nodules. Several corrections in English, both use of proper words and grammar.

Many corrections have been made on the text and the manuscript was revised by a native english speaker.
4) **Case report:** What was her thyroid profile after first and second thyroid surgery.

What was the corrected calcium level immediately after both thyroid surgeries?

Why did phosphorous level increase and what was the calcium-phosphate product in this case?

After her first surgery (right lobectomy), thyroid profile was at normal levels and after the second thyroid surgery she got post-surgical hypoparathyroidism and also hypothyroidism. As explained above, we did not have any contact with the patient during the period of the surgeries (bariatric and thyroid surgeries), so we do not know how it was not used the corrected calcium during this period. We decided to expose it the reader on the table 1.

Hypoparathyroidism is characterized by hyperphosphatemia, since one of the actions of PTH is to inhibit phosphorus reabsorption on the kidneys.

The primary goals of hypoparathyroidism treatment include: 1) symptoms control and 2) to keep serum calcium in the low-normal range, serum phosphorus within the normal range and to keep a calcium-phosphate product below 4.4 mmol²/L² (55 mg²/dL²) without developing hypercalciuria. All of these cited aims were all achieved at the end of the case report (see Table 1 – last measurements).

5) What was the exact dose of pancrealipase given? Please give references for it.

The dosage used is cited in Table 1 and also in the text - Pancrelipase were added at mealtime (3/day) [compound 10000 USP units of lipase; 37500 USP units of protease; 33200 USP units of amylase/capsule]. The reference was also inserted.

6) What were the calcium levels during pregnancy, labour and after delivery?

What was calcium level of the newborn.

The calcium levels during pregnancy, labour and after delivery are all reported in Table 1 (see 14 mo. post-TT – pregnant 2\textsuperscript{nd} trimester). Calcium levels of the newborn were not measured.

7) What was the dose of magnesium given?

Magnesium dosage is reported in the text (magnesium oxide 1200mg/day).

8) What about the risk of nephrocalcinosis?
In patients with chronic kidney disease, nephrocalcinosis is directly correlated with phosphorus levels and with calcium-phosphorus product (Zhonghua Yi Xue Za Zhi. 1993 Nov;73(11):652-4, 700) while in hypoparathyroidism it is better for the patients to avoid nephrocalcinosis by keeping calcium and phosphorus levels at normal ranges, as well as their product, and also to avoid hypercalciuria. All of these aims were achieved at this case report.

9) Any side-effects of pancreas-lipase?
Pancreas-lipase can cause occasional diarrhea, constipation, stomach discomfort, nausea and skin reactions, but the patient did not experience any side effects. We included “without side effects” on the text.

10) Reversal of RYGB may not ensure reversal of hypocalcemia and hypoparathyroidism. Pl provide references
We did not find any reference that specifically relates improvements of calcium homeostasis after reversal of a bariatric surgery in a patient with hypoparathyroidism but we should AGAIN speculate that this is a possible therapeutic solution not to solve completely the need of calcium, vitamin D and the other therapeutic choices but possibly to enable us to lower the need of so many pills/tablets ingested every day by this patient. We decided not to emphasize this possibility since it was rejected by the patient.

Editor
1. Please change the description of the patient’s gender to ?female?.
Thank you for your careful review, we have revised the text and added this correction.

2. Please include the Ethnicity of the patient in the Abstract and Case presentation sections.
We included patient’s ethnicity.

3. Please remove any unnecessary details from the manuscript which may jeopardise the anonymity of the patient. For example ?RYGB?
RYGB means Roux-en-Y gastric bypass. It is not the abbreviation for the patient’s name.
4. Please include an acknowledgement section at the end of the manuscript before the reference list. Please acknowledge anyone who contributed towards the study by making substantial contributions to conception, design, acquisition of data, or analysis and interpretation of data, or who was involved in drafting the manuscript or revising it critically for important intellectual content, but who does not meet the criteria for authorship. Please also include the source(s) of funding for all authors. Authors should obtain permission to acknowledge from all those mentioned in the Acknowledgements.

*We included both sections.*

*Again we wish to thank all the criticism made by the reviewers.*