Reviewer’s report

Title: Impact of Postsurgical Hypoparathyroidism on Bone Mineral Density and on the Frequency of Subclinical Vertebral Fracture

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Reviewer: Karin Amrein

Reviewer’s report:

Mendonca et al. report an interesting, very important and well written cross-sectional study on hypoparathyroidism and its effects on bone including vertebral fractures and assessment of mandibular bone. The latter might provide a new method of diagnosing osteoporosis early through dentists.

Major Compulsory Revisions

1. The title does not well reflect the indeed very new and spectacular result that despite normal or high BMD at the spine, the incidence of vertebral fractures is higher in PhPT
2. “Primary hypoparathyroidism” should be replaced as it may be misleading and interpreted as idiopathic hypoparathyroidism while all included patients have postsurgical permanent hypoparathyroidism
3. Discussion „while osteoporosis is rare” needs to be clarified further because the presence of vertebral fractures imply osteoporosis. The authors mean “T-Score > 2.5” or “low BMD”
4. It is a limitation that all patients showed normal serum 25(OH)D levels without treatment because this is possibly not the case in other countries than Brazil
5. Have the authors also data on clinically evident fractures since the patients became hypoparathyroid?
6. Is there a correlation between duration of PhPT and vertebral fractures?

Minor Essential Revisions

1. Fig 2: could you give R2 and the extrapolated line?
2. “and no woman had premature ovarian failure.” Is redundant in the Results section
3. The given duration of primary hypoparathyroidism does not exactly match between Results and Methods section
4. Is it really true that the much larger absolute difference in BMD of the lumbar spine (CG = 0.970 ± 0.153 vs PhPTG = 1.088 ± 0.250 g/cm) is not significant while the one at the radius is (CG = 0.630 ± 0.07 vs PhPTG = 0.570 ± 0.09, P < 0.05)? Also, is in both cases SD given? (such a difference!?)
5. Language
a. Discussion: "especially after clinical investigationS, based on surrogate parameters, have shown"

**Level of interest:** An exceptional article

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests