Reviewer's report

Title: Fibroblast growth factor-23 and calcium phosphate product in young chronic kidney disease patients: A cross-sectional study

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Reviewer: Gunnar Heine

Reviewer's report:

The authors report a medium-size cohort of CKD patients and analyzed parameters of calcium-phosphate-metabolism in a cross-sectional design. Most-but not all – patients were children.

The findings rather confirm earlier studies – FGF-23 associates with other Ca-P-parameter - than providing real novel results.

Major issues:
1. The cohort is very heterogeneous. I would strongly recommend to delete data from transplant patients and from dialysis patients. Numbers of these patients were much too low to allow a valid comparison to CKD-ND patients. Nonetheless, for a variety of reasons, these patients profoundly differ from patients with CKD without renal replacement therapy. Data from these patients should therefore not be lumped together.

2. There is severe redundancy in data presentation (compare Table 1 + Figure 1 as well as Table 4 + Figure 2)

3. Data presented in tables are not identical to data presented in the text, e. g. correlation cystatin C eGFR vs phosphate -0.277 (Table 3) vs -0.29 (Abstract). P 0.0025 vs 0.0048!

Maybe this discrepancy results from different statistical methods (correlation vs “one phase exponential association”); but then you must explain why you provide different statistical calculations. If you provide “one phase exponential associations” for univariate analysis, you should not use multivariate LINEAR regression analysis! Moreover, no relevant data on the multivariate regression analyses are provided (which variables are included? Stepwise / forward / backward? )

Minor issues:
1. Please do not provide more than one decimal places in table 1.

2. Table 3 is very busy. There is no need to provide “P value summaries”. Again, you provide too many decimal places. For correlation coefficients, two decimal places are oK.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
'I declare that I have no competing interests'