Author's response to reviews

Title: Pre-clinical cardiac involvement in adulthood growth hormone deficiency: role for left ventricular remodeling. A single-centre case-control study

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Author's response to reviews: see over
Dear Editor,

enclosed please find the revised version of the manuscript **Pre-clinical cardiac involvement in adulthood growth hormone deficiency: role for left ventricular geometric remodeling. A single-centre case-control study.**

We have reviewed the paper according to the *Instructions for BMC Endocrine Disorders Authors* and considering the constructive referees’ suggestions. Of note,

1. the number of GHD patients has been upgraded with 4 new cases. Thus the study included 54 GHD patients;
2. figures (now are 4) and tables (now are 3) have been improved, since the referees had raised comments about the lack of such information;
3. more detailed explanation of the main aim of the study has been provided (see comments from both the referees Marzullo and Salerno);
4. more pathophysiological hints have been quoted in the ‘background’ section (and the discussion) about the most typical changes in cardiac mass and LV function in GHD patients and in obese/hypertensive patients (see comments from both the referees Marzullo and Salerno);
5. important information about GHD aetiology and multiple endocrine dysfunction in the study group have been quoted in the ‘methods’ section (see comments from both the referees Marzullo and Salerno);
6. following the constructive suggestion of the reviewer Salerno, basal GH sampling has been not considered in the study design. Characteristics (geographic origin) of the control groups have been provided;
7. unfortunately, we were not able to quote the TEI-index and IVRT in all the study population, as suggested by the reviewer Di Bello. In fact, these parameters were measured in about 65% of the patients. On the contrary, midwall fractional shortening (MFS) has been provided;
8. as suggested by the reviewer Salerno, both ‘methods’ and ‘discussion’ sections have been merged and shortened;
9. the new figure 1 and the figure 3 depict the prevalence of LVM/LVMi (and the type of LV hypertrophy) in the study groups. As appropriately quoted by the referees Salerno and Marzullo, we also found that the majority (about 75%) of GHD patients have low-normal LVM/LVMi. However, for the first time in this field, we describe an increased cardiac mass in the other 25%, probably related to the high BMI (as in controls) and a relatively high circulating IGF-1;
10. Age-related LV mass and resting function have been also provided, and the new figure 2 shows the lack of significant differences among the GHD patients (see comments from both the referee Marzullo);
11. Statistical analysis has also improved and a multivariate analysis was given in order to assess the main determinants of the LVMi (see comments from the referees Salerno and Marzullo)
12. some references have been cancelled;
13. legends in figure 3 have been corrected, as suggested by the reviewer Marzullo;
14. English language has been improved (see all the reviewers’ comments).

We hope that the revised version of the paper could be considered for publication on *BMC Endocrine Disorders*.

Sincerely yours,
Cesare de Gregorio, MD
On behalf of the authors
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