Reviewer's report

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

Version: 1 Date: 20 September 2005

Reviewer: Mariacarolina Salerno

Reviewer's report:

General
This study examines the effect of adult-onset GH deficiency on the left ventricular resting morphology and function, by echocardiography, compared to age and weight control matched subjects. The results of the study indicate that LV morphology and function at rest in GHD adults are not different from healthy overweight controls.

While the objective of the study, though not original, is of some interest. However, the points below require further attention:

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

-------------------1) The aim of the study is not completely clear; left ventricular resting morphology and function, by echocardiography, have been already been studied in subjects with adult-onset GHD, what is new in the aim of this study?

2) The definition of the study population is confused and unclear. On page 4, line 10 the authors refer to 2 groups of patients who are not defined until page 5. The control group (group C) is described before groups A and B are defined. The paragraph concerning the study population and the diagnosis of GHD should be merged and shortened. The definition of the study population and the 3 groups of patients should also be more clear.

3) Did the patients have other additional hormonal deficiency and were they on replacement therapy? Are only TSH and GH deficiency found in all 50 patients?

4) What is the rational for evaluating basal serum GH levels? When the authors stated that basal GH was measured in all the 70 enrolled patients did they mean 50 GHD and 20 controls? Why was basal GH also evaluated in controls, and why weren't IGF-I levels evaluated?

5) What was the source of the control subjects - were they from the same social class and geographic region?

4) Statistical analysis should be more detailed, in particular concerning student t- test and the liner correlation

5) Differences with other studies showing a decrease in LVM in GHD or other cardiac results different from this study patients are not adequately discussed

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**
I declare that I have no competing interests.