Correspondence to 'Effects of Early Initiation of Growth Hormone Therapy on Different Auxological Parameters in Growth Hormone-Deficient Children: Experience from an Indian Tertiary Care Center'

Sir,

We read the article by Kochar *et al*.[1] with a great interest. We congratulate the authors for presenting the largest data on the effect of growth hormone (GH) therapy in Indian children. However, I have a few major concerns regarding the article.

1. The pre- and post-treatment height z-scores of the two groups (>8 and <8 years of age) mentioned in tables and 'results' section of the main manuscript differ from those mentioned in the 'results' sections of the abstract and figures. Kindly clarify this discrepancy to avoid the confusion to readers. Also, a rationale for choosing 8 years as a cut-off to subgroup the subjects need to be discussed.
2. The majority of the children had mild (or no) short stature which is typical of normal variants of growth rather than GH deficiency (GHD). Only a few cases had organic causes of GHD. In children with mild short stature (height SDS: -2.0 to -2.5), documentation of a low (<25th percentile) height velocity is essential while considering evaluation for GHD. Notably, the height z-scores were calculated using CDC charts which might have further underestimated the height z-scores in Indian children. Moreover, a higher peak GH cut-off (10 ng/ml) was used to diagnose GHD. A mention of sex steroid priming in prepubertal girls aged ≥10 years or boys aged ≥11 years with normal predicted adult height is also missing.[2] These raise a concern of potential misdiagnosis of normal variants of growth as GHD in the study. Hence, it would be interesting to know whether the appropriate sex steroid priming was used, details of the GH assay used and also, the proportions of patients with a peak GH of >7 ng/ml and >5 ng/ml. We believe the additional information regarding midparental height-adjusted height z-scores, pre-treatment height velocity, pre- and post-treatment bone age and (predicted) adult height z-scores enhance the understanding of the readers regarding the diagnosis of GHD and response to GH therapy. Also, please clarify whether all these children were GH-naive at the initiation of GH therapy at your center.
3. There is a mention regarding the final adult height achieved in the results but only the calculation of predicted adult height was mentioned in the methods. Were the subjects followed till (near) adult height attainment or does the final height achieved that is mentioned in the results refers to the predicted adult height? This point should be clarified to the readers.
4. We understand that the height gain was assessed over a fixed period of 12 months of GH therapy in all the subjects. In such a scenario, was it appropriate to include the duration of therapy as a parameter to predict height gain and (predicted) final height?
5. One of the main conclusions that the height gain was better in children aged <8 years than those aged >8 years lacks appropriate statistical support. Providing (mean ± SD) change in height (cm) and height z-score from GH initiation to 12 months of GH therapy and their comparison using appropriate statistical tests should be provided. Notably, insignificant prediction of height gain and predicted adult height by age, as depicted in Table 3 of Kochar *et al*,[1] is in contradiction to the conclusion.
6. We believe that the effect of gender on response to GH therapy merits a mention.

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Conflicts of interest

There are no conflicts of interest.

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