

# Assessment of subjective and objective compliance to growth hormone therapy of children with growth hormone deficiency

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## Introduction

The success of rhGH therapy is thought to be dependent on the patient's ability to maximally adhere to their treatment regimen.

## Aim

To compare the reported (subjective) compliance as it was documented via a questionnaire fulfilled by the parents and/or patients, with actual (objective) compliance as recorded by a delivery device, to rhGH therapy.

## Methods

- The study population consisted of 94 GH deficient children and adolescents (70 boys) with no underlying disease treated with GH.
- The reported compliance was recorded through a questionnaire and the actual compliance was retrieved through the special software from the dispenser (EasyPod).
- The Intraclass Correlation Coefficient (ICC) was used to compare the reported monthly compliance to treatment using the SPSS 25 statistical package.

## Results

Table 1: Demographic characteristics

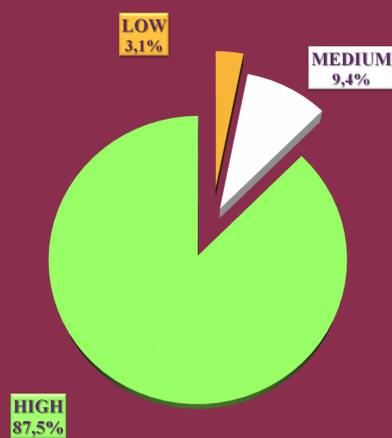
		N	%
Gender	Boys	70	74.5
	Girls	24	25.5
Responding parents sex	Female	63	66.7
	Male	31	33.3
Mother's educational level	<12 years	20	21.3
	>12 years	74	78.7
Father's educational level	<12 years	26	27.2
	>12 years	68	72.8
Administration of injections	Child (alone)	31	33.3
	Child and parent/other	33	34.8
	Parent/other	30	31.9
Age (years), median range $\pm$ SD		12.6 $\pm$ 1.9	
Age (years) of abandonment, median range $\pm$ SD		1.9 $\pm$ 1.5	

### LEVEL OF COMPLIANCE

High: Loss <3 injections per month

Medium: Loss  $\geq$  3 and <5 injections per month

Low: Loss  $\geq$  5 injections per month

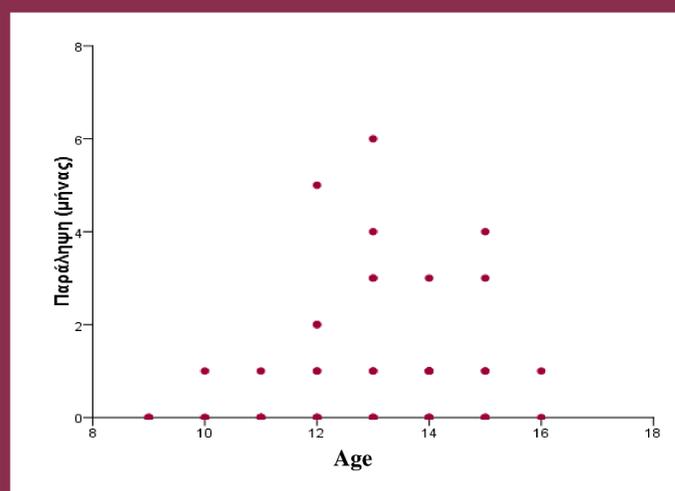


Level of compliance

There was a moderate degree of agreement between the two measurements, with ICC = 0.531 (95% CI 0.313-0.692) ( $F(64.64) = 3.588, p = 0.0005$ ).

The level of the actual monthly compliance in treatment was positively correlated with the child's age ( $r_s(64) = 0.272, p = 0.030$ ).

The level of compliance was high (loss of <2 injections per month) in the majority (87.5%) of the patients.



Agreement rate

## Conclusions

Previous data suggest positive correlations between adherence and growth outcome, supporting the clinical relevance of adherence monitoring.

Assessment of the degree of compliance with growth hormone treatment is a key to the proper adjustment of the dose and assessment of the efficacy of the treatment.

Systematic recording via questionnaires is helpful however the objective recording through the delivery device reveals the real dimensions of the issue.