



# DOES APPLYING REGULAR QUESTIONNAIRE TO PATIENTS ON GROWTH HORMONE INCREASE COMPLIANCE ?

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**Introduction:** Compliance of patients on growth hormone (GH) treatment is very important for the success of the treatment. In a multicentre study done in Turkey we had shown that compliance decreased at the end of 1st yr of treatment which had an adverse effect on growth rate and IGF-1 levels.

**Aim:** To evaluate whether doing regular questionnaire to patients on GH has an effect on compliance at long term

**Material and method:** A questionnaire form was prepared with 14 questions. The patients on GH treatment who were followed from our Unit filled a form at the 3rd and 6th month of their follow-up consecutively. Spectrum of diagnoses were GH deficiency (86.3%), Turner syndrome (5.7%), intrauterine growth retardation (3%) and others (5%).

**Results:** Three hundred and one patient filled the 1st form and 198 patients filled the 2nd form on follow up. Evaluation of the questionnaires are summarized in Table 1 and 2. Mean age was 11.6±3.5 years and duration of GH treatment was between 0.25-14 years. 98.5% of the children answered the questions regarding technical issues (GH application technique and time, storage conditions etc ) correctly. However 56% of the patients stated that, not infrequently, after injection drug spilled back. Sixty two percent of GH injections were done by parents or under parental guidance. Treatment duration was much longer in incompliant patients. Injection by the parents resulted in a higher compliance rate than injection by the patient (79.5% and 68.3%, respectively). After the 2nd questionnaire, compliance rate increased from 74.2% to 80.7%. Compliance of girls was much higher than boys.

**Conclusion:** Applying regular questionnaire to patients on GH increases the compliance to treatment. More education should be given to boys in this matter.

Table 1: Comparison of the results of the questionnaires 1 and 2

	Questionnaire-1 N=391	Questionnaire-2 N=198	p
<b>Gender (%)</b>			
Girl	45.3	47.5	0.75
Boy	54.7	52.5	
<b>Age (year)</b>			
Mean ±SD (Interval)	11.6±3.5 (1-18)	11.3±3.4 (1-18)	0.8
<b>Complete compliance (%)</b>	74.2	80.7	0.235
<b>Complete compliance (%)</b>			
Girl	82.4	83.9	0.585
Boy	67.5	77.8	
<b>Cause of noncompliance(%)</b>			
Forgetting	22	23.3	0.84
Supplying the drugs	48.1	44	
Other	29.9	32.7	
<b>Drug proper storage (%)</b>	98	98.9	0.606
<b>Applied the drug</b>			
Correct technique(%)	98.5	96.5	0.36
Right time (%)	98.7	99	0.606
<b>After injection drug spilled back (%)</b>			
Yes, often	9.5	8.1	0.329
Yes , sometimes	46.5	56.6	
No	43.9	35.4	

Table.2 Some of the results of the evaluation of patients with complete and incomplete compliance

	Complete compliance n:280	Incomplete compliance n:96	P
<b>Gender(%)</b>			
Girl	50.1	39.9	0.001
Boy	49.9	60.1	
<b>GH treatment duration</b>			
Mean±SD Interval	1.8±1.9 0.25-14	2.1±1.6 0.25-8.5	0.207
<b>Applying the injection(%)</b>			
Patient	25.9	37.8	0.311
Parents	74.1	62.2	
<b>Drug proper storage (%)</b>	98	98.9	0.393
<b>Applied the drug</b>			
Correct technique(%)	98.5	96,5	0.343
Right time (%)	98.5	97.9	0.025
<b>After injection drug spilled back (%)</b>			
Yes, often	8.9	10.3	0.001
Yes , sometime	40.2	62.1	
No	50.8	27.6	

