

# Evaluation of the Effect of Knowledge Levels of Adolescents Diagnosed with Type 1 Diabetes Mellitus on Hba1c and Life Quality Score

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## INTRODUCTION

Type 1 Diabetes Mellitus (T1DM) is a chronic disease in children and adolescents. Following the diagnosis, some requirements such as daily insulin injections, blood sugar monitoring, diet adaptation and regular physical activity are challenging the coping skills of the cases and their families. There are studies showing that quality of life is affected in T1DM. In our study, we aimed to evaluate the effect of diabetes knowledge levels on quality of life and metabolic status.

## METHOD

Patients aged >10 years who were diagnosed with diabetes mellitus in our clinic and who were given diabetes education and who had regular follow-up were included in the study. At the end of the education, all subjects and their families underwent a 20-item Diabetes Assessment Test (DAT) (Exam passing grade: 150 out of 200). DAT was repeated at the beginning, 3, 6, 9 and 12 months after the diagnosis. In diagnosis, the third, 6th, 9th and 12th months after the diagnosis also consisted of five options (1 never, 5 always), 24 items and 6 dimensions. Quality of Life Scale (QLS) was applied to patients. The DAT scores, QLS scores, Hba1c status were analyzed by appropriate statistical methods.

## RESULTS

The study included 15 male and 30 male patients. The mean age of diagnosis was  $11.3 \pm 2.2$  (10-15) years, and the diagnosis Hba1c value was  $\% 12.8 \pm 2.3$  (10.1-16.8). The diagnosis and follow-up Hba1c, DAT and QLS scores and p values of the cases are presented in Table 1. The DAT scores were adequate in all months. Among all months, DAT and QLS scores were similar. There was no correlation between Hba1c level and DAT score and QLS score. There was no correlation between DAT score and QLS score.

Table 1. Hba1c, DAT and QLS scores and p values of cases

	Beginning	3. months	6. months	9. months	12. montss	p
<b>Hba1c (%)</b>	12,8±2,3(10,1-16,8)	6,1±1,1 (5,2-8,4)	6,2±0,6 (5,3-7,9)	6,2±0,7 (5,1-7,8)	6,5±0,9 (5,1-7,8)	0,01
<b>DAT score</b>	169,5 ±25,3 (90-200)	157,8 ±30,9 (75-200)	161,9 ± 30,9 (90-200)	166,4 ± 24,3 (120-200)	168,1 ± 28,6 (105-200)	0,271
<b>QLS score</b>	91,7 ±22,4 (47-112)	101,7±17,1 (76-115)	99,2 ± 11,6 (78-120)	98,3 ± 12,5 (74-119)	98,5 ± 14,1 (71-117)	0,606

## CONCLUSION

In our study, we found that diabetes knowledge in our adolescents patients diagnosed with T1DM remained in adequate levels for the first year after diagnosis, and the quality of life was similar in the first year and Hba1c levels were in good metabolic control. We think that the fact that the patients know from the beginning that they are included in the study may be affected the results.

