Evaluation of Relation Between Diabetic Education Levels of Type 1 DM Child/Adolescent and Parents and Metabolic Control

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INTRODUCTION AND AIM

The education of the diabetic patient and one who is responsible of his/her care about disease, care and treatment is an important phase of diabetic treatment. It is accepted in general that good control in diabetes is not possible without enough knowledge and experience about diabetes. In this study it is aimed to evaluate the relation between diabetic education levels of type 1 DM child/adolescent and parents and metabolic control.

MATERIAL AND METHOD

January- February 2018

42 patients (27 girl/15 boy)

Mean age 11.6±4.1 (1.6-18.6) years

69% (n=29) pubertal

HbA1c level
<7.5% good
7.5-9.0 mild
>9.0% bad
metabolic control

The study included the patients and their parents who refered to Pediatric Endocrinology clinic and followed at least for 1 year with diagnose of Type 1 DM.

Children over 11 years old and their parents performed questionary form which aims to evaluate diabetes knowledge level and daily diabetic management. They had 20 questions, every right answer had 10 points, and diabetes knowledge point (DKP) was measured.

Patients had physical examination and anthropometric measures, HbA1c levels in last 1 year used to evaluate metabolic control.

RESULTS

Mean diabetes duration was 4.8±3.3 (1-15) years

Mean HbA1c levels were 8.2±1.4% (5.9-12.3%).

Metabolic Control

33.3% (n=14) good
38.1% (n=16) mild
28.6% (n=12) bad

⬆⬇ CORRELATION ✗

Diabetes Knowledge Point

Patients
134.3±35.9 (73-200)
Parents
133.6±25.3 (69-189)

Usage of diabetes knowledge in management of disease

47.6% (n=20) always
35.7% (n=15) often
9.5% (n=4) sometimes
7.1% (n=3) rarely

Diabetes Knowledge Point (Self-assessment)

69% (n=29) good
16.7% (n=7) very good
14.3% (n=6) mild

Table I: HbA1c levels of type-1 DM patients according to the frequency of usage of diabetes knowledge in management of disease

Usage of diabetes knowledge in management of disease	HbA1c			P
	Mean±SD	Min	Max	
Rarely	9.0±1.8	7.2	12.3	
Sometimes	8.3±1.4	6.8	10.8	
Often	8.2±1.5	6.7	10.7	
Always	8.0±1.1	5.9	9.5	
Total	8.2±1.4	5.9	12.3	0.418

The most important factors affecting HbA1c levels were diabetes duration (p=0.010) and frequency of blood glucose measures (p=0.028).

While 1 year increase in duration of diabetes increases HbA1c level by 0.29%, increasing blood glucose measurement frequency by 1 reduces HbA1c by 0.8%

DISCUSSION

Diabetes education is a planned regimen for the desired behavioral change in the patients and plays an important role in ensuring metabolic control, preventing acute and chronic complications and improving quality of life. In addition to education, it is also aimed to bring diabetic adaptation and behavior change.

In many studies, it has been shown that glucose controls, self-care skills, and knowledge about diabetes in the educated patients is better and that planned training and follow-ups are important in preventing chronic complications and having a positive effect on controlling HbA1c.

CONCLUSION

In this study no relation was found between patients and parents diabetes knowledge levels and metabolic control. It is considered that usage of knowledge in management of disease has impacts on metabolic control but there are more important factors affecting metabolic control.

97--P3
57ESPE
Diabetes and insulin
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