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## Effect of health education on the childhood diabetics

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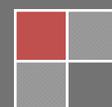
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### ABSTRACT

**Objective:** To investigate the effect of health education on the childhood with diabetes. **Methods :** 86 cases of children diabetic and their parents were payed attention to knowledge of diabetes health education, which including of diet controlling, exercising, using insulin and monitoring of blood sugar with a period of one month. It was as the evaluation of blood sugar, lose rate of adverse events, management and satisfaction rate of parents before and after one month.  $X^2$  test was used with count data and  $t$  test was done with measurement data. **Results:** While fasting and postprandial two hours blood glucose decreased significantly and adverse events was lose, parents have the significantly higher management level and satisfaction. after health education. **Conclusions:** Health education was helpful to diabetic children's diet, exercise and application of insulin and blood sugar monitoring, ,which was conducive to controlling of blood sugar, improving the management ability of the parents ,reducing the occurrence of adverse events.

### KEYWORDS

Childhood diabetes; Treatment; Health education.



## INTRODUCTION

Diabetics patients were rising in recent years, which had a serious impact on people's health. We should grab the prevention and control of diabetes from children. Domestic and foreign research shown that health education was the key measure in diabetic treatment<sup>[1]</sup>.Gu and Lu observed the correct application of insulin, blood sugar monitoring before and after health education<sup>[2,3]</sup>.Liao's and other studies had shown that patients need to take own condition through their own efforts to change the bad life style and behavior<sup>[2,4-6]</sup>. There was lack of effective observation on children with psychological guidance and management and satisfaction of parents .This paper explored the effect of health education on child diabetics by insulin application ,diet control standard, correct exercise and reasonable blood sugar. The result was reported as following.

## PATIENTS AND METHODS

There were 40 male and 46 female aged 4 to 15year with mean age  $7.2 \pm 2.8$  year in 86 cases of children diabetics from March 2011 to July 2011 in the Department of Endocrinology,the First Affiliated Hospital, Nanyang Medical College,Henan Province, China , which was complied with the WHO diagnostic criteria set by the 1999 and excluded specific cardiovascular disease or liver disease, renal impairment, connective tissue disease, repeated severe hypoglycemia and hypoglycemia coma, actived hyperplastic retinopathy and infectious diseases.Both of the children and their parents were given health education system on the basis of conventional treatment in a period of one month.. The diabetic health education knowledge was supplied to the children and their parents by regular lectures, small manual ,publicity column discharge guidance and telephone manner .The health education content were as following:Given oral drug instruction including causes, harm, commonly used oral glucose-lowering drugs and their usage, dosage, adverse reactions, and taking time. Supplied dietary guidance as estimate nutritional requirement, balance the calorie diet,combing with the patient's nutritional status, choose food according to food exchanging table and dietary habit.Taken sports guidance and correct insulin therapy.Teach parents and children to monitor blood sugar, adjust the dose of insulin and diet.Tell the children and their parents the psychological guidance such as the fluctuation of mood on blood sugar, paying attention to the calm mood , keeping happy mood and facing the treatment in a calm state mind ,and so on. It was as the observing indicators of blood sugar , lose rate of adverse events , management and satisfaction rate of parents before and after one month. $X^2$  test was used with count data and  $t$  test was done with measurement data.

## RESULT

Comparison of education content before and after health education were in table 1.

**TABLE 1 : Comparison of education content before and after health education**

	n	After health education		Before health education	
		Affect		Affect	
		Cases	ratio	Cases	ratio
Insulin application	86	24	27.9	46	53.5 <sup>1</sup>
Diet control standard	86	21	24.4	43	50 <sup>1</sup>
Correct exercise	86	19	22.1	40	46.5 <sup>2</sup>
Reasonable blood sugar	86	26	30.2	39	45.3 <sup>2</sup>

Note:1 stand for comparing after education compared with before education,  $P < 0.01$ ; 2 stand for comparing after education after compared with before education,  $P < 0.05$ .

Fasting and postprandial two hours blood glucose before and after health education were in table 2. Fasting and postprandia two hours blood glucose were significantly lower than before the education.The difference was statistically significant.

**TABLE 2 : Blood sugar before and after health education**

	n	Fasting glucose	Postprandial 2 h glucose
Before health education	86	$9.4 \pm 3.5$	$14.1 \pm 4.3$ <sup>1</sup>
After health education	86	$6.9 \pm 1.8$	$9.5 \pm 2.1$ <sup>1</sup>

Note: 1 stand for comparing after health education compared with before education,  $P < 0.01$ .

Ratio of adverse events , management level and satisfaction of parents before and after health education were as shown in table 3.

Ratio of adverse events after health education were significantly lower than before . Management and nursing satisfaction of parents were significantly higher than that of before health education

**TABLE 3 : Comparison in ratio of adverse events, parents' management level and satisfaction before and after health education**

	<b>n</b>	<b>Ratio of adverse events (%)</b>	<b>Management level (%)</b>	<b>Satisfaction (%)</b>
Before education	86	17.4	56	68
After education	86	3.5 <sup>1</sup>	92 <sup>2</sup>	94 <sup>2</sup>

**Note:** 1 stand for comparing after education compared with before education,  $P < 0.01$ ; 2 stand for comparing after education after compared with before education,  $P < 0.05$ .

## DISCUSSION

86 cases of diabetic children and their parents strengthen health education on the basis of conventional treatment, including medical guidance, psychological direction, diet instruction and exercise guidance, knowledge education system makes it easier to learn and accept of children and their families, made parents to master relevant knowledge of comprehensive medication .The results shown that blood glucose was better than that of before health education.Ratio of adverse events was little.Management level and satisfaction of parents were significantly higher after health education than before.

## CONCLUSION

Health education play an important role in preventing and curing diabetes in children, which was an effective measures . With a small sample cases and a crowding range while clinical limitations,this study should been improved.

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