A Pilot Study of the Use of Insulin Glargine in Combination with Short Acting Insulin Analogue in Adolescents with Type I Diabetes Mellitus in Hong Kong

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Abstract  This pilot study is a retrospective analysis of the frequency of nocturnal hypoglycaemia and glycaemic control in 7 adolescents with well-controlled type I diabetes 3 to 6 months before and 6 months after switching to a new long-acting insulin analog-insulin glargine in combination with short acting insulin analogues before meals. The patients were on short acting insulin before the three main meals and isophane insulin at bedtime and they had a mean annual HbA1c value of 7.6±0.4%. The patients were switched to a new regime of insulin lispro before the three main meals and insulin glargine at bedtime. The mean duration of glargine treatment was 0.8±0.3 years. The mean average fasting blood glucose determined by glucometer was significantly improved from 9.9±1.4 mmol/L to 8.5±1.2 mmol/L (p<0.05) after switching to insulin glargine. The proportion of morning blood glucose between 4 to 10 mmol/L achieved by patients significantly increased from 42.7±11.2% to 52.2±15.2% (p<0.05) without nocturnal or morning hypoglycaemia. There was no significant change in the daily insulin dosage between the two treatment regimes. This combination has a high degree of acceptability to motivated adolescent patients. A larger prospective study on the beneficial effects of insulin analogues on poorly controlled diabetes is warranted. (HK J Paediatr (new series) 2004;9:208-212)

Key words: Adolescents;  Insulin glargine;  Type I diabetes mellitus