

中文題目:控制不佳的第2型糖尿病患使用長效胰島素或增加口服糖尿病藥量之比較

英文題目:Comparison between Insulinization and Adjusted Oral Antidiabetic Therapy in Poorly-Controlled Type 2 Diabetes

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Background: The clinical treatment guideline for type 2 diabetes mellitus suggests insulinization when patients' hemoglobin A1C does not reach the treatment goal of 7.0%. We aimed to test its efficacy and safety about insulinization with basal insulin in poorly-controlled type 2 diabetes in a community-based hospital in southern Taiwan.

Methods: In the outpatient department (OPD) for diabetic patients, basal insulin was suggested if the patient's HbA1C was higher than 7.0%. Then patients were divided into two groups based on their decisions to accept insulin injection or not. One group is the treatment group with add-on insulinization and the other is the control group with oral antidiabetic drug adjustments alone. We followed the two groups for one year, and both of the two groups received diabetic educations to intensify lifestyle modifications. Biochemistry data were obtained in each participant including HbA1C, cholesterol, triglycerides, HDL-C, LDL-C, GPT, and creatinine. Body weight was recorded at every OPD visit. Statistical analysis with t-test was used to analyze the data before and after medication adjustments.

Results: After following up for one year, changes in body weight and HbA1C were statistically-significant between the treatment group and the control group, respectively, with increases in body weight being 2.2 kg vs 0.2 kg, and reductions in HbA1C from 10.2% to 8.2% vs from 9.1% to 9.0%. The differences in cholesterol, triglycerides, HDL-C, LDL-C, GPT, and creatinine were all insignificant. None of the participants in the two groups had been admitted for hypoglycemia.

Conclusion: Our result had confirmed that use of basal insulin in the treatment group was superior to the control group in reducing HbA1C. However, the undesirable side effect of body weight gain was more obvious in the treatment group receiving basal insulin. It is assumed that use of basal insulin improved diabetic control leading to increased anabolism and body weight gain, while the less body weight increase in the control group was related to persistent elevated glucose level causing catabolism. In summary, basal insulin injection for poorly-controlled type 2 diabetes can improve glycemic control effectively and safely, but weight control management must be enhanced during the process of insulinization.

Keywords: type 2 diabetes mellitus , insulin , oral antidiabetic therapy , hemoglobin A1C