

ORIGINAL ARTICLE

Comparison of short-term effectiveness of introducing insulin treatment between intensive and thrice-daily lispro 50/50 therapy

Kiyomi Masuda, Kazutaka Aoki, Yu Togashi, Mayumi Takahashi, Yasuo Terauchi

Department of Endocrinology and Metabolism, Yokohama City University Graduate School of Medicine

Abstract

Objective: To evaluate the short-term effectiveness of thrice-daily lispro 50/50 (prandial premixed therapy [PPT]), we retrospectively compared type 2 diabetic patients with poorly controlled glycemia who were hospitalized at the time of insulin therapy introduction and were treated with either basal/bolus therapy [BBT] (NPH at bedtime plus Aspart at mealtimes) or PPT.

Methods: Using a morning fasting blood glucose level of 130 mg/dL and an average blood glucose level at 2 hours after each meal of 200 mg/dL as the targets for glycemic control during hospitalization, an appropriate amount of insulin was determined using the responsible insulin method.

Patients: The intensive therapy group and the thrice-daily injection group consisted of 13 and 12 patients, respectively.

Results: At the time of the achievement of the glycemic control goals, the fasting blood glucose levels for the BBT and PPT groups were 111.1 ± 8.5 mg/dL and 107.6 ± 15.6 mg/dL, respectively ($p=1.00$), and the total insulin dosages per day were 26.2 ± 5.8 U and 32.1 ± 17.8 U, respectively ($p=0.59$). The numbers of days required to achieve these goals were 7.1 ± 2.3 days and 8.8 ± 3.8 days, respectively ($p=0.27$).

Conclusion: Glycemic control was similarly achieved in patients treated with PPT or BBT. From the aspect of adherence to insulin treatment, thrice daily injections of one kind of insulin may be beneficial for diabetic patients who are unsatisfied with BBT, which requires the use of two kinds of insulin.

Key words: Type 2 diabetes mellitus, Insulin, Prandial premixed therapy, Thrice-daily injection, Basal/bolus therapy, Lispro50/50