

Efficacy and Safety of Biphasic Insulin Aspart 30/70 in Type 2 Diabetes Suboptimally Controlled on Oral Antidiabetic Therapy in Korea: A Multicenter, Open-Label, Single-Arm Study (*Diabetes Metab J* 2013;37:117-24)

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We thank Byung-Wan Lee for his thoughtful and insightful comments on our study regarding “Efficacy and safety of biphasic insulin aspart 30/70 in type 2 diabetes suboptimally controlled on oral antidiabetic therapy” [1].

To the first point, there have been many guidelines regarding insulin initiation in type 2 diabetic patients. Therefore, various options are available, including the types of insulin to be chosen, the starting dose, and the ratio of prebreakfast to predinner insulin. At the time of the study design and initiation, dividing the premixed insulin dose with the ratio of 2:1 was usual clinical practice in Korea, which was adopted in our study. Regarding the time of single insulin injection in the morning, we wanted to avoid nocturnal hypoglycemia to enhance the adherence to insulin therapy.

Second, as we mentioned in our article, oral antidiabetic drug (OAD) treatment should be combined with insulin, even after conversion to insulin treatment, as OAD(s) plays an important

role in blood glucose control. Metformin can be used at full dose in concert with insulin, but it is uncertain whether sulfonylurea should be maintained with insulin therapy or decreased. Recent American Diabetes Association/European Association for the Study of Diabetes guideline showed some tips on combination use of insulin and OAD(s). It is recommended that insulin secretagogues be avoided once prandial insulin regimens are employed, and thiazolidinediones be reduced in dose (or stopped) to avoid edema and excessive weight gain [2,3].

Third, the major side effect of insulin therapy is weight gain. The disparity in weight gain between our study and Jang’s study may be arise from study population (mean age of 57 years vs. over 65), study design (prospective vs. retrospective) and discontinuation of metformin in our study [1,4].

Finally, insulin therapy in Korean may not be different from other ethnic groups. When we use premixed insulin once or

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twice and cannot achieve target goals, further actions should be taken to control postlunch blood sugar, such as combining OAD(s) and/or adding prelunch insulin injection.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

REFERENCES

1. Song KH, Kim JM, Noh JH, Park Y, Son HS, Min KW, Ko KS. Efficacy and safety of biphasic insulin aspart 30/70 in type 2 diabetes suboptimally controlled on oral antidiabetic therapy in Korea: a multicenter, open-label, single-arm study. *Diabetes Metab J* 2013;37:117-24.
2. Inzucchi SE, Bergenstal RM, Buse JB, Diamant M, Ferrannini E, Nauck M, Peters AL, Tsapas A, Wender R, Matthews DR; American Diabetes Association (ADA); European Association for the Study of Diabetes (EASD). Management of hyperglycemia in type 2 diabetes: a patient-centered approach: position statement of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). *Diabetes Care* 2012;35:1364-79.
3. Lund SS, Tarnow L, Frandsen M, Nielsen BB, Hansen BV, Pedersen O, Parving HH, Vaag AA. Combining insulin with metformin or an insulin secretagogue in non-obese patients with type 2 diabetes: 12 month, randomised, double blind trial. *BMJ* 2009;339:b4324.
4. Jang HC, Lee SR, Vaz JA. Biphasic insulin aspart 30 in the treatment of elderly patients with type 2 diabetes: a subgroup analysis of the PRESENT Korea NovoMixstudy. *Diabetes Obes Metab* 2009;11:20-6.