

The clinical benefits of IDegLira in DUAL VII were achieved while using a simple regimen with fewer injections and dose adjustments compared with basal-bolus therapy

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Background and aims: Complex treatment regimens, such as basal-bolus insulin therapy (BB), are associated with lower compliance, greater treatment burden and poor patient satisfaction. Complex regimens are also a major concern for physicians since they require more resources and clinical decisions, both of which become more problematic as type 2 diabetes (T2D) progresses. In DUAL VII, insulin degludec/liraglutide (IDegLira) resulted in non-inferior HbA_{1c} reductions (as per the trial design), weight loss (-0.9 vs. 2.6 kg), and an 89% reduction in rates of hypoglycaemia compared with BB in patients with T2D. This *post hoc* analysis evaluated the treatment complexity of IDegLira vs. BB in terms of number of injections and dose adjustments.

Materials and methods: In a 26-week, open-label trial, patients with T2D uncontrolled on metformin and 20-50 U insulin glargine 100 U/mL (IGlar U100) were randomised 1:1 to IDegLira (N=252) or BB (IGlar U100 + insulin aspart ≤4 times/day; N=254). IDegLira was initiated at 16 dose steps/units (U) (16 U insulin degludec + 0.58 mg liraglutide); initial IGlar U100 dose was the pre-trial dose (mean: 33 U). Both were titrated twice-weekly, based on the mean of three pre-breakfast self-monitored plasma glucose (SMPG) readings, to a target of 4-5 mmol/L. Insulin aspart was initiated at 4 U/main meal and titrated twice-weekly to a pre-prandial and bedtime SMPG target of 4-6 mmol/L. This analysis reports the observed mean number of insulin injections and dose adjustments during 26 weeks.

Results: Despite the lower starting basal insulin component dose with IDegLira vs. BB, the number of basal insulin dose adjustments were similar during treatment (Table). The mean number of bolus insulin adjustments increased steadily during the trial to 200 per patient (median [min; max]: 218 [1; 569]). 66.5% of patients in the BB group were receiving ≥3 bolus injections/day at Week 26 in addition to their basal insulin and SMPG measurements in connection with each injection.

Conclusion: Burdensome regimens impact on patients' quality of life, treatment adherence and ability to achieve good glycaemic control. Compared with BB, the clinical benefits of IDegLira (comparable HbA_{1c} reduction, lower hypoglycaemia rates and weight loss) are achieved using a more convenient regimen in the DUAL VII study. In addition to the clinical benefits, this simple regimen has the advantages of fewer daily injections, SMPG readings and dose adjustments, requiring fewer clinical decisions.

Regimen complexity at 26 weeks		
	IDegLira	Basal-bolus
Mean number (SD) of basal insulin dose adjustments	16.6 (6.8)	17.1 (10.2)
Mean number (SD) of bolus insulin dose adjustments	–	200.1 (118.6)
Number (%) of patients receiving the following bolus injections/day		
0	–	3 (1.3)
1	–	18 (7.8)
2	–	56 (24.3)
≥3	–	153 (66.5)

IDegLira, insulin degludec/liraglutide

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