The baseline characteristics of the drug naïve patients with HbA1c <7.5% randomised in the VERIFY trial

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CONCLUSIONS

- The VERIFY study population is representative of real-world newly diagnosed, ethnically diverse patients with diabetes, evenly distributed by gender and age.
- The enrolled subjects display a classic profile of inadequate insulin secretion in the face of insulin resistance.
- The results of VERIFY, available by end of 2019, are expected to add value on the effect of early intervention with vildagliptin/metformin combination compared with standard-of-care metformin monotherapy on durability of glycaemic control.

INTRODUCTION

- Early combination therapy in patients with type 2 diabetes mellitus (T2DM) aims to target multiple pathophysiological defects with a hope to provide both durable glycaemic control and preservation of β -cell function.^{1,2}
- Combination of metformin and a dipeptidyl peptidase-4 (DPP-4) inhibitor such as vildagliptin is a potential option, because of their effect on insulin sensitivity and islet function allied with a low risk of hypoglycaemia and a neutral effect on body weight.^{3,4}

OBJECTIVE

- To verify if vildagliptin/metformin early combination therapy would provide a more durable glycaemic control compared with the standard-of-care metformin monotherapy, followed by addition of vildagliptin when metformin monotherapy fails (glycated haemoglobin [HbA1c] $\geq 7.0\%$).

METHODS

- Vildagliptin Efficacy in combination with metformin For early treatment of T2DM (VERIFY)** is a 5-year, ongoing multi-national, multi-ethnic, randomised, double-blind, two-arm, parallel-group study conducted across 34 countries in 254 centres (**Figure 1 and 2**).⁵
- Standardised and locally adapted annual meal tests are performed in a subset of patients to assess plasma glucose, insulin secretory rate relative to glucose (ISR/G_{0-2h}) and oral glucose insulin sensitivity index (OGIS).

Figure 1. VERIFY study design

*Insulin initiation according to local guidelines; bid, twice daily; d, day; HbA1c, glycated haemoglobin; MET, metformin; Vilda, vildagliptin

Figure 2. Patient population

BMI, body mass index; HbA1c, glycated haemoglobin; T2DM, type 2 diabetes mellitus

Figure 5. Standard meal test, blood collection time points and assessments (n=462)

ISR/G_{0-2h}: integrated insulin secretion rate relative to the integrated glucose levels over 2 hours; OGIS: oral glucose insulin sensitivity index

Figure 4. Characteristics of VERIFY study population, by region (N=2001)

BMI, body mass index; FPG, fasting plasma glucose; HbA1c, glycated haemoglobin

RESULTS

- 4524 patients were screened: 1416 patients with HbA1c levels <6.5%, 702 with HbA1c >7.5%, and 66 who could not tolerate at least 1000 mg metformin/day were excluded. 2001 patients were considered eligible as per protocol inclusion/exclusion criteria (**Figure 2**).
- Treatment-naïve, newly diagnosed patients with T2DM (<2 years), were evenly distributed by gender, had a mean age of 54.3±9.3 years and >25% were below 50 years of age (**Figure 3**).

Figure 3. Demographic and baseline characteristics of the study population (N=2001)

BMI, body mass index; DBP, diastolic blood pressure; FPG, fasting plasma glucose; GFR, glomerular filtration rate; HbA1c, glycated haemoglobin; HOMA-B, homeostasis model assessments for β -cell function; HOMA-IR, homeostasis model assessments for insulin resistance; LDL-C, low-density lipoprotein-cholesterol; SBP, systolic blood pressure; TGs, triglycerides; T2DM, type 2 diabetes mellitus; VLDL-C, very low-density lipoprotein-cholesterol

- The overall study population was obese (mean body mass index [BMI] 31.1±4.7 kg/m², body weight 85.5±17.5 kg). However, the Asian group had a relatively lower mean BMI and body weight versus other groups. History of smoking was higher in the European region (18%) compared to other regions (14%) (**Figure 4**).
- Mean HbA1c levels (6.9±0.3%) were uniform across the regions while fasting plasma glucose (FPG) levels (mean: 7.5±1.5 mmol/L) were higher in Europeans (~7.9 mmol/L) versus other regions (7.1 mmol/L). Results of the meal test are presented in **Figure 5**.
- Patients were normotensive and had normal renal function.
- The average well-tolerated daily dose of metformin was ~1600 mg.

References

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