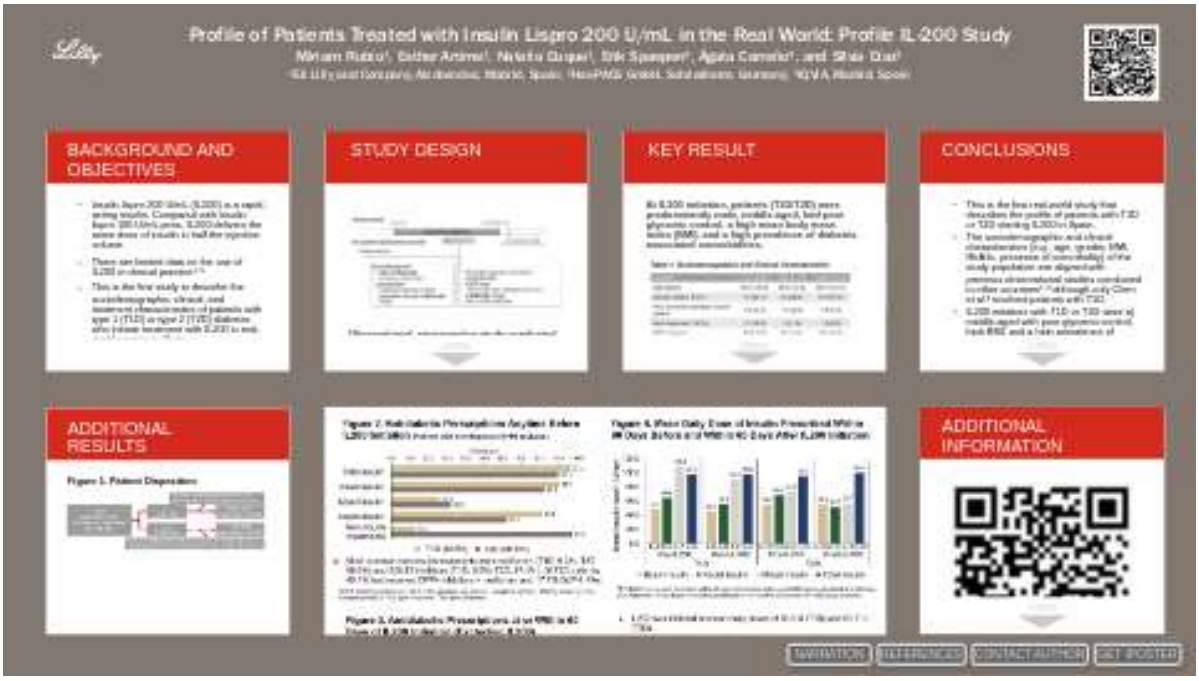
Profile of Patients Treated with Insulin Lispro 200 U/mL in the Real World: Profile IL-200 Study



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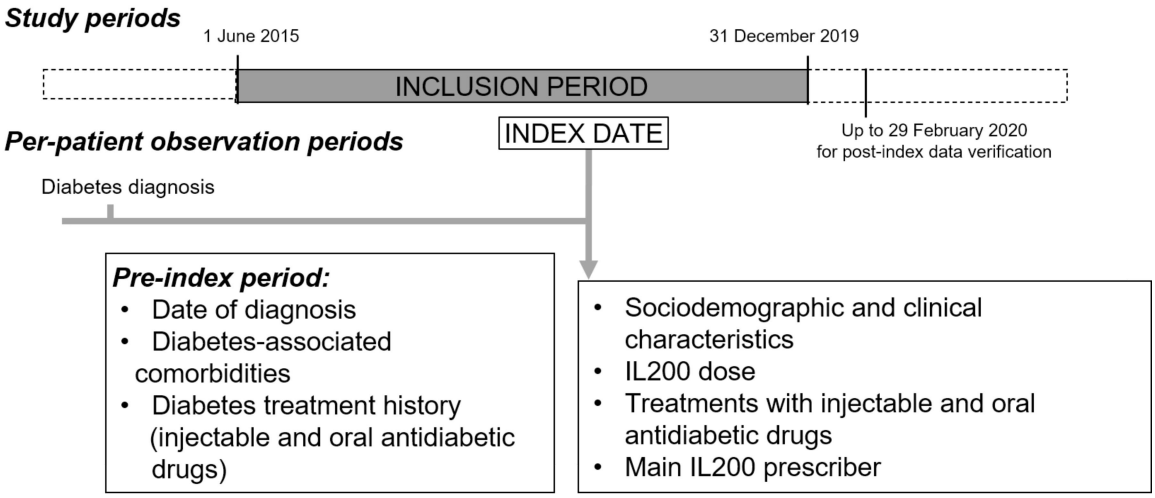
BACKGROUND AND OBJECTIVES

- Insulin lispro 200 U/mL (IL200) is a rapid-acting insulin. Compared with insulin lispro 100 U/mL pens, IL200 delivers the same dose of insulin in half the injection volume.

- There are limited data on the use of IL200 in clinical practice[1–3]

- This is the first study to describe the sociodemographic, clinical, and treatment characteristics of patients with type 1 (T1D) or type 2 (T2D) diabetes who initiate treatment with IL200 in real-world practice in Spain.

STUDY DESIGN



Observational, retrospective study conducted using the IQVIA electronic medical records database in Spain.

- Patients aged ≥18 years with a prior diagnosis of T1D or T2D (ICD-9 codes: 250.x1, 250.x3, 250.x0 and 250.x2) who started treatment with IL200 between 1st June 2015 and 31st December 2019 were identified in the IQVIA database.

- Demographic and clinical characteristics on the index date (date of IL200 initiation), initial dose and main prescriber of IL200, antidiabetic therapy prescribed at index or in the first 60 days after the index date, medical history, and previous antidiabetic drugs administered in the pre-index period (insulin dose based on prescriptions in the 90-day pre-index period), were analysed descriptively by diabetes type.

KEY RESULT

At IL200 initiation, patients (T1D/T2D) were predominantly male, middle-aged, had poor glycemic control, a high mean body mass index (BMI), and a high prevalence of diabetes-associated comorbidities.

Table 1. Sociodemographic and Clinical Characteristics

Variable	T1D, N=65	T2D, N=167	Total, N=232
Age (years)	46.5 (15.5)	62.6 (12.8)	58.10 (15.4)
Gender (male), N (%)	41 (63.1)	93 (55.7)	134 (57.8)
Time since first diabetes record[a] (years)	6.6 (4.2)	7.9 (2.9)	7.5 (3.3)
New diagnosis,[b] N (%)	11 (16.9)	3 (1.8)	14 (6.0)
BMI[c,d] (kg/m^2)	30.9 (5.8)	33.1 (5.5)	32.6 (5.6)
HbA1c[d,e] (%)	8.3 (2.1)	8.8 (1.8)	8.7 (1.9)
eGFR[d] (mL/min/1.73 m^2)	89.9 (26.1)	76.6 (24.7)	79.5 (25.5)
Main diabetes-related comorbidities, N (%)	36 (55.4)	155 (92.8)	191 (82.3)
Hypertension, N (%)	24 (36.9)	114 (68.3)	138 (59.5)
Hyperlipidemia, N (%)	22 (33.8)	115 (68.9)	137 (59.1)
Macrovascular disease,[f] N (%)	13 (20.0)	92 (55.1)	105 (45.3)
Microvascular disease,[g] N (%)	6 (9.2)	8 (4.8)	14 (6.0)
Chronic kidney disease, N (%)	2 (3.1)	4 (2.4)	6 (2.6)

Data are mean (SD) unless otherwise stated
[a] For patients diagnosed before 2008, the first record in the database was used as a proxy for diagnosis (maximum possible time since diagnosis, 12 years); [b] Patients with a prescription of antidiabetic treatment in the 15 days before diagnosis date and no previous antidiabetic treatments; [c] T1D, N=37; T2D, N=141; [d] Most recent values in the database before index date are shown; [e] T1D, N=30; T2D, N=120; [f] Includes cardiac ischemic disease, myocardial infarction, acute coronary syndrome, ischemic stroke, peripheral artery disease, congestive heart failure, transient ischemia attack, unstable angina, left ventricular hypertrophy and left ventricular dysfunction; [g] Includes diabetic retinopathy and microalbuminuria
BMI, body mass index; eGFR, estimated glomerular filtration rate; HbA1c, glycosylated hemoglobin; HDL, high-density lipoprotein; LDL, low-density lipoprotein; SD, standard deviation; T1D, type 1 diabetes; T2D, type 2 diabetes

- Patients starting IL200 presented with a high BMI*.
- Glycemic control was poor in the majority of patients* (HbA1c ≥7.0%: T1D, 76.7%; T2D, 85.8%).

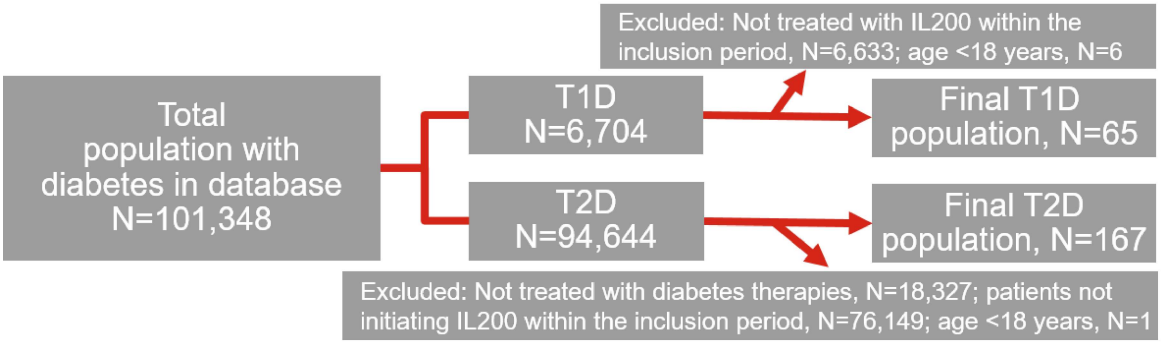
* Among patients with data available (BMI: T1D, N=37; T2D, N=141; HbA1c: T1D, N=30; T2D, N=120)

CONCLUSIONS

- This is the first real-world study that describes the profile of patients with T1D or T2D starting IL200 in Spain.
- The sociodemographic and clinical characteristics (e.g., age, gender, BMI, HbA1c, presence of comorbidity) of the study population are aligned with previous observational studies conducted in other countries[1–3] although only Chen et al.[2] involved patients with T1D.
- IL200 initiators with T1D or T2D were a) middle-aged with poor glycemic control, high BMI, and a high prevalence of diabetes-associated comorbidities; b) On high doses of insulin before IL200 initiation. However, the total dose of insulin was similar before and after initiation of IL200.
- This study describes the profile of patients who may benefit the most from the characteristics of IL200 (e.g., delivery of the same dose in half the volume of injection, longer duration of the insulin pen, patient´s preferences).[4]

ADDITIONAL RESULTS

Figure 1. Patient Disposition



ADDITIONAL INFORMATION

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3 Gentile S, et al. Expert Opin Drug Saf. 2018;17:445-450

4 Wang, T, et al. J Diabetes Sci Technol 2016;10:923-31