**INTRODUCTION**

- Second-generation basal (BIs) analogs, including Gla-300 and IDeg, are associated with less glycemic variability and reduced hypoglycemia compared with first-generation BIs, and are frequently used BIs in PWD2 who also have renal impairment.

**METHODS**

**Study Population and Design**

- Retrospective analysis of real-world data from patients with type 2 diabetes and renal impairment who received Gla-300 or IDeg between March 1, 2015 and August 31, 2016, using electronic medical records (EMR) from 4 medical centers.

- All patients had a diagnosis of diabetes mellitus type 2 (ICD-10 codes) were assessed.

- Once eligible PWD2 had been identified, the Gla-300 and IDeg cohorts were propensity-score matched on baseline demographic and clinical characteristics. Propensity-score matching was used to match the Gla-300 and IDeg cohorts to account for the underlying differences in baseline characteristics.

- Logistic regression, Student’s t-test, and generalized linear model were used to compare outcomes in the matched and unmatched groups. Statistical Analyses: Propensity-score matching was used to match the Gla-300 and IDeg cohorts to account for the underlying differences in baseline characteristics. Baseline characteristics were analyzed descriptively; means and standard deviations (SDs) were provided for continuous variables, and frequencies were provided for categorical variables; Student’s t-tests were used for the means of continuous variables, and provided for continuous variables.

- Hemoglobin A1c; IDeg, insulin degludec 100/200 U/mL; OAD, oral antidiabetic medication; SD, standard deviation; SMD, standardized mean difference.

**RESULTS**

**Baseline Characteristics**

- Table 1: Baseline characteristics for matched patients

<table>
<thead>
<tr>
<th>Age, years (mean)</th>
<th>Gla-300 (n=150)</th>
<th>IDeg (n=150)</th>
<th>SMD</th>
</tr>
</thead>
<tbody>
<tr>
<td>60.24 (10.06)</td>
<td>60.64 (10.10)</td>
<td>0.29</td>
<td>0.01</td>
</tr>
</tbody>
</table>

**HbA1c Reduction and Goal Attainment**

- Table 2: Change in HbA1c from baseline to 6-month follow-up

**Figure 2A**

- Reductions in HbA1c values were comparable between the 2 cohorts (1.45% for Gla-300 vs. 1.33% for IDeg; 

**Figure 3**

- Follow-up and 6 months’ data available before index event (range: 0–12 months) and 6 months after index event (range: 0–12 months) were required to have data available for 12 months before and after index, and Gla-300 and IDeg cohorts were propensity-score matched on baseline and clinical characteristics. Glycated hemoglobin (HbA1c) change from baseline to last measure 3–6 months after index, proportion of patients achieving target HbA1c (<7% and ≤9%), and incidence of hypoglycemia in categorical variables; Student’s t-tests were used for the means of continuous variables, and provided for continuous variables.

**Incidence of Hypoglycemia**

- Reduced because of the Gla-300 and IDeg cohorts were propensity-score matched on baseline and clinical characteristics. Hypoglycemia events in the 6-month follow-up period were not significantly different with Gla-300 (0.78%) vs. IDeg (0.58%); reduction in HbA1c in PWD2 receiving Gla-300 or IDeg was not only significant in the >9% subgroup but not in the ≤9% subgroup.

**DISCUSSION**

- This randomized, blinded, placebo-controlled trial was conducted in 200 centers in 10 countries and 10,000 patients.

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**REFERENCES**


