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The Real-world Treatment Patterns and Clinical **Effectiveness of GLP-1 Receptor** Agonist Liraglutide among Patients with Type 2 Diabetes in China: Based on Existing Healthcare Data

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OBJECTIVES

To evaluate the treatment patterns and effectiveness of Glucagon-like peptide-1 receptor agonist (GLP-1 RA) Liraglutide on glycemic control and cardiovascular outcomes among Chinese patients with Type 2 Diabetes Mellitus (T2DM).

METHODS

Study population & period

Adult patients with T2DM who initiated Liraglutide between Jan. 1, 2016 and December 31, 2018 were identified, and followed 1 year (Fig. 1).



Measures

- Treatment patterns were assessed by adherence, persistence and average daily dose of Liraglutide.
- Efficacy in glycemic control was estimated by the differences of HbA1c levels and its distributions between 3-month pre-index period and 12-month postindex period, among patients with available test results at both time windows.
- · Cardiovascular effectiveness was presented by the differences of Incidence rates of myocardial infarction, stroke, unstable angina, heart failure and their composite endpoint between the baseline and the follow-up period, with Kaplan-Meier analysis employed.

RESULTS

During 1 year follow-up, after initiation of Liraglutide, the incidence rates • A total of 1,624 Liraglutide initiators were included (mean age 52.5 \pm 12.8 (events per 1000 patient-years) of composite endpoint1(8.0 vs. 3.0; RR years, 56.8% male). 0.38) , composite endpoint2(20.9 vs. 7.9; RR 0.38) myocardial Within 1 year follow-up, the mean PDC of Liraglutide was 0.54±0.38, and the infarction(8.0 vs. 3.0; RR 0.38) , heart failure(4.9 vs. 0.8; RR 0.15), mean days to discontinuation was 201.9±170.0 days. The average daily dose decreased significantly compared with those in baseline period (Fig. 4).

was 0.70 ± 0.37 mg/d among persistent patients (Tab. 1).

Tab 1. Treatment patterns of Liraglutide over 1 year follow-up period

| Treatment patterns | Liraglutide cohort, N=1624 | |
|--------------------------------|----------------------------|-------|
| | Mean | SD/% |
| Adherence | | |
| PDC, mean | 0.54 | 0.38 |
| PDC≥80%, [n(%)] | 575 | 35.4% |
| Persistence | | |
| Days to continuation, mean | 201.9 | 170 |
| Persistent, [n(%)] | 824 | 50.7% |
| Average daily dose(mg/d), mean | 0.70 | 0.37 |

• 304 patients were further selected from the total population for the analysis of glycemic control. After using Liraglutide for 1 year, the proportion of HbA1c < 7% is significant increased, (P<0.001, Fig. 2).



A significant decrease of 0.79% in HbA1c levels was observed at 12-month



RESULTS(Cont'd)

• No significant difference was observed regarding the incidence of stroke and angina.

CONCLUSIONS

The favorable effects on glycemic control and macrovascular benefits of Liraglutide was proved regarding myocardial infarction and heart failure among Chinese patients with T2DM, even though the suboptimal adherence and persistence. Further study is still needed to capture the long-term effects of Liraglutide.