Total Cardiovascular Events Analysis of the EXAMINE trial of Patients with Type 2 Diabetes and Recent Acute Coronary Syndrome

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Background

- Alogliptin, a dipeptidyl-peptidase 4 inhibitor, is approved for the treatment of patients with DM.
- EXAMINE was a randomized, double-blind, placebo-controlled, multinational trial of alogliptin in patients with DM that were enrolled 15 to 90 days after an acute coronary syndrome (ACS).
- In the EXAMINE trial, there was neither an increase nor decrease in the risk of time to first CV death, MI or stroke (MACE).
- To better understand and describe the cardiovascular safety of alogliptin by providing a comprehensive picture of total CV events, we sought to determine the first, recurrent and total CV events (CV death, MI, stroke, unstable angina and coronary revascularization).

Methods

- In the EXAMINE trial, patients with T2DM with ACS (within 15-90 day) were randomly assigned to alogliptin or placebo (clinicaltrials.gov: NCT00968708).
- All clinical endpoints in the trial were adjudicated by a clinical events committee using prespecified definitions.

Methods, cont.

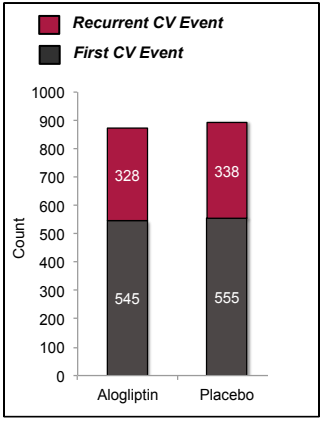
- Fatal events were counted as a single event, such that, if a patient experienced an MI and then had CV death with the cause of death adjudicated as being due to the MI, the event was considered 1 fatal MI event.
- Comparisons between baseline characteristics were made the chi-square test (categorical) and Kruskal-Wallis (continuous).
- Poisson regression analysis was performed to compare the total number of occurrences of CV death, MI, stroke, unstable angina and coronary revascularization between all patients in the alogliptin and placebo groups.

Results

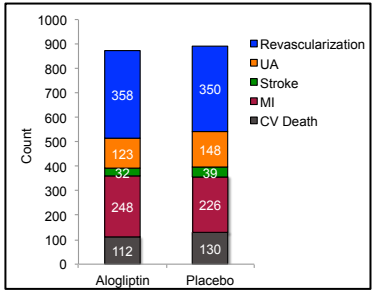
	No CV Events (n=4280)	Single CV Event (n=720)	Recurrent CV Events (n=380)	p-value
Age, y	60 (54, 68)	62 (55, 70)	62 (55, 68)	<0.001
Male	68.4%	66.3%	65.3%	0.28
Qual MI	76.7%	79.7%	80.5%	0.07
eGFR<60	27.0%	39.7%	32.1%	<0.001
Hx HF	26.6%	34.9%	29.7%	<0.001

- Patients with recurrent CV events were older and more likely to have renal disease and history of heart failure.

- There were 1100 first events and an additional 666 recurrent MACE over a median of 18 months of follow-up.



- There were no significant differences in patients treated with alogliptin or placebo with regard to the total number of events (p=0.52, Poisson).



- There were no differences in the types of events seen in patients treated with alogliptin or placebo.

Conclusions

- In patients with T2DM and recent ACS, alogliptin did not increase the risk of either first or recurrent MACE events when compared to placebo.
- These data support the CV safety of alogliptin in patients with diabetes and increased risk of future CV events.

The trial was funded by Takeda and analysis were performed by the Baim Institute for Clinical Research (Boston, MA). Drs. White, Bergenstal, Me Cannon were members of the EXAMINE Steering Committee and compensated at that time.