Treatment effects of once-weekly dulaglutide versus insulin glargine in patients with different baseline glycemic patterns (based on high/low fasting or high/low postprandial glucose): A post hoc analysis of the AWARD-2 clinical trial

Francesco Giorgino[1], Maria Yu[2], Axel Haupt[3], Zvonko Milicevic[4], Luis-Emilio García-Pérez[3], Anders Toll[5]

[1]University of Bari Aldo Moro & University Hospital Policlinico, Bari, Italy; [2]Eli Lilly and Company, ON, Canada, [3]Eli Lilly and Company, IN, USA; [4]Eli Lilly and Company, Vienna, Austria, [5] Eli Lilly Sweden AB, Solna, Sweden

Insulin glargine (Glar) exerts its action by decreasing fasting plasma glucose (FPG), whereas dulaglutide (DU), a once-weekly GLP-1RA, targets fasting and postprandial glucose (PPG). AWARD-2 post-hoc analysis assessed efficacy of DU vs Glar in Type 2 diabetes patients with different glycemic patterns at baseline determined by self-monitoring of blood glucose (fasting glucose [FG] vs PPG) using analysis of covariance. Patients were categorized into 4 groups based on combinations of low and high FG and PPG. Median baseline values of FG (151 mg/dL) and PPG (182 mg/dL) were used as threshold for low and high, respectively. DU showed statistically significant A1c reduction compared with Glar for all subgroups [Low FG-Low PPG: -0.6 (DU) and -0.2 (Glar), $p < 0.01$; High FG- Low PPG: -1.0% (DU) and -0.5% (Glar), $p < 0.05$; High FG-High PPG: -1.4 (DU) and -0.9 (Glar), $p < 0.01$], except for low FG/high PPG, where the numerical difference was in favor of DU (DU: -0.9%, Glar: -0.5%) but did not reach statistical significance. FPG change from baseline at week 52 was significant for all except DU in Low FG-Low PPG subgroup. Change in PPG from baseline at week 52 was significant for all subgroups except Glar in Low FG-Low PPG subgroup. Total hypoglycemia was numerically lower for DU vs Glar in all subgroups. DU showed efficacy on A1c reductions across different baseline glycemic patterns vs Glar (with the exception of low FG/high PPG), indicating a clinical benefit of targeting both FG and PPG, irrespective of the baseline glycemic phenotype.