LIRAGLUTIDE IN COMBINATION WITH METFORMIN PROVIDES GREATER POSTPRANDIAL GLUCOSE (PPG) CONTROL VS METFORMIN MONOTHERAPY ACROSS ALL THREE MAIN MEALS

C. Olimpo Mendivil1, D.R. Matthews2, M.A. Nauck3, G. Fulcher4, L.P. Prada Romero5, S. Christensen6, A. Garber7

1Facultad de Medicina, Universidad de los Andes Medical School, Colombia 2Oxford Centre for Diabetes, Endocrinology & Metabolism, The Churchill Hospital, UK 3Diabetes, Diabeteszentrum, Germany 4Medicine, Northern Clinical School, Australia 5Diabetes, Novo Nordisk Pharma, Colombia 6Medical Affairs, GLP-1 Diabetes, Novo Nordisk A/S, Denmark 7Diabetes, Endocrinology and Metabolism, Baylor College of Medicine, USA

Effective type 2 diabetes management should provide postprandial glucose (PPG) control. LEAD-2 compared liraglutide 1.2 mg (n=241), 1.8 mg (n=242), placebo (n=122) and glimepiride (n=244), as add-on to metformin. As reported, PPG reduced after meals with liraglutide and glimepiride versus placebo after 26 weeks; this post-hoc analysis further examines PPG effects of liraglutide. Proportion of subjects below ADA PPG target (10 mmol/L) 90 min after individual meals, and 3 meals overall, was evaluated using 7-point self-measured plasma glucose (SMPG) profiles. Time below target was assessed using 15-hour post-dosing SMPG. Comparisons used regression analyses with treatment, previous treatment and baseline as covariates (ITT, LOCF). More subjects achieved PPG10 mmol/L across all 3 meals with liraglutide 1.2 (38%) and 1.8 mg (37%) versus glimepiride (27%) or placebo (15%); odds of remaining below target across all meals were higher with liraglutide 1.2 and 1.8 mg versus placebo (OR=3.51, 3.37, respectively; p<0.001) and glimepiride (OR=1.68, p=0.019 and 1.61, p=0.033; respectively). Liraglutide subjects were more likely to be below target after individual meals compared with placebo (p<0.001); difference versus glimepiride was not significant at most meals. Proportion of time below target post-dosing increased significantly with liraglutide (71.6%/73.3%) or glimepiride (69.9%) versus placebo (44.0%; p<0.001). Differences in PPG increments for 3 meals overall were not significant. Adding liraglutide to metformin increased odds of being below PPG target across 3 daily meals overall versus placebo or glimepiride. As PPG increments did not differ between treatments, improvements with liraglutide are likely due to combined FPG and PPG effects.