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Substituting Liraglutide for insulin: A retrospective observational study on feasibility and predictors of success in type-2 diabetesEveline Bruinstroop^{1, 2}¹AMC Amsterdam, Netherlands²Duke-NUS Graduate Medical School, Singapore

We aimed to assess the success rate and determinants of success of an insulin to liraglutide switch in type-2 diabetes. In a retrospective observational study 87 persons (37 men, age 57 ± 9 years, HbA1c 73 ± 18 mmol/mol, BMI 40 ± 6 kg/m²) were analyzed after switching from insulin therapy to liraglutide. Persons that continued liraglutide for 12 months were labeled as reaching glycemic target ≤ 53 mmol/mol (7%) ($L \leq 53$) or remaining above 53 mmol/mol ($L > 53$). Persons who discontinued within the first 12 months were divided into persons who discontinued because of poor glycemic control (Dglyc) or discontinued because of intolerable side effects (Dside). HbA1c and body weight values during follow up were extracted from the medical records. Baseline characteristics were compared between the groups to establish determinants of success. Among the 87 persons, 50 persons (58%) continued liraglutide during these 12 months ($L \leq 53$ 17%; $L > 53$ 40%). 37 persons discontinued treatment during follow-up (Dglyc 37%; Dside 6%). On average HbA1c decreased in group $L \leq 53$ while remaining stable in the $L > 53$ group. HbA1c increased in group Dglyc during follow-up. Determinants of success were less frequent insulin regimen and lower insulin dose ($L \leq 53$ and $L > 53$ versus Dglyc) and baseline HbA1c and duration of diabetes ($L \leq 53$ versus $L > 53$ and Dglyc). Postprandial C-peptide was higher in $L \leq 53$ versus Dglyc. The majority of persons remained on liraglutide after switching from insulin therapy. Determinants of success were lower insulin dose, a less frequent insulin regimen, lower baseline HbA1c, shorter duration of diabetes and higher post-prandial C-peptide.

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