Glycaemic and non-glycaemic effects of glucagon-like peptide-1 (GLP1) agonists among UAE patients with diabetes

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Aim: The effects of two commonly used GLP1-agonists on glycaemic and non-glycaemic parameters among UAE patients with diabetes were investigated.
Methods: Data was retrieved from a computerised database of patients attending large diabetes center in UAE. Patients on exenatide2mg weekly (n=1222) or liraglutide0.6-1.8mg daily (n=2495) for at least 12months were included in the study. Data on HbA1c, weight, blood pressure, pulse, lipids, microalbuminuria and eGFR were collected at four time points of treatment; visit1 (within 3months prior to treatment), visit2(2-4months), visit3(5-7months) and visit4(10-14months). Paired t-test, two-sample t-test and linear mixed effects model with random intercept and slope were performed.
Results: Maximum mean reduction from baseline (for weekly exenatide and daily liraglutide respectively) in HbA1c(0.93v0.91%;p<0.0001), systolic BP(4.3v3.3mmHg; p<0.0001) and total cholesterol(0.22v0.20mmole;p<0.0001) was observed at visit2. Maximum mean weight reduction was at visit3 (2.3v2.5 kg;p<0.0001) for both drugs. Sustained significant mean reduction in log-transformed triglyceride was observed from visit2 with liraglutide(p<0.0001) and visit3 for exenatide(p<0.007). Significant sustained diastolic BP reduction of 1 to1.5mmHg was observed with weekly exenatide(p<0.001). There was non-sustained reduction in microalbuminuria and eGFR in both drugs with variable significance. No significant difference in weight, HbA1c, diastolic BP, microalbuminuria, eGFR and lipid reduction between the two drugs at different time points. Linear mixed effects model showed no significant difference in slopes between both drugs on all parameters over the duration of the study.
Conclusions: Modest reduction in glycaemic and non-glycaemic parameters were observed with both GLP1-agonists with no significant difference between the two drugs. Further randomized studies are required specifically in this population.